

**MINING**

# HOW A DIRTY INDUSTRY IS GOING GREEN

The mining industry has long had a reputation for being a polluting and dirty sector. However, it has a key role to play in the world's low-carbon future, writes **BENJAMIN VAN DER VEEN**

**A**s South Africa and the world grapple with the transition to a low-carbon future, our mining sector can support this move in a number of ways. Mines are producing more critical minerals that underpin renewable energy production and battery manufacturing – key pillars in moving away from carbon-based technologies. They are also coming up with innovative ways forward that embrace energy efficiency and renewable energy sources.

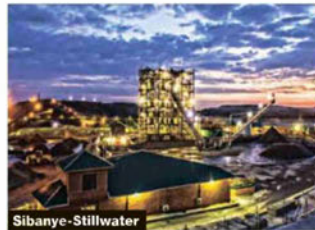
On the production side, Africa contributes mainly through mining copper, cobalt and tantalum in Central Africa, while platinum group metals are mined in Southern Africa. According to SRK Consulting director and principal consultant Andrew van Zyl, these commodities come from regions that have contributed relatively little to the carbon emissions hastening climate change. "Despite this, African countries are, through their mining industries, making a significant contribution to supplying the minerals for a global energy transition. There are also possible reserves of lithium in Zimbabwe, and perhaps in the Democratic Republic of Congo, Namibia and Ghana."

Van Zyl notes that mining companies in Africa, as elsewhere, have focused increasingly on environmental, social and governance (ESG) compliance. This includes climate change and resilience, which drives efforts to reduce mines' carbon footprint. At the level of mining operations, there is growing momentum in raising energy efficiency as a route to cutting carbon emissions. There are also efforts to substitute fossil fuels with renewable sources of energy.

## GREEN INVESTMENTS IN LOCAL MINING

Following the South African government's landmark decision in late 2021 to increase the licensing threshold for embedded generation projects from 1 megawatt (MW) to 100MW, mining companies in South Africa are expected to spend as much as R65.2-billion on renewable energy projects in the near term.

The industry plans to introduce up to 3 900MW of solar, wind and battery energy projects. Several mining companies in Southern Africa have already implemented plans to develop solar photovoltaic (PV) plants, with a combined capacity of 585MW.



**Sibanye-Stillwater**

## SIBANYE-STILLWATER

Sibanye-Stillwater has proposed a three-project plan to introduce 175MW of renewable energy across its platinum group metal (PGM) mining operations in South Africa, which will consist of an 80MW solar PV project at its Rustenburg Platinum Mines Complex, a 65MW solar PV project at its Karee Complex and a 30MW solar PV project at its Bushveld Complex. Accounting for approximately 39 per cent of the group's energy demand, Sibanye-Stillwater's South African PGM operations are equivalent to around 310MW.



**Anglo American**

## ANGLO AMERICAN PLATINUM

One of the world's largest producers of platinum has selected a South African independent power producer to assist with its renewable energy needs. A consortium comprising Pele Green Energy and EDF Renewables South Africa will build a 100MW solar PV plant at Anglo American Platinum's Mogalakwena mine in Limpopo. The plant is expected to become operational by the end of 2023.



**Gold Fields**

## GOLD FIELDS

Gold Fields has finalised plans to construct a 40MW solar PV plant at its South Deep gold mine near Westonaria, 50km southwest of Johannesburg. The project currently comprises 116 000 solar panels. The plant will supply the mine with a fifth of its power needs.



**Harmony Gold**

## HARMONY GOLD

The first phase of Harmony's renewable energy journey consists of a 30MW solar energy plant in the Free State. In phase two, the company will build an additional 137MW of renewable energy at its various longer-life mines, while phase three is in the planning stage and progressing as anticipated.

"The ESG-linked financial transactions that we have concluded, alongside the construction of the solar energy plants, are a watershed moment for Harmony and our host communities," says Jared Coetzer, head of Harmony Gold's investor relations. "Not only will these transactions help us to deliver on our environmental and social obligations and undertakings, but they will also de-risk the business and deliver many socioeconomic benefits. 'Mining with purpose' is ensuring that our investors and other stakeholders continue to derive value and positive returns in a global climate of energy uncertainty." ■

## FAST FACT

**Government has secured approximately R100-billion of investment in its Risk Mitigation Independent Power Producer Procurement Programme and the fifth bid window of the Renewable Energy Independent Power Producer Procurement Programme.**

*Source: Department of Mineral Resources and Energy*

Images: Supplied