



[The Electric Mine 2023](#) [IPCC 2022](#) [Event papers](#) [DOWNLOAD IM](#) [Get IM Free](#) [Videos/Webinars](#) [2023 Media Pack](#) [Past Events](#) [Pay Online](#) [Contact](#)

[Twitter](#) [LinkedIn](#)



Expect more sustainability Supporting a circular economy with mining tyre recycling solutions. **KALTIRE**

Anglo's Minas-Rio iron ore mine in Brazil next in line for nuGen™ concept

Posted by Paul Moore on 19th April 2023



Anglo American recently gave a Sustainability Performance Update on April 18, outlining its progress in many fields of its business. Duncan Wanblad, Anglo's Chief Executive gave some more detail on its 2023 targets for reduction of Scope 1 emissions – its direct emissions; and Scope 2 emissions – indirect emissions from the generation of its energy input.

Wanblad commented: "Our to do list for this year as far as Scope 1 and Scope 2 is concerned is to complete the transition to 100% renewables in our electricity projects in Peru, and we'll hopefully have that done by the middle of this year. It is also to commence construction on the first wave of these wind and solar projects in South Africa – so a lot of the commercial agreements are now already in place; the PPAs are in place – moving very rapidly towards financial close and selection of the construction partners to get this developed; start breaking ground on that during the course of this year. Continue also the concept phase work on nuGen™ Zero Emissions Haulage solutions for both Mogalakwena and Minas-Rio...and start the vent air methane feasibility study for the abatement at Moranbah which then becomes the basis for the low concentration vent air methane abatement for the rest of our coal business."

Of course the nuGen™ Zero Emissions Haulage Solution (ZEHS) project including a prototype hydrogen powered truck has already been launched at the Mogalakwena platinum mine in South Africa; so it seems that Minas-Rio, Anglo's iron ore mine in the Brazilian state of Minas Gerais is potentially next on the nuGen™ deployment list. Minas-Rio is a 26.5 Mt/y fully integrated export iron ore operation, comprising a mine and beneficiation plant 160 km northeast of Belo Horizonte, plus a 529 km iron ore slurry pipeline and dedicated export facility at the port of Acu.

Minas-Rio is a good fit for nuGen zero emissions haulage – it already utilises a fleet of 32 diesel-electric drive Komatsu trucks – albeit 230 t class 830Es as opposed to the larger **291 t 930Es at Mogalakwena**, one of which, number DT74, became the world's first nuGen™ truck, with the rest of the Mogalakwena fleet set to start being converted from 2024. The 2 MW hydrogen-battery hybrid truck actually generates more power than its diesel predecessor. American's nuGen™ Zero Emission Haulage Solution (ZEHS) also doesn't just refer to the truck – it covers a fully integrated green hydrogen system, consisting of production, fuelling and haulage, with green hydrogen to be produced at the minesite.

Minas Gerais as a state is seeing green hydrogen movement – as an example in April 2022, Germany's Neuman & Esser, with a Brazilian base in Belo Horizonte, signed a protocol of intent with Brazil's Minas Gerais state to invest up to 45 million reais (about \$9 million) in the production of green hydrogen generation equipment. In January 2023 it was then announced that in collaboration was underway between steel makers in Minas Gerais, the Federal University of Itajuba (Unifei) and the H2Brasil project to develop a green hydrogen facility. The facility will contain a laboratory-scale production unit for electrolysis, storage, and vehicular delivery of green hydrogen, be totally powered by renewable energy, and have a 60 m3/h production capacity.

And Acu, Minas-Rio's export port in northern Rio de Janeiro state is also in the green hydrogen mix. Fortescue Future Industries Pty Ltd (FFI) and the Port of Acu signed in 2021 a Memorandum of Understanding (MOU) to assess the opportunity to develop hydrogen-based green industrial projects including development studies into the feasibility of installing a 300 MW capacity green hydrogen plant at Acu. This was followed in 2022 by another MOU between Shell and the Port of Acu to jointly build a 10 MW green hydrogen plant due to be completed by 2025.

The whole nuGen™ project is now being driven by First Mode, which led the Mogalakwena truck conversion and delivery. In January 2023, First Mode and Anglo American's nuGen™ zero emission haulage solution were combined and First Mode entered into a global supply agreement to supply several nuGen™ systems to Anglo American which includes the retrofit of approximately 400 ultra-class haul trucks with First Mode's proprietary hybrid fuel cell battery powerplant and related infrastructure.

MOST RECENT

Guanajuato Silver reduces costs, optimises workflow with Micromine software solution

DEUTZ and Talpa develop FUSIONHub software platform for enhanced data visibility and use

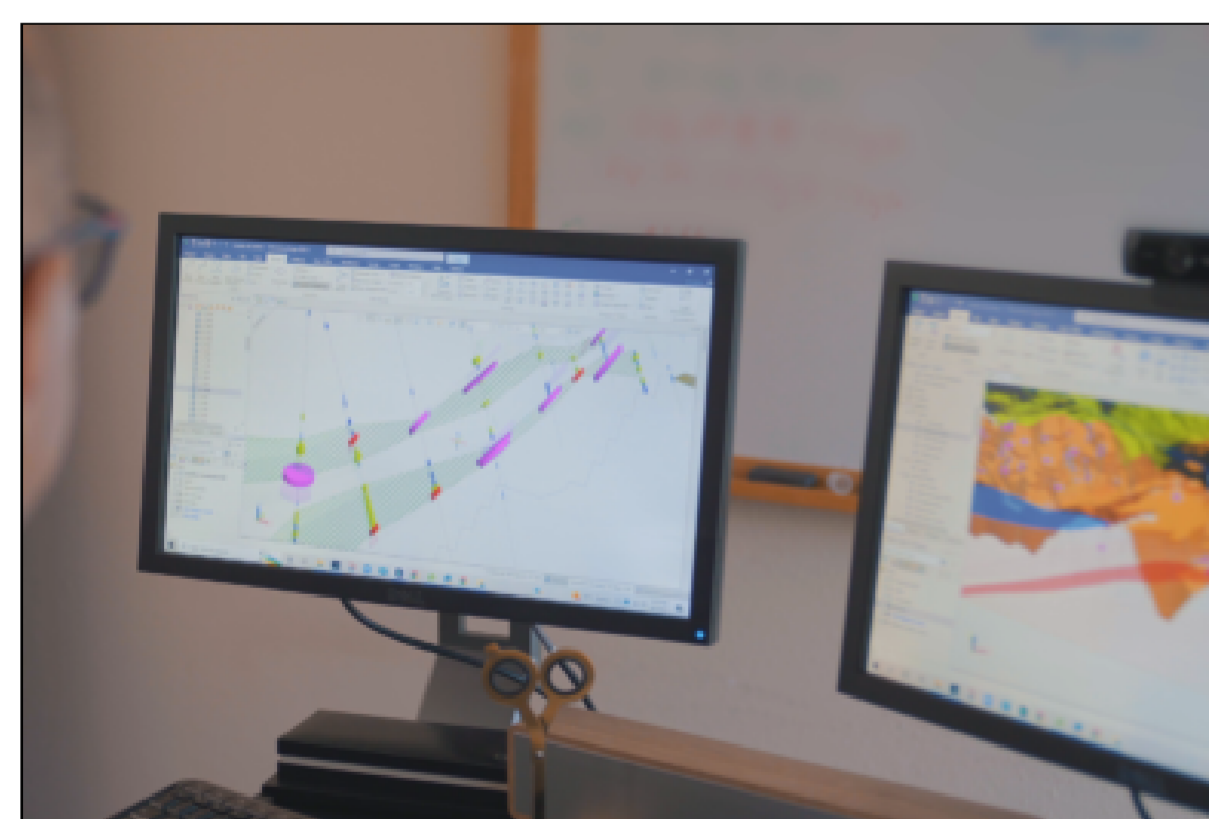
Anglo's Minas-Rio iron ore mine in Brazil next in line for nuGen™ concept

NEWS ARCHIVE

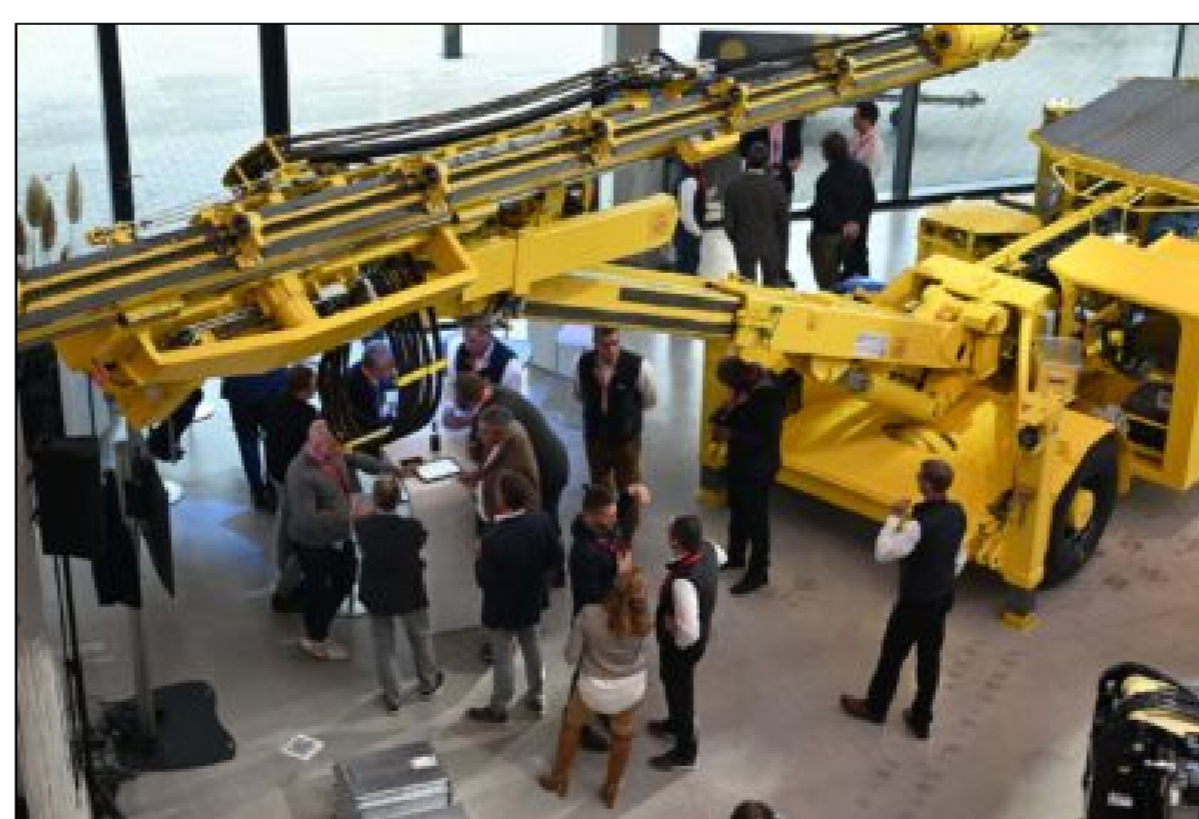
- April 2023
- March 2023
- February 2023
- January 2023
- December 2022
- November 2022
- October 2022
- September 2022
- August 2022
- July 2022
- June 2022
- May 2022

SEARCH NEWS

NEWS



Guanajuato Silver reduces costs, optimises workflow with Micromine software solution



DEUTZ and Talpa develop FUSIONHub software platform for enhanced data visibility and use



Anglo's Minas-Rio iron ore mine in Brazil next in line for nuGen™ concept



International Mining
Team Publishing Ltd
2 Claridge Court, Lower Kings Road
Berkhamsted, Hertfordshire
England HP4 2AF, UK

Tel: +44 (0) 1442 870 829
Fax: +44 (0) 1442 870 617
Email: lynne@im-mining.com or emma@im-mining.com

© Copyright International Mining 2023
[Privacy & cookies](#)

[Tweets by @im_mining](#)

Micromine says Guanajuato Silver has chosen Micromine as its primary geological and mine design software provider... <https://t.co/5WYqTM7dN5>, 3 hours ago

DEUTZ is expanding its digital services portfolio with the help of Talpa Solutions, a leading IIoT, analytics and i... <https://t.co/ds85pePDN2>, 4 hours ago

Rockwell Automation is to deploy a PlantPAX distributed control system for Cornish Lithium's demo plant, which aims... <https://t.co/NibZZt3flt>, 22 hours ago