

ESGS Webinar

Topic: Decarbonizing the Mining Sector by 2040

Date: 14 September | Time: 14:00-15:00 | Online via Zoom

The mining industry is amongst the heaviest generators of greenhouse gases globally. While the goal of the Paris Accord is to achieve carbon neutrality for the planet by 2050, many mining companies such as Anglo American have committed to carbon neutrality by 2040.

Decarbonization is often simplistically interpreted as being about renewable energy and the use of fossil fuels, but it is far more complex than that. From a mining perspective, decarbonization of mines has very specific and often, ostensibly disparate dimensions to consider. These range from deep-seated social anthropological factors such as social and industrial practices and behaviour to the highly technological solutions to decarbonize energy usage. From a technology perspective it is possible to decarbonize the mining sector by 2040, but there is inevitably a trade-off between economics and the pragmatic application of these interventions. At the other end of the decarbonization spectrum, many of the social interventions are beyond the control or influence of the mining companies but there is much that can be done.

In South Africa, most of the larger companies have established programmes to implement renewable energy projects, many of which are driven by sheer economics and the affordability of Eskom's energy supply, while at the same time these projects will contribute substantially to the decarbonization of these mines. There are at present 29 mining companies undertaking 89 energy projects comprising 6,5GW. These comprise 6.2GW of solar, 0.2GW, 8MW Biomass energy and 84MW of battery storage. The total capex is in excess of ZAR100 bn or USD 6 bn, much of which is off-shore finance and constitutes substantial FDI. Complementing the renewable energy programmes, many mining companies such as Anglo American and Exxaro have coherent circular economy, Zero Waste to Landfill Projects and economic diversification strategies directed towards Just Transition in the sector. While these are established, they are effectively in their infancy and not enough to reach the 2040 targets. The mining sector is only just starting out on this journey and there is much more to do.

Mitigating the impacts of greenhouse gases through structured decarbonization and just transition strategies in the mining sector requires a trans-disciplinary systems-based approach. This must bridge the ostensibly disparate causalities and design integrated functional and economic value chains that serve to eliminate greenhouse gases through related carbon neutral processes in the mining value chain. The SAIMM ESGS Committee's decarbonization programme outlines the issues to be addressed and describes the architecture of mining decarbonization value chains. The objective of this webinar is to create an awareness and understanding of the cardinal issues around decarbonization of mines in South Africa and to start a structured dialogue around these issues within our membership.



SPEAKER

Michael Solomon
*Chairperson SAIMM
ESGS Committee*

Professor Solomon is a mining engineer of 39 years of experience in the gold, platinum, diamond and coal sectors. Inter alia Senior Mining Engineer for SRK Consulting, Principal Mining Engineer for Bateman Projects (Van Eck and Lurie) and Principal Mining Engineer and Director Mining for the Mineral Corporation. Chief Executive of JSE-listed Wesizwe Platinum, from early stage exploration in 2004 to capital construction in 2011. Drafting team for the post-democratic South African mining policy from 1992-1994; Senior Policy Analyst, Minerals and Energy Policy Centre; South African Ministerial Water Advisory Committee and several Judicial and Ministerial Commissions of Enquiry into the minerals industry; the United Nations Economic Commission for Africa (UNECA) Expert Group on Minerals Beneficiation; Expert advisor to the UNECA High Level Dialogue on Accelerating the Rwandan Economy for the Rwandan Presidency. Served on the World Economic Forum Global Agenda Council for Mining and Metals for its entire tenure from 2008-2016, is a Fellow of the Southern African Institute of Mining and Metallurgy (SAIMM), is a Member of Council of the Institute and is the Chairman of its Mineral Economics Division and a member for the Agricultural Economists Association of South Africa (AEASA). Prof

Solomon served on the Board of ASX-listed Gold One as Chairman of the Audit and Risk Committee and the Health, Safety and Environment Committee. Currently sits on the Boards of the United Nations Global Compact in South Africa and the Federation for a Sustainable Environment and is a member of the Steering Committee of the National Agricultural Development Agency in South Africa and chairs the Policy Committee of that body. He is an Adjunct Professor in the Department of Chemical Engineering at the University of Cape Town specialising in the economic complexity of natural resource clusters.

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