

The Progressive Mining Agenda.

The global metal mining industry is critically important in the struggle to arrest the effect of the global climate crisis within 20 years. Greater electrification of the economy is essential to reduce the effect of GHG in the atmosphere, but subsidies to reduce the consumption of carbon-based technologies will achieve nothing if the supply of metals for new, alternative technologies is insufficient or uncompetitive. Improving the performance of the metal mining industry within the next 5 years is critical because it is the only way to meet the increased demand for the metals that will power the technologies in the new, low-carbon economy, and do so at a price lower than carbon-based technologies.

This will require transformative, disruptive change to the technology platforms of surface and underground mines, mine waste storage systems and mineral exploration. Given the time needed to bring new mineral discoveries into production, the climate-driven demand increase must be met by mines already in production or starting within 5 years. Later discoveries of large-scale ore deposits will be essential to prevent a return to carbon-based technologies.

The need to electrify the economy means the future role of the global metal mining industry is now much more important than individual corporate interests; simply meeting the needs of customers and shareholders and addressing the concerns of stakeholders is not sufficient. Electrification is the best way to secure the long-term stability of Earth's atmosphere and hydrosphere and to preserve humanity's current place within its biosphere. Improving the performance of the metal mining industry is too important to be left to market forces alone.

The Progressive Mining Agenda (TPMA) will describe the kinds of changes needed to improve the productive capacity and environmental performance of the global metal mining industry, identify companies and individuals with the ideas, techniques and technologies that can effect these changes, and attract investors that recognize both the importance of successfully confronting these challenges and the opportunities and risks of doing so. Globally, in the last decade, the mining industry has seen the decline of mine productivity by at least 30%, a gradual increase in the frequency and severity of tailings dam failures, and a decline in recruitment while most of its experienced people are about to retire. These trends threaten the industry's ability to sustain itself and support the transition to a low-carbon future. The PMA's purpose is to help the industry become more profitable, more productive and a more prudent steward of human and natural resources than it has been.

TPMA aims to assemble a suite of technological solutions that will address the critical issues of the day in order to help create a progressive mining industry capable of meeting *all* the demands of the future - produce the raw materials customers need, provide investors with sound returns and prevent negative impacts on neighboring communities and ecologies. The Progressive Mining Agenda, as we see it today, will be presented in a series of position pieces that address specific changes that are becoming essential and increasingly urgent. Time is short.