Mining our way to the Green Revolution

written by Stephen Lautens | August 23, 2022

The widespread commitment to living “greener” has never been greater. The ecological movement was a fringe concept in the 1960s when some scientists and futurists began to make dire predictions about limits to growth and pending ecological disasters. Sixty years on, with increasingly wild weather, droughts, and melting polar ice, the ecological fringe has become mainstream, not just in popular culture but also in boardrooms.

Paradoxically, communist China has proven to be a vivid example of the perils of capitalism in a hurry. While the industrial revolution in the West took place over two and a half centuries, China’s industrial revolution compressed its rush to catch up and join 21st century affluence into the last two or three decades. The result has been the ability to observe their ecological disaster unfold at ten times the speed. Willing to sacrifice the environment for industrial dominance and general prosperity – as the West did for centuries – China rapidly polluted their rivers with toxins, the land with heavy metals, and their air with thick, sulfur-laden smog.

Some business leaders in the West see this as the “China advantage” and continue to advocate for the loosening of environmental and other regulations here to “stay competitive,” even as China itself is realizing that its polluting ways are not sustainable in the long run as they poison their country.

China is in the very early stages of balancing prosperity and sustainability. In 2021 China’s own carbon market became fully operational. Many other developing countries in Africa, South

America and Asia are facing the same conundrum and represent many points along the long road to economic advancement. Politicians there are often too willing to allow foreign companies to create ecological and social disasters to line their own pockets. Before we get too smug, the same battles have occurred here in the not too distant past and even continue today with “cut the red tape” politicians who push back against environmental regulations, motivated by either ideology or their donor lists.

For many, getting to a greener tomorrow is portrayed as an assault on our lifestyle and standard of living. While we have a long way to go before we make the shift away from oil, it has become widely accepted that oil will eventually have to go if we are to get to a carbon-neutral world. Oil production and consumption have increased with world population, but the search for new energy technologies and materials alternatives has never been more serious.

And therein lies the problem.

Electric vehicles rely on rare earths and other battery materials. These critical minerals are mined and processed, but for years there has been a concerted and sustained opposition to mining as an industry. This opposition has been on the basis of both disruption of local populations and the potential for ecological disaster. Someone once observed the truth that mining is the destructive use of land, although in the past few decades there have been added additional layers of regulatory oversight and restrictions. There are still jurisdictions around the world that turn a blind eye (for a price) to environmental sloppiness by local or international miners, but western countries are increasingly extending strict environmental (and anti-corruption) rules to overseas operations. Securities regulations require environmental assessments and investors and auditors

expect regular and glowing ESG disclosure.

Experts have been warning that there are significant shortages coming of the necessary critical minerals required for green, carbon-neutral energy sources and technology. Even ignoring geopolitical supply issues, the world simply does not currently produce enough basic materials like nickel and copper to supply the near-term electric vehicle demands, let alone more exotic materials like rare earths for EV magnets, batteries, solar panels, wind turbines, and the consumer electronics we cannot live without.

The bottom line is the green revolution is going to take a lot more mining and mineral processing. The only way we will ever reach a greener, carbon-neutral future will be through the mining and processing of critical minerals. It has to be done responsibly and intelligently, but it has to be done, and it has to be done quickly to meet the coming demand. China learned that sacrificing the environment for speed results in disaster, but a balance has to be found if we are going to have the materials needed to get to a green future before it is too late.

Sometimes the only way out is through.