



Unrecognized - potential wealth where least expected



There has been a lot of talk lately about the just energy transition and critical minerals. Southern Africa is richly endowed with critical minerals and as such should play an important role in the journey towards renewable energy. And then there is coal. Inevitably, decarbonization will entail the phasing out of coal as an energy source. However, a just energy transition requires more than simply shutting down coal mines and power plants. Coal mining communities often rely heavily on the industry for their jobs and livelihoods. As coal use declines, these communities will require robust social safety nets and reskilling programmes to ensure a smooth transition into new sectors of the growing clean energy economy. Areas for consideration might include alternative applications for, and products from, coal such as carbon fibre, which has applications in motor vehicles, wind turbines and energy equipment, sports items, electronic, military, defence, and medical products. Another example is coal use in building materials, some made with carbon fibres and others with carbon char. include coal plastics, coal foam, and graphene-based building materials. Graphene is an important single-layered carbon product which is light and extremely strong. It is currently emerging as a vital product with many applications including manufacturing, vehicles, aircraft, space travel, and electronics. Other alternative products from coal are activated carbon and carbon black. Coal and coal discard may turn out to be viable sources of rare earth elements, which are also of critical importance to the decarbonization journey. As this journey progresses and as is seen elsewhere in the world, the future of coal may lie in its perceived role as one of the most important elemental, mineral, and ore commodities that a country can possess. For any of the above to materialize will require extensive research and development. And even then, only a few of these visions may come to fruition. However, to do nothing is not an option. I wish you a pleasant reading experience.

H. Lodewijks

Coaltech Research Association