

# SANEA – Energy Storage Workshop

## ESS and SA's mining value chain potential



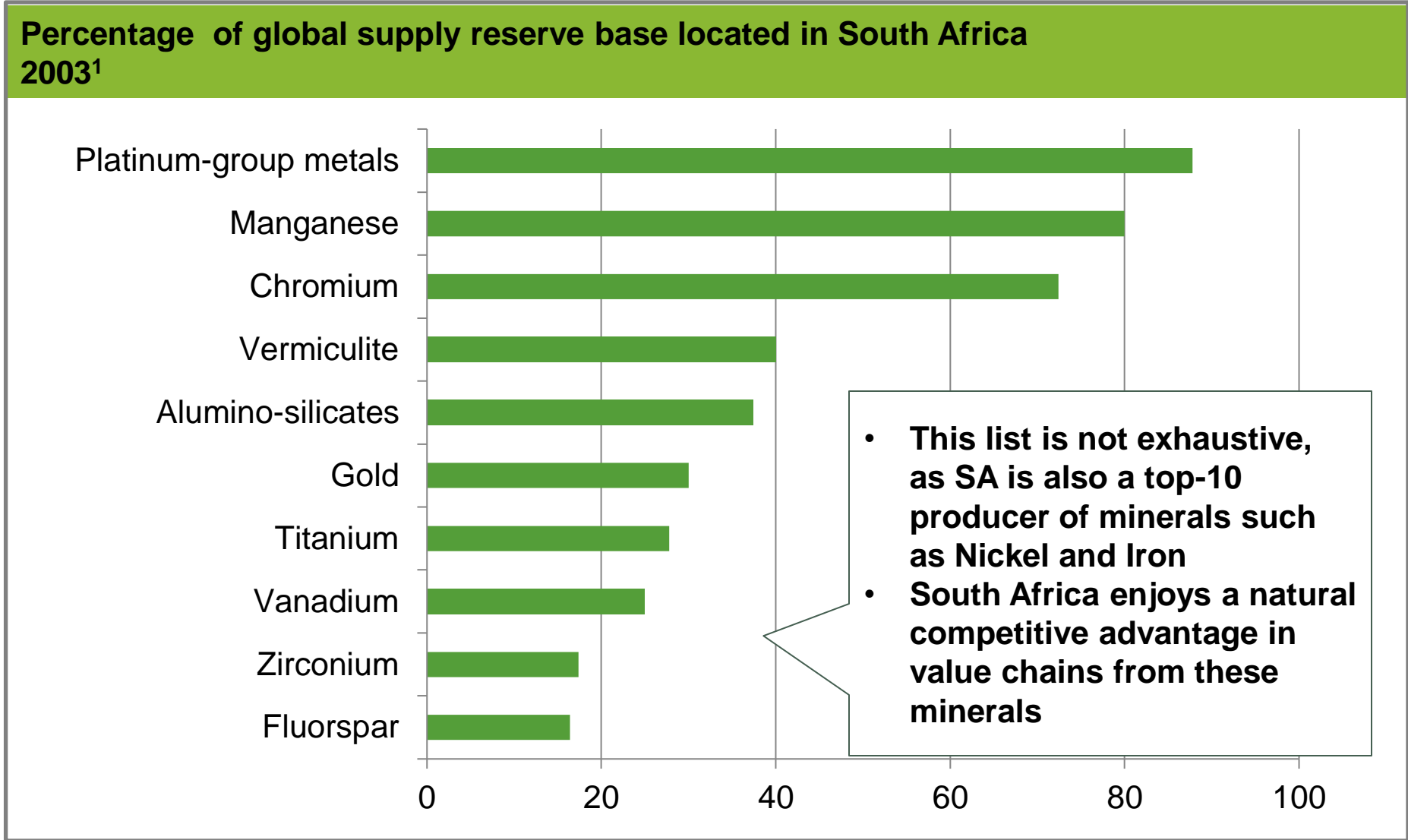
Overview document

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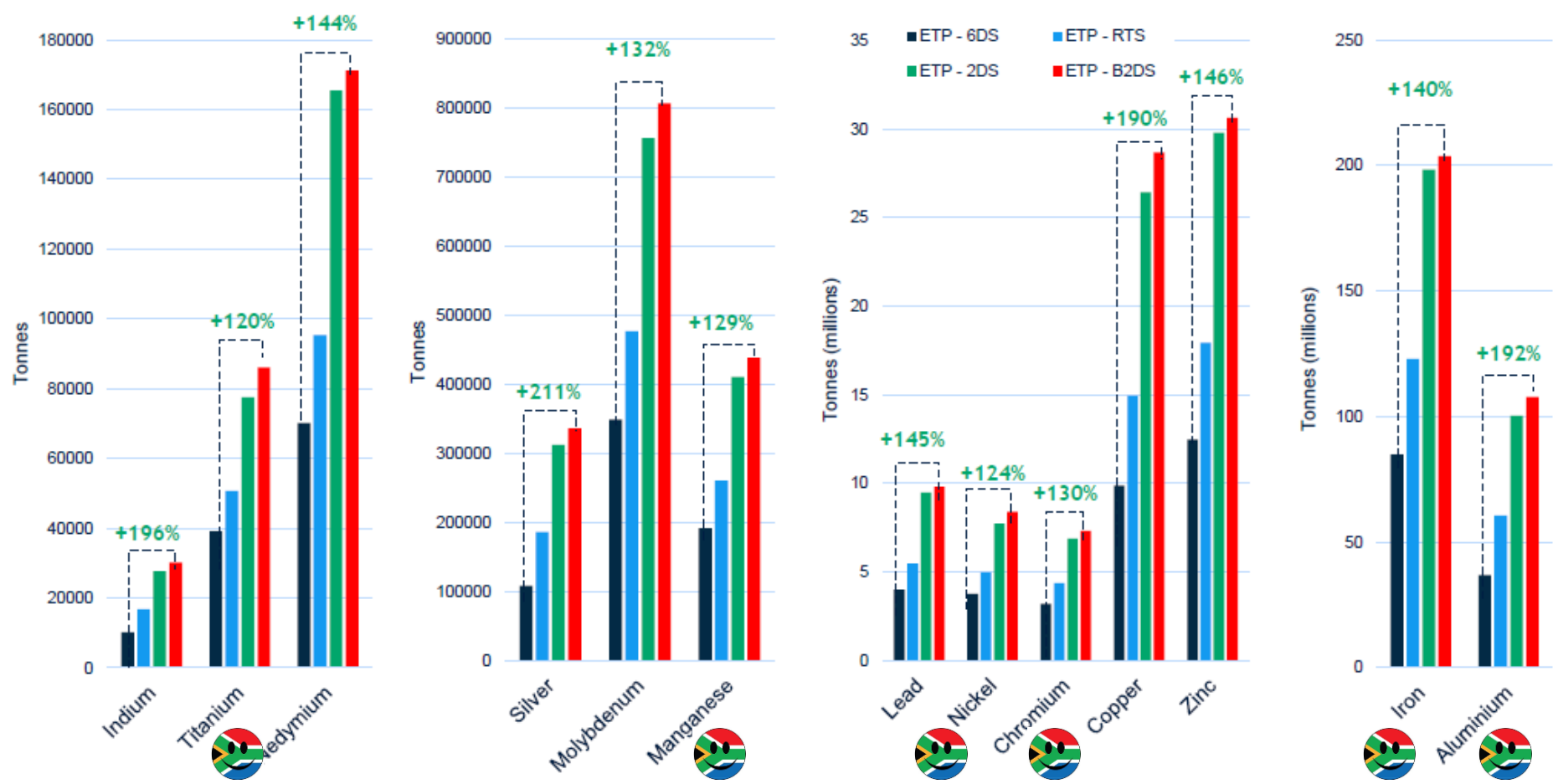
# South Africa has the largest or second largest mineral deposits for a multitude of very important minerals



<sup>1</sup> 2008 data for Gold and 2014 data for Vanadium  
SOURCE: South Africa Mining Industry Business Opportunities Handbook, 2013; USGS, 2014

# The transition from fossil fuels to sustainable energy will create new demand for minerals for: 1) Electrical Energy Generation

Total Mineral Demand from Power Generation Technology to 2050, with 'Business as Usual' (ETP – 6DS)

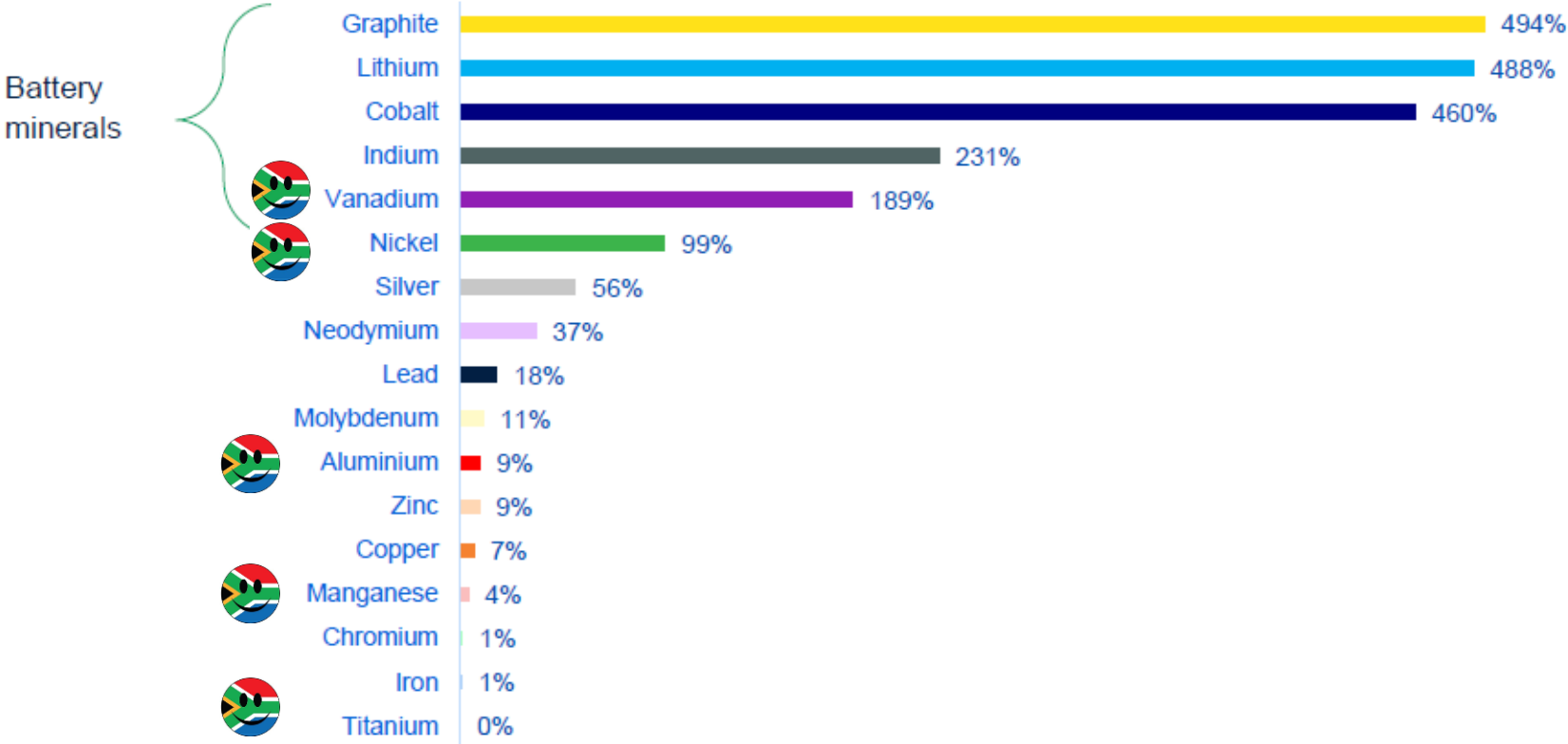


Source: International Energy Agency, Energy Technology Perspective (ETP) 2017, World Bank Analysis (preliminary results from Sep. 2018)

- ETP-RTS: Scenario based on existing Paris Agreement Commitments (2.6°C – 3.1°C)
- ETP-2DS: Scenario where there is at least a 50% chance of limiting the avg. global temperature increase to 2°C by 2100
- ETP-B2DS: Scenario where there is at least a 50% chance of limiting avg. future temperature increases to 1.75°C

# The transition from fossil fuels to sustainable energy will create new demand for minerals for: 2) Energy Storage

Projected Annual Demand in 2050 for Energy Technologies as a Percentage of 2018 Production Levels under 2DS



Source: [International Energy Agency, Energy Technology Perspective \(ETP\) 2017](#), [Deetman et al \(2018\)](#), [World Bank Analysis \(2020\)](#)

- [ETP-2DS](#): Scenario where there is at least a 50% chance of limiting the avg. global temperature increase to 2°C by 2100

## Some questions for South African businesses and policy-makers in these sectors (not exhaustive)

- How to ensure that domestic mining and processing capacity grows fast enough to supply into these new value chains?
- How do we convert the competitive advantage of access to the raw material into growing downstream, further value adding activities?
- How does South Africa ensure that technologies that use its minerals and downstream supply chains are more successful than those do not?
- Where do the roles of private sector business, domestic and internal capital markets and government policy makers factor? Are risks appropriately divided among them for SA-based investments?
- Does South Africa have or need a plan on how it participates in the global economic opportunity presented by the energy transition? Should such a plan be led by upstream or downstream parts of the value chain?

