

SA can decarbonise by 2050 'at cost of at least R3-trillion'

● Report puts case for rapid action

Garth Theunissen

SA can fully decarbonise its energy system by 2050 though it will require at least R3 trillion in investment over the next three decades to transition away from fossil fuels.

That is the finding set out in a report released on Wednesday by the National Business Initiative (NBI), Business Unity SA (Busa) and Boston Consulting Group (BCG). It was found that transitioning SA to a net-zero power system would need about 150 Gigawatts (GW) of wind and solar capacity to be deployed by 2050. That's almost four times the total capacity of SA's existing coal-fired plant network, according to the Power Sector Decarbonisation Report, which is part of the NBI's Just Transition and Climate Pathways project.

"By leveraging its world class renewable energy sources, SA can fully decarbonise its power sector, while unlocking the opportunity to stimulate economic growth and job creation," the report says. "SA's complementary wind and solar resources are among the best renewable energy resources in the world, available on vast amounts of unused land. By 2050, a renewables-dominated power system is the most cost-competitive system for SA."

To reach net-zero by 2050, SA would need to speed up its development of renewable energy capacity by adding at

least 4GW of installed power generating capacity from renewable sources each year. That's roughly 10 times the current pace of new-build capacity in SA's existing renewable energy sector.

The report says that the use of natural gas as a "transition fuel" will be critical in SA's journey towards a net-zero energy system by 2050 as it allows the gradual integration of wind and solar power into the electricity grid. Gas can then be gradually replaced by other technologies to reach the net-zero emissions target by mid-century.

Transitioning SA's power system to a net-zero position could help boost job creation provided the country can successfully localise elements of the renewable energy value chain while reskilling its workforce, says the report.

SA could become one of the world's biggest exporters of green hydrogen and green fuels as its world class renewable energy resources could enable it to produce the gas at a highly competitive cost of below \$160/kg by 2030.

"To help fund this journey and ensure competitive cost of capital, access to international green finance will be required to succeed," the report says.

"To enable this pathway, cross-sector collaboration and a conducive policy environment will be critical."

The publication of the report comes just a few days after the



Many benefits: By leveraging its renewable energy sources, SA can fully decarbonise its power sector while unlocking economic growth and job creation opportunities, says the Power Sector Decarbonisation Report released on Wednesday. /Simon Mathebula

UN Intergovernmental Panel on Climate Change (IPCC) warned that the world's reliance on fossil fuels is causing the earth's surface temperature to rise at a faster pace than at any other time in the past 2,000 years.

It also comes at a time when SA banks and asset managers are coming under increasing pressure to stop financing carbon-intensive projects such as thermal coal mines. While most

financial groups such as Ninety One, the asset manager spun out of Investec, have argued for a "just transition" that would give developing nations time to gradually implement more environmentally sustainable energy systems, some activists dismiss this notion.

Robyn Hugo, the director of climate-change engagement at Just Share, argues that SA's status as one of the most unequal

societies on earth as well as being a major carbon emitter means it is irrational to use the country's development challenges as an excuse to delay taking action on climate change.

"A rapid and extensive scaling up of renewable energy generation is the most cost-optimal energy pathway for the continent, and presents significant economic benefits and opportunities," she says. "This is not con-

troversial, despite the outdated narratives peddled by many in government and business about fossil fuels being required for development, job creation and baseload power. It is, of course, clear that the transition away from existing fossil fuels must not only be carefully managed, but must provide credible alternatives for inclusive and sustainable growth."

theunissen@businesslive.co.za