



## **ENERGY HUBS SET TO TAKE KZN TO GREAT ECONOMIC TRANSFORMATION HEIGHTS**

WITH a clear-cut focus on positioning KwaZulu-Natal as the leading hydrogen ecosystem hub, attracting investments and creating jobs, the Richards Bay Industrial Development Zone (RBIDZ) was one of many entities that participated in the Energy Transformation Summit held in eThekweni recently.

A first of its kind in South Africa – and certainly not the last – the two-day summit was hosted by eThekweni Municipality with the aims of outlining the energy transformation agenda and strategies linked to building energy security, as well as sharing its natural gas strategy and green hydrogen plans for the near future. The summit also focused on addressing the City's declining energy security and the impact of load shedding on the industrial economy.

With rising oil prices, the ongoing Russia-Ukraine war and a weak rand, South Africa is strongly considering an alternative, effective and blended means of energy. One form of energy that is gaining prominence around the world is green hydrogen.

Green hydrogen, also regarded as green gold (even though its green properties revolve around its sustainability and not colour), is produced by splitting water molecules through electrolysis using energy from renewable sources such as wind, hydropower and solar. With many practical applications for both industrial and residential environments, green hydrogen energy can be used as an alternative for fuel, for heating homes, and to power steelwork plants.

Richards Bay is earmarked as the hub that will supply natural gas via the existing Lilly pipeline infrastructure (also known as Secunda-Durban natural gas pipeline) up inland and down to eThekweni, in order to increase the capacity of the pipeline.

On day two of the summit, RBIDZ Chief Operations Officer Muzi Shange discussed the prospect of positioning KZN as the leading energy export hub. According to Shange, while KwaZulu-Natal faces the challenge of not having a single renewable energy project, it is optimistic that the available energy projects – specifically the gas projects – can assist with

easing the pressure on the energy grid and be a fast forward solution to the imminent energy crisis faced by the country.

“In Richards Bay, we have a site earmarked for 3 000 megawatts of gas-to-power that has an environmental authorisation. We are currently waiting for a Section 34 Determination to allow a R73-billion project to get off the ground, in order for us to produce at least 3 000 megawatts of power to stabilise KZN’s energy system. With the burning issues relating to energy alternatives, which could still have a negative impact on the environment due to emissions, we will seek to use advanced technologies and innovation to capture carbon to allow for clean energy.

“KZN is not going to be producing green hydrogen energy due to its lack of renewable energy projects. However, KZN is identified as an exporter. We can create these hubs as we have ports that will allow us to export hydrogen to international markets.

“The strategic location of KZN allows us to have inter-linkages with the Southern African Development Community (SADC) and have leverage on the existing infrastructure, as we already have gas pipes connecting from Secunda to Richards Bay and eThekweni. In eThekweni, we have the multi-purpose pipeline that connects to Johannesburg.”

EThekweni Mayor, Mxolisi Kaunda said the City is committed to building a sustainable energy sector. He believes that hydrogen energy is good for the economy and presents opportunities as an alternative fuel of the future.

“Natural gas continues to be the largest source of energy. The Russia and Ukraine conflict has put extraordinary pressure on natural gas markets. However, every crisis presents an opportunity for economic growth and new value-add products. We believe that the penetration scale of hydrogen could provide markets with clean molecules necessary to decarbonise hard-to-abate sectors of our economy.”

The eThekweni council has established the South Durban Energy and Chemicals Park (SDECP), which seeks to work with all relevant stakeholders to effectively repurpose the South African Petroleum Refineries site into the SDECP.

“The SDECP will include energy storage infrastructure, liquefied natural gas (LNG) import terminals, marine bunkering, trucks, floating systems, a re-gasification unit, and gas-to-power which will provide electricity for the eThekweni municipality. With green energy and hydrogen gas, we believe the gas demand for KZN will grow significantly over time.”

Kaunda added that the City aims to be the hydrogen economic capital of South Africa, supported by various stakeholders and the successful implementation of the City's Hydrogen Strategy and Natural Gas Strategy.

Speaking last week at the Africa Energy Indaba held in Cape Town, Shange reiterated the unwavering position of the RBIDZ in driving energy-related projects that are a major boost in the company's investment pipeline to tackle energy security, as well as high unemployment.



Pictured at the eThekweni Energy Transformation Summit (from left): Damane Hlalele, director for planning and advisory at Arup; Sibusiso Mazibuko, executive chairman at Cato Ridge Dry Port; Muzi Shange, RBIDZ COO; Amanda Makgoga, renewable energy sector specialist at Transnet; and Linda Myeza, oil and gas sector specialist at Transnet National Port Authority (TNPA).



From left: Vusi Sithole, founder and director of Hybrid Control Systems; Muzi Shange, RBIDZ COO; and Xolile Mabuse, director of Energy Efficiency and Demand Management at the Department of Mineral Resources and Energy.