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Immediate Release

SANEDI bids farewell to SA Centre for Carbon Capture and Storage

The South African National Energy Development Institute has long been host to a successful and lesser-known initiative that seeks to see South Africa's carbon footprint minimised through the capture and storage of carbon dioxide emissions. Through the South African Centre for Carbon Capture and Storage (SACCCS), SANEDI has been supporting the country's efforts to be more environmentally responsible. In a new development, considering the geological aspects involved in this climate change solution, the SACCCS has been transferred to the Council for Geoscience (CGS), which is sure to see further success of this initiative in the country.

SANEDI GM for cleaner fossil fuel use and head of SACCCS, Dr Tony Surridge, explains how this initiative came to be in South Africa: "With South Africa joining the Carbon Sequestration Leadership Forum (CSLF) in 2004, after attending the inaugural meeting in 2003, it was noted that carbon capture and storage (CCS) was a likely technology to mitigate CO_2 emissions in South Africa. Studies into its potential were then undertaken by the Council for Scientific and Industrial Research, which stated that South Africa has captureable emissions and appropriate geological formations to store the gas. Consequently, it was decided to undertake a proof of concept of geological storage under local conditions. In light of this, the SACCCS was established in 2009 in partnership with the then Department of Energy (DoE), industry and international stakeholders." Since then, the CCS Roadmap received cabinet endorsement. To date, SANEDI has enjoyed successful forays into CCS, including:

- In depth skills and capacity building for CCS operations through public outreach and formal courses.
- Cooperative agreements between DoE and the World Bank for finance of four CCS projects.
- Financial and in-kind support from Norway, UK, EU, CSLF and the Global Carbon Capture and Storage Institute for specific investigations leading to a Pilot Storage Project.

- Stakeholder engagement outreach activities.
- The commissioning of the Council for Geoscience to develop a Atlas on Geological Storage of Carbon Dioxide in South Africa and identification of suitable storage sites.
- International collaboration on research and development.
- Awards of bursaries leading to about twenty post-graduate degrees and another ten in progress.
- Completion of project data and planning for the Pilot Carbon Dioxide StorageProject.

“South Africa is reliant on fossil fuels for most of its primary energy supply,” explains Dr. Surridge. “This has led to an approximate 400 Mt of CO_2 emissions per year. Notwithstanding the recent advances made in renewable energies and energy efficiency measures, it is evident that fossil fuels will remain the main contributor to South Africa’s energy economy for some decades to come. Until nuclear and renewables become more dominant in the national energy supply, CCS is a critical measure to mitigate our carbon footprint and to facilitate a just transition.”

CCS is an internationally tried and tested technology to decrease CO_2 emissions. The technology involves four stages: 1) The capture of CO_2 from the emissions of industry; 2) Transport to a suitable storage site, usually by pipeline; 3) Injection into an appropriate geological storage site, usually 1-2 km deep; and 4) Monitoring and verification to ensure safety and permanent storage. “The geological formation for storing CO_2 is critical, hence the Ministerial approval move to host the SACCCS within the CGS. We have long been working with the CGS on CCS projects, and look forward to further success under their direction,” concludes Dr Surridge.

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About SANEDI
The South African National Energy Development Institute (SANEDI), established by the Government, directs, monitors and conducts applied energy research to develop innovative, integrated solutions to catalyse growth and prosperity in the green economy. It drives scientific evidence-driven ventures that contribute to youth empowerment, gender equity, environmental sustainability and the 4th Industrial Revolution, within the National Development Plan (NDP), through consultative, sustainable energy projects. For more information, go to www.sanedi.org.za.