Press Release
Date 21 November 2019
Immediate Release

Decade of energy reform, growth

The National Energy Act, promulgated in November 2008, enabled the mandatory provision of energy data by suppliers and, in its 2009 Digest of South African Energy Statistics, the Department of Energy released data on the energy sector[1].

"This report indicated that renewable energy contributed approximately 8% of South Africa's primary energy supply in 2006, mostly centred on the concept of biomass fuel," explains Barry Bredenkamp, General Manager for Energy Efficiency at The South African National Energy Development Institute (SANEDI).

"A decade of intensive research and development by SANEDI and other key players in the renewables energy sector has seen massive change. The use of wind, solar and other renewable resources has grown and today the sight of windmills or solar panels is no longer a point of interest, so engrained has it become in the minds of the public."

REIPPP gains

"The Renewable Energy Independent Power Producer Procurement (REIPPP) programme began in 2011. Its purpose was to contribute to the alleviation of the electrical energy shortfall in South Africa, contribute towards socio-economic and environmentally sustainable growth and to start and stimulate the renewable energy industry in South Africa. The following technologies were considered as qualifying technologies for selection under the programme: onshore wind; concentrated solar thermal; solar photovoltaic; biomass solid; biogas; landfill gas and small hydro schemes.

---

[1] www.energy.gov.za/files/media/explained/2009%20Digest%20PDF%20version.pdf

"By 2014[2], there had been 2 127.66 MW of bids, predominately in the solar photovoltaic (PV) and wind sector. Of these, 28 bids were accepted. By May 2019[3], 102 IPP projects had arisen from four bidding round windows, with the procurement of 6 422 MW of renewable energy, out of which 3,876 MW has come online. The REIPPP programme's contribution to the environment reduced South Africa's carbon emissions by about 33.2 million tons of carbon dioxide and saved 39.2 million kilolitres of water, bas at 31 December 2018.

In its eight-year period, REIPPP attracted R209.4 billion in committed private sector investment (24% of which was foreign direct investment), and provided much needed jobs and local investment.

"The publication of the government's Integrated Resource Plan (IRP) 2019 has included sustainable options in its energy mix for the future, taking into account low-cost electricity options.

"By 2030, South Africa will aim for additional capacity of 14.4 GW wind power, 6 GW solar, 3 GW of gas, 2.5 GW hydro power, 2.088 GW storage, and finally 1.5 GW of coal."

Winds of change

"In a joint project with the Department of Mineral Resources and Energy and various funding agencies, SANEDI has supported the Wind Atlas for South Africa (WASA) project, which utilises the information gained from wind measurement masts.

September 2010 saw the erection of nine wind measurement masts covering the Western Cape, some parts of the Eastern Cape and the Northern Cape. Five wind measurement masts, covering the remaining areas of the Eastern Cape, KwaZulu-Natal and Free State, became operational in November 2015. Four wind measurement masts covered the remaining parts of the Northern Cape in December 2018. The 18 wind measurement masts now cover 75% of South Africa's land area.

"The Wind Atlas depicts local surface wind climate, such as mean wind speed or mean wind power density that a wind turbine or wind farm would operate in. Its statistics enable predictions, such as annual energy production (AEP) of a wind turbine and expected capacity factor. This information allows the identification of specific areas in South Africa that have the capacity to enable large or small-scale exploitation of wind energy.

International solar recognition

[2] www.usea.org/sites/default/files/event-file/497/South_Africa_Country_Presentation.pdf
[3] https://futuregrowth.co.za/newsroom/reippp-comes-of-age/

“This year, thanks to two major solar thermal projects, South Africa leapt from relative obscurity into the global top 20 of such installations, driven by the Southern African Solar Thermal Training and Demonstration Initiative (SOLTRAIN), a SANEDI partner.

Funded by the Austrian Development Agency and co-funded by the OPEC Fund for International Development, SOLTRAIN is a regional initiative on capacity building and demonstration of solar thermal systems in the SADC region.

Next ten years

“The current IRP envisages a country that will move from the current 8.7% of renewable energy to a much higher percentage of alternatives to coal-based energy, which will improve climate change statistics and develop a new local economy of renewables manufacturing.

“SANEDI is poised to assist South Africa with research and implementation of various renewable projects,” concludes Bredenkamp.

Ends 719 words

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.