



Press release - FINAL

Structures Along the N4 Are Garnering Public Interest

The Council for Scientific and Industrial Research (CSIR) has revealed that the strange structures, which caused widespread public interest when they were erected on its Pretoria campus in full view of the N4 highway, are part of an advanced solar energy system that is providing the institution with electricity and research benefits.

Now that the system is up and running, the CSIR is working with the SA National Energy Development Institute (SANEDI) to explore the most effective options to enable solar-powered electricity generation systems to supply electricity when the sun is not shining.

The CSIR structures that have created great public interest are a solar array consisting of 1, 800 photovoltaic (PV) modules covering a total surface area of 3, 493 m². The modules are controlled by a ground-mounted single-axis solar tracker that allows them to tilt and follow the movement of the sun from east to west. The tracking system is generally more expensive to install and maintain but produces more electricity than a fixed/non-tilting system. The CSIR says the tracking PV facility is the first 100% South African designed and made tracking system and substructure in the country. "People are becoming familiar with seeing fixed-position solar panels on roofs, but for people with little knowledge of renewable energy, the CSIR solar array must have appeared as a strange sight," says Dr Karen SurrIDGE, project manager of renewable energy at SANEDI, the state-owned agency mandated by government to coordinate renewable energy research and development in South Africa. "The CSIR solar array is fully operational and its high visibility on one of the busiest stretches of road in the country gives us an opportunity to make more people aware of renewable energy and its value."

The CSIR project provides multiple benefits, explains SurrIDGE. It is a valuable research facility and training ground for PV engineers and technicians, but it also generates 4% of the electricity required by the CSIR Pretoria campus. This is equivalent to the amount of electricity needed to power 200 middle-income households. By being able to produce some of its own electricity, the CSIR is also able to contribute to reducing the amount of electricity Eskom is required to generate for their demand and to easing the impact load shedding.

The solar power generated by the facility will equate to an annual carbon dioxide saving of approximately 1, 200 tons, which will significantly reduce the CSIR's carbon footprint and help South Africa to meet its international commitment to combat climate change.

"We want the public to appreciate that although renewable energy can only be generated when the sun is shining or the wind is blowing, it can nevertheless play a valuable role," explains

SurrIDGE. “Like many large enterprises, the CSIR operates mainly during the day when conditions for solar energy generation are highly favourable. A PV system is therefore ideal for an institution such as the CSIR that has its main energy demand during the day. You can tailor technology to meet your requirements.

“Of course, many companies and households still need electricity when the sun is not shining, and the obvious way in which a solar plant can continue to provide electricity is to equip the system with some form of storage. This would allow the PV plant to store surplus electricity generated during the day and to supply this at night and particularly during peak periods when the national electricity grid is under the greatest pressure.

“The CSIR and SANEDI are therefore collaborating with large companies to explore several storage options using mainly battery technology for small- to large-scale PV systems. We will keep the public informed of progress in this exciting project.”

Ends.

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.

Issued on behalf of SANEDI by One Union:

For more information, visuals and or interview requests, please contact Thembaletu Khumalo on +27 82 352 2314 / email prcomms@oneunion.co.za or Lisa Pellatt on +27 84 553 4620 / email lisa@oneunion.co.za.