Local company's solution means a tangible ROI from renewable energy solutions

Netshield South Africa, a Westcon-Comstor Southern Africa company, has developed a renewable energy (RE) solution that will increase the power production capabilities of a solar panel array by up to 45%.

The Netshield NPVT5 dual-axis solar tracker enables a solar panel array to follow the sun vertically and horizontally so that it is always perpendicular to the sun and collecting the maximum amount of solar power available. So while many South African households and businesses have been sceptical of implementing RE solutions in the past because of the hefty initial costs, this solution promises a tangible ROI.

"I call it our sunflower effect because that's exactly how it behaves, following the sun from sunrise to sunset wherever it is in the sky no matter what season it is," says Inus Dreckmeyr, CEO at Netshield South Africa, "This tracker makes the investment in a solar array worth it because it saves people money in the long run and they will see a return on their investment faster."

"The NPVT5 collects solar energy for the longest possible period of the day with the most accurate alignment to the sun as its position shifts during the day and with the seasons. Its dual-axis tracking capability is combined with durable hardware and systems, complete with everything needed including the solar tracking tower, support systems, dual-axis motorised tracking hardware and embedded controller."

The NPVT5 is accurate, high performance, easily installed and can be remotely monitored through SMS's, positioned and controlled through Netshield's remote monitoring solutions. Depending on the size of a panel each solar tracker can carry 5.5 Kilowatts (kW) – 7.4kW. All components are pre-drilled and ready to assemble and no sheet metal screws or field welding is required. Its motor runs infrequently and well below load limits and its functional design guarantees at least 25 years' functioning.

Trackers have a hot-dipped galvanised steel structure and are equipped to work with recommended MPPT's and inverters. They are programmed to stow at a wind speed of 13m/s with a capability of surviving gust loads of 150km/h. The NPVT5 is well suited to residential and small to medium commercial power plants but with scalable manufacturing Netshield is able to ship trackers for solar power plants ranging in size from 5 kW to Megawatts.

"While the overarching benefit of the NVPT5 may be that it delivers a tangible ROI there are other reasons to implement this solution including saving electricity and increasing the reliability of your power," says Dreckmeyr.

"But before buying any RE solution it is imperative to do some decent planning. You need to do an energy evaluation to see where you can save power and implement a strategy accordingly. You also need to do your research and talk to an expert because there is no point in buying solutions that aren't right for your environment or worse still, are poor in quality but high in price."

Along with this RE solution, Netshield also provides an array of services to assist clients before and after implementation. These include:

- A site evaluation.
- Feasibility studies which comprise of energy requirement calculations, solar system performance and cost analysis.
- Assistance with electrical design to reduce total energy consumption.
- On-site webcams that provide real-time eyes on the array to ensure that it is running optimally.
- Live monitoring of a solar power system at each site every day.
- Live updates and performance reports.
- Downloading of Kilowatt/hour data.
- Real-time power plant email updates showing status of all trackers.
- Scheduling of trackers for regular wash mode to achieve maximum

power generation.

- Running of periodic system scans to ensure performance.
- Remotely updating tracking system software.
- Remote monitoring of solar power plants to ensure maximum power generation and 99% uptime.

“A RE system is not just a product to us, which is why we choose to support our clients in the process of adopting one every step of the way by providing them the services and expertise they need to get the most out of their chosen solutions. Our sunflower is a vital component of any solar array if it is expected to deliver not only more power, but a ROI that makes the initial layout worth it.”

Netshield manufactures a variety of both single and dual-axis trackers used in various photovoltaic and focal point applications.