Belgotex has Africa's largest rooftop solar plant

Belgotex Floorcoverings in Pietermarizburg has invested in the expertise of Sustainable Power Solutions to transform one of their roofs into Africa's largest industrial grid-tied solar plant.

Image courtesy of graur codrin /
FreeDigitalPhotos.net

Recognising the trend of ever increasing electricity prices, Belgotex made the decision to build a 1MW solar plant on the 100,000m^2 roof of their manufacturing facility at a cost of R17m as part of their strategy to offset 5% of their carbon emissions. Power Solutions installed the solar plant in two and a half months, and the system will be ready for implementat by early November 2013.

The system is built on the north-facing roof of the facility at an angle of 15 degrees resulting in a yield of 1 415MWh per annum. The entire installation comprises 4,080 poly crystalline modules each rated at 245 Watt peak. The solar modules a tied to 64 Danfoss three-phase grid inverters and the output of the grid inverters is integrated into Belgotex's electricity system at 11,000 Volts. The integrated web server function in the inverter compiles data on the status of the solar plant wh is fed to a web portal, and can be easily accessed by Belgotex and the operations and maintenance team.

The energy generated daily is estimated to power 200 average households and avoids carbon emissions of 1 386 tons ea year from not having to rely on coal produced electricity. "The interest of commercial and industrial clients in solar power generation is what will make solar power sustainable in South Africa and will ultimately lead to a change in how the electric sector in South Africa will operate to incorporate the increasing contribution of intermittent renewable energy generation," Sustainable Power Solutions MD, Axel Scholle says.