

## Fortsig roof-top PV training system

PV system installed on the roof of CoT's electricity depot in Fortsig. The electricity produced will mainly be used to supply the Fortsig facilities. Excess energy will be fed into the city's network. Design and installation of the PV system was executed by Southern Cross Renewable Energy Technologies PTY Ltd. As part of the quality assurance the PV system was issued a PV GreenCard.

Location		Van der Hoff Road extension, Boekenhoutkloof, Pretoria
Orientation	Direction	North
	Tilt angle	22°
Irradiance (global, horizontal)		2035 kWh/m <sup>2</sup> a
Capacity (DC)		3.08 kW <sub>p</sub>
Modules	Manufacturer	Eterbright Solar Corporation
	Type	CdF-1100A1
	Technology	Poly-crystalline silicon standard module
	Quantity	28
	Power	110 Wp
	Efficiency	13.7 %
	Power Warranty	linear 25 year (0.8 %/a)



PV module array; Photographer Manyatsa Monyamane, © GIZ

Inverters	Manufacturer	SMA Solar Technology AG
	Type	Sunny Tripower 5000TL
	Technology	Three-phase, transformerless, grid-tied, multi-string inverter
	Quantity	1
	Power	max. power output: 5 kW
	Efficiency	max. 98 %; average (European) 97.1 %
	Product Warranty	5 years
Mounting system	Manufacturer	Renusol GmbH
	Type	MS+ Portrait
	Installation type	roof parallel
	Material	Aluminium
Monitoring	SMA Smart Webconnect (part of the inverter); remote data access via SMA Sunny Portal	
Expected yield (over the expected lifetime of 25 years)	98 MWh	
Avoided CO <sub>2</sub> emissions (over the expected lifetime of 25 years)	95803 t of CO <sub>2</sub>	



Inverter and accessories;  
Photographer Manyatsa Monyamane, © GIZ

### City of Tshwane Municipality

Utility Services Department  
Energy & Electricity Division  
[www.tshwane.gov.za](http://www.tshwane.gov.za)

Contact

**Mokale Rasetlola**  
Director: Technical Support &  
Technology Management  
[mokaler@tshwane.gov.za](mailto:mokaler@tshwane.gov.za)

### Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Registered offices Bonn and Eschborn, Germany  
South African-German Energy Programme (SAGEN)  
[sagen@giz.de](mailto:sagen@giz.de)  
[www.giz.de](http://www.giz.de)  
[www.sagen.org.za](http://www.sagen.org.za)

Contact

**Dr Sascha Thielmann**  
SAGEN Programme Manager  
[sascha.thielmann@giz.de](mailto:sascha.thielmann@giz.de)

**Christopher Gross**  
Head: Renewable Energy  
[christopher.gross@giz.de](mailto:christopher.gross@giz.de)

**Philipp Vanicek**  
Energy Advisor  
[philipp.vanicek@giz.de](mailto:philipp.vanicek@giz.de)

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