maxx | solar energy PTY Ltd.

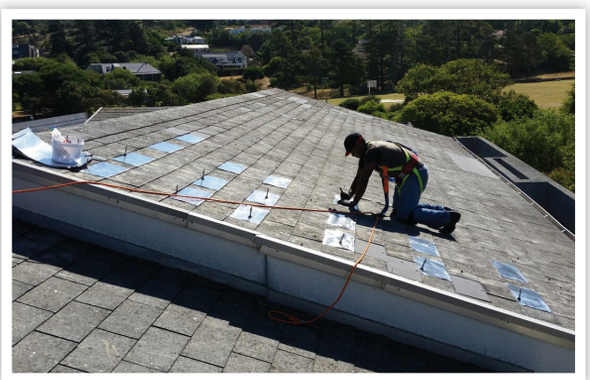
excellence in photovoltaics

PV Renting Pilot Project – Dominican Grimley School

Valley Road, Hout Bay, 7806 Republic of South Africa

maxx I solar energy PTY Ltd.

The maxx | solar energy group with headquarters in Thuringia, Germany provides its customers with all services related to photovoltaics. Through maxx | solar energy PTY Ltd., the maxx group extended its presence into South Africa in 2011. The service range of maxx | solar energy PTY Ltd. includes training, wholesale and consulting. As the South African Premium Partner of the German PV system integrator IBC SOLAR, we stand for the highest quality standards in wholesale of photovoltaic technology. Our maxx-solar academy is Africa´s Premier Training Institute on Solar Power. It was established in 2011 by the German Solar Energy Society DGS and the maxx group. Since 2011 hundreds of engineers, architects and craftsmen have been taking part in our trainings and many of them now work as certified maxx I team installers.



German dena RES Project South Africa at the Dominican Grimley School

Financing tools for PV systems are not readily available in South Africa. The lack of financing options is one of the main obstacles to the implementation of small scale photovoltaic systems in South Africa. The German company maxx I solar & energie GmbH & Co. KG has experience with PV Renting projects in Germany. PV renting means, one entity invests in a PV system (System Owner) and rents the system to a second entity (System operator). The system operator uses the electricity and pays a monthly rental to the system owner. Furthermore, the system owner gets the option to buy the system after 10–15 years (similar to car leasing).

Thanks to the dena Renewable Energy Solutions Programme the maxx group is able to transfer the PV Renting approach to South Africa. A first 20 kWp pilot project was installed at the Dominican Grimley School in Hout Bay February 2016.

PV Renting at the Grimley School

The maxx group took care of the engineering and material supply of the PV system. The maxx I team installer SOLARPowerPB PTY Ltd. installed the system and the start-up company SunRent PTY Ltd. invested in the system.

The PV system will substitute expensive grid electricity, which costs the school 1.87 ZAR/kWh excl. VAT. Only in the first year, the school will save minimum R19,500 excl. VAT. The school rents the system for 10 years and can buy it afterwards for R30,000 excl. VAT. The rent starts with R3,640 excl. The annual increase of the rent is 3% plus CPIX. The school can save up to R4.7 Mill. over 20 years considering an annual grid electricity tariff increase of 13.5%.

Contact

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Tamboerskloof, Cape Town 8001
www.maxx-energy.co.za

You need a maxx | team installer in your area?
Please contact info@maxx-energy.co.za and we will get you in touch with one of our certified maxx | team installer.

maxx | solar energy PTY Ltd.

PV Renting Pilot Project – Dominican Grimley School, 20 kWp

PV System	
system type	Embedded Generation (SSEG) registered at City of Cape Town
PV generator capacity	20 kWp
spec. annual yield	1,668 kWh / kWp
performance ratio (PR)	85.8 %

Power	
total electricity consumption	144,000 kWh / year
Solar PV electricity generation	33,600 kWh / year
Solar PV electricity generation	2,800 kWh / month
CO_2 emissions avoided	up to 40 t / year

Rent and Saving	
monthly rent	R3,640 excl. VAT
annual rent escalation	3% plus CPIX
monthly savings 2016	R1,625 excl. VAT
rental time	10 years
Residual value	R30,000 excl. VAT

Stakeholders	
system owner	SunRent PTY Ltd.
system operator	Dominican Grimley School
material supplier	maxx solar energy PTY Ltd.
system installer	SOLARpowerPB PTY Ltd. HH ROOFING PTY Ltd.
engineering	RED Engineering PTY Ltd.
marketing campaign	German Energy Agency (dena)

Q.CELLS

Modules
95 Modules,
Q.Cells G3 210W
(3 roofs, total PV generator surface 128 m²)

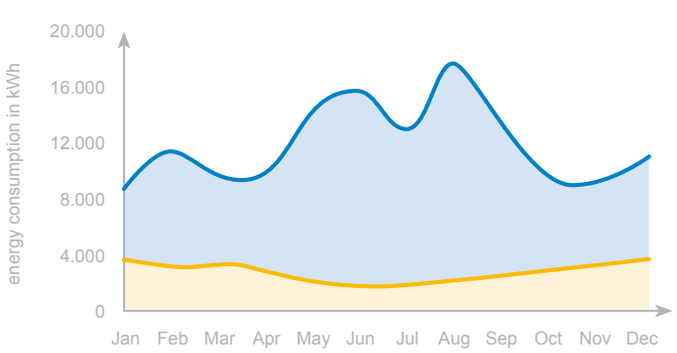
solaredge

Inverter
SolarEdge SE27.6K,
with 95 optimizers
(43 OP 250 und 52 P300)

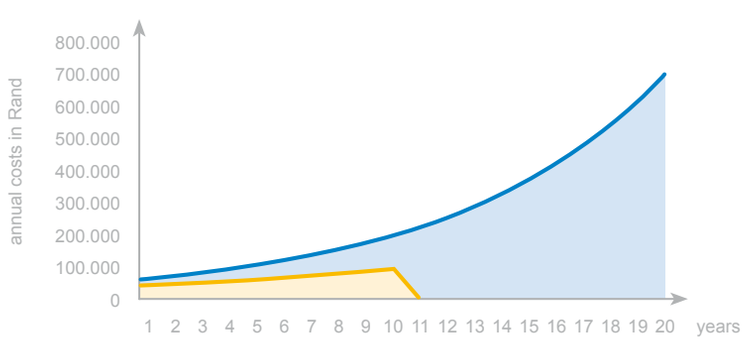
Mounting System
IBC TopFix200 incl.:
support profiles,
joint connectors,
universal connectors and
hanger bolts,
middle and end clamps

IBC SOLAR

Substitution of grid by PV electicity
*Real **Total consumption** vs **PV production***



Comparison of the electricity cost substituted by PV
Grid electricity vs **PV electricity*****



* Domestic tariff, annual increase according ESKOM 13,5%
** Annual increase of 9% (CPIX plus 3%)

The dena RES Project South Africa is part of the worldwide dena Renewable Energy Solutions Programme coordinated by Deutsche Energie-Agentur (dena) - the German Energy Agency - and co-financed by the German Federal Ministry for Economic Affairs and Energy (BMWi) within the German Energy Solutions Initiative.

energy solutions
MADE IN GERMANY

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Project lead:
dena
German Energy Agency