

Grid-Connected System: Simulation parameters

Project : St Johns College - 100kWp GT

Geographical Site

Yemmiganur

Country India

Situation

Latitude 15.76° N

Longitude 77.47° E

Time defined as

Legal Time Time zone UT+5.5

Altitude 376 m

Albedo 0.20

Meteo data:

Yemmiganur

Meteonorm 7.1 (1981-2010), Sat=100% - Synthetic

Simulation variant : New simulation variant

Simulation date 28/05/17 08h32

Simulation parameters

Collector Plane Orientation

Tilt 15°

Azimuth 0°

Models used

Transposition Perez

Diffuse Perez, Meteonorm

Horizon

Free Horizon

Near Shadings

No Shadings

PV Array Characteristics

PV module

Si-poly

Model

Orb - 250P

Custom parameters definition

Manufacturer

Orb Energy Pvt Ltd

Number of PV modules

In series

20 modules

In parallel 20 strings

Total number of PV modules

Nb. modules

400

Unit Nom. Power 250 Wp

Array global power

Nominal (STC) 100 kWp

At operating cond. 89.8 kWp (50°C)

Array operating characteristics (50°C)

U mpp 554 V

I mpp 162 A

Total area

Module area 657 m²

Cell area 584 m²

Inverter

Model

Solar Inverter RPI M50A

Original PVsyst database

Manufacturer

Delta Energy

Characteristics

Operating Voltage 200-800 V

Unit Nom. Power 50 kWac

Max. power (=>35°C) 55 kWac

Inverter pack

Nb. of inverters 4 * MPPT 50 %

Total Power 100 kWac

PV Array loss factors

Array Soiling Losses

Loss Fraction 7.5 %

Thermal Loss factor

Uc (const) 29.0 W/m²K

Uv (wind) 0.0 W/m²K / m/s

Wiring Ohmic Loss

Global array res. 23 mOhm

Loss Fraction 0.6 % at STC

LID - Light Induced Degradation

Loss Fraction 2.5 %

Module Quality Loss

Loss Fraction 1.0 %

Module Mismatch Losses

Loss Fraction 1.0 % at MPP

Incidence effect (IAM): User defined IAM profile

10°	20°	30°	40°	50°	60°	70°	80°	90°
0.998	0.998	0.995	0.992	0.986	0.970	0.917	0.763	0.000

System loss factors

Wiring Ohmic Loss

Wires: 3x120.0 mm² 70 m

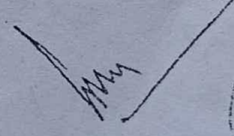
Loss Fraction 2.0 % at STC

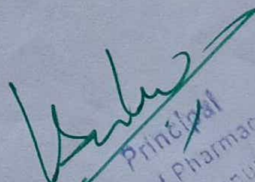
User's needs :

Unlimited load (grid)



COMMERCIAL INVOICE

Orb Energy Pvt Ltd, 19/8/47/A, R C Road Hathi Ramji Colony, Ground Floor Tirupathi-517502-A P VAT no. 37071982193-CST NO:37071982193		Ref No :1617300306-307-310 DATED-31.03.2017		
Buyer St Johns Educational Society St Johns College of Engineering And Technology, Yerrakota, Yemmiganur - 518360 Andhra Pradesh M - 8500753007		Buyers Order no. 16400221		Email India
		Delivery Terms :		
Buyer's Contact Details :		Delivery Address (if other than the buyer address)		
Payment Terms :				
Product Code	Model	Quantity	Unit Price	Total Amount
SL100KAN65238	Solectric 100kWp with 50kVA x 2 GT (Fit)	1	6190477.00	6190477.00
	VAT @ 5%			309523.85
	Less Subsidy			1870000.00
	Discount			700000.00
Amount chargeable in words : Thirty Nine Lakhs Thirty Thousand Only			Total Amount	3,930,000.85
Our Bankers : Axis Bank Ltd., Sona Tower, No.8, 32E Cross, 4th T Block, Jayanagar, Bangalore - 560041 A/c Name: Orb Energy Private Limited A/c No.911020049684781 Swift Code : AXISINBB052 RTGS Code : UTIB0009052		For Orb Energy Pvt Ltd   Authorised Signatory		


Principal
St. Johns College of Pharmaceutical Sciences
Yerrakota, Yemmiganur-518360 A P