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)