

JAYAMUKHI INSTITUTE OF TECHNOLOGICAL SCIENCES
(An Autonomous Institution)

The following details are pertaining to the Solar plant in the Institution

100 kwp solar on-grid system with net metering facility

Jayamukhi Institute of Technological Sciences (JITS) initiated Green Energy in the campus in the year 2019 to reduce the carbon emissions and to protect the environment. JITS installed roof top 100 kwp solar on-grid system with net metering facility.

100 kwp solar on-grid system

1	Project Site	JAYAMUKI-100kwp
2	District Name	Warangal
2	Name of the State	Telangana
4	Location	M/s Jayamukhi Educational Society, Mukdumpoor(Vil) Chennaraopeta (MD)
5	Irradiation details considered	Simulation data attached
6	Type of system	100 Kwp solar On-grid system with net metering facility
7	Type of PV Modules Considered for the offer	Crystalline Poly
8	Proposed Capacity	100Kwh
9	Projected Module Area Required	10,000 Sq Feet
10	Capacity of each Module proposed	320 W
12	Inverter Capacity	50 KVA X 2Nos
12	Projected Energy Production per year	1,53,000 Units/per year
14	Total Project Cost	62,50,000.00

Calculation for unit cost power generation

Total Project Cost for 100kw (-) Rs.	59,50,000/-
Project maintenance for Next 25 years@50/%	29,75,000/-
Total Project cost for 25 years	89,25,000/-
For first 10 years average unit generation	15,30,000 units
With an efficiency 90%	
Next 15 years average unit generation	20,65,500 units
With an efficiency 80%	
Total average units generation for 25 years	35,95,500 units
Therefore Per unit cost generation = Total project cost/units generated	
	= 89,25,000/35,95,500
Per unit cost	2.49/-

PAY BACK CALCULATIONS OF SOLAR On_GRID SYSTEMS

Catpcity of the System Kwp	100 KW
Price per Watt	59.5 Rs
Total Project Cost	5950000 Lacs
Subsidy @ 30%	1785000
Project Cost after Subsidy	4165000 lacs
No.of Units generated by the system	153000 Units
From DG utilistaion	15300

@10%		
From EB Utilisation 90%	137700	
generation cost by using Generator per year	290700	(Considering 1litre diesel generates 3units)
Generation cost by Using EB power per year	1170450	
EB and generator cost per annum	1461150	
Depreciation as per section 32 of the income tax act 1961		
Project cost after Subsidy	4165000	
1 st year @80%	N/a	
Depreciation @33.3%	N/A	
2nd year depreciation on balance 20%	N/A	
Depreciation @ 33.3%	N/A	
3rd year depreciation on balance 20%	N/A	
Depreciation @33.3%	N/A	
4th year depreciation on balance 20%	N/A	
Depreciation @33.3%	N/A	
5th year depreciation on balance 20%	N/A	
Depreciation @33.3%	N/A	
Total Depreciation in five years	N?A	

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Principal
Jayamukhi Institute of Technological Sciences
Narsampet, Warangal-506332,

after Subsidy project
cost

4165000

EB and Generator cost per
annum

1461150 per year

Pay back period for
the system

2.85049447

4 years