Company

SC PETAWATT ENERGIA SRL
Str. Faget , Nr.6
110386 Pitesti
Romania

Contact Person:
Iliescu Flavius

Phone: 0040 248 223 003
Fax: 0040 248 223 232
Mail: petawatt.energia@gmail.com

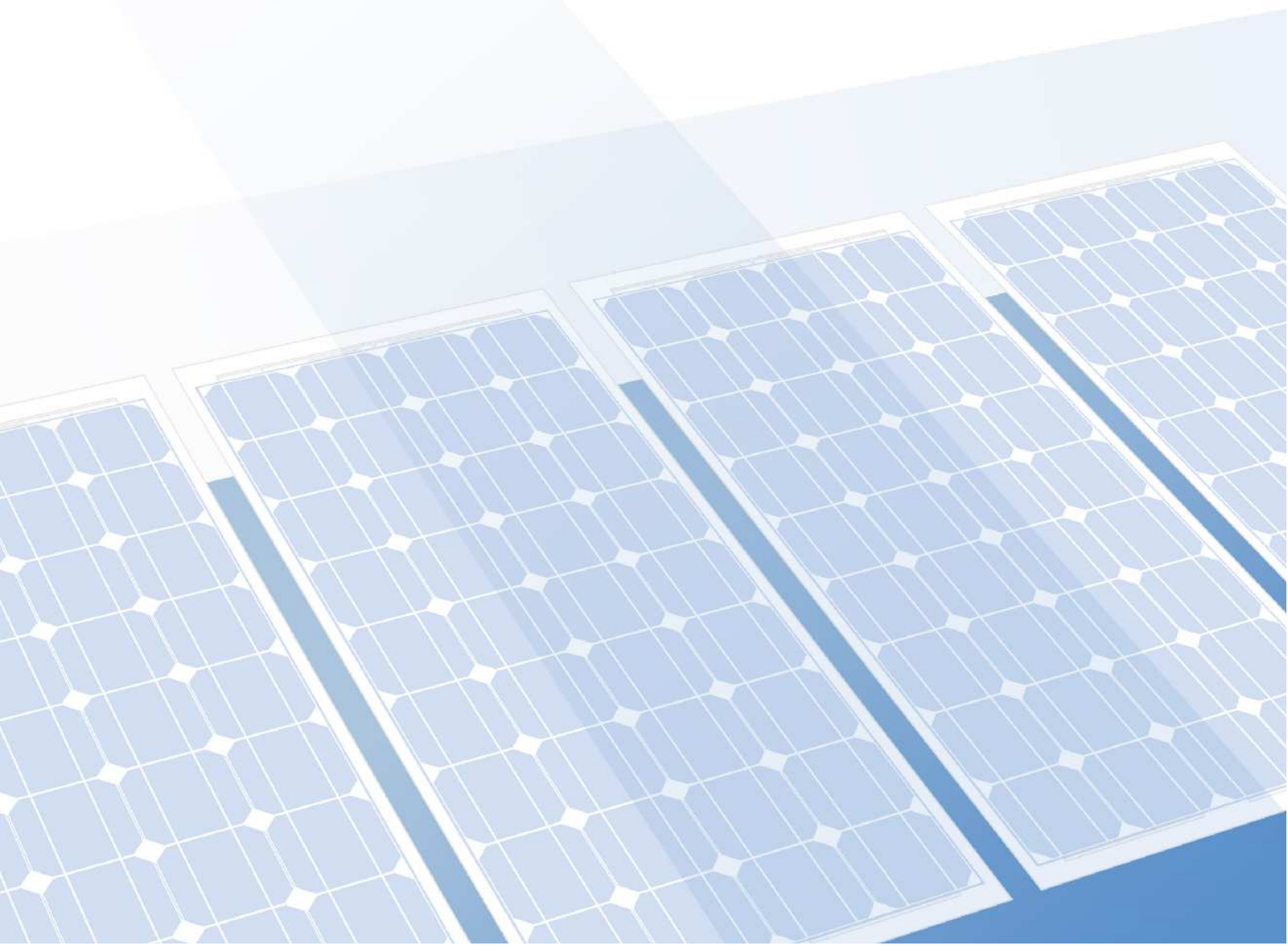
Client

SISTEMUL CONTINE :

26 buc. PV ET-Solar 240 W Poly x 158,40 euro = 4118,40 euro
1 buc. Invertor Danfoss TLX Pro+6 Kw x 1515,00 euro = 1515,00 euro
1 buc. Strucutra AL completa (pentru acoperis) = 499,20 euro
40 ml Cablu Fi 6 x 0,87 euro = 34,80 euro
4 buc conectori ,,y,, x 1,21 euro = 4,84 euro
1 buc. Manopera de instalare : 430,00 euro

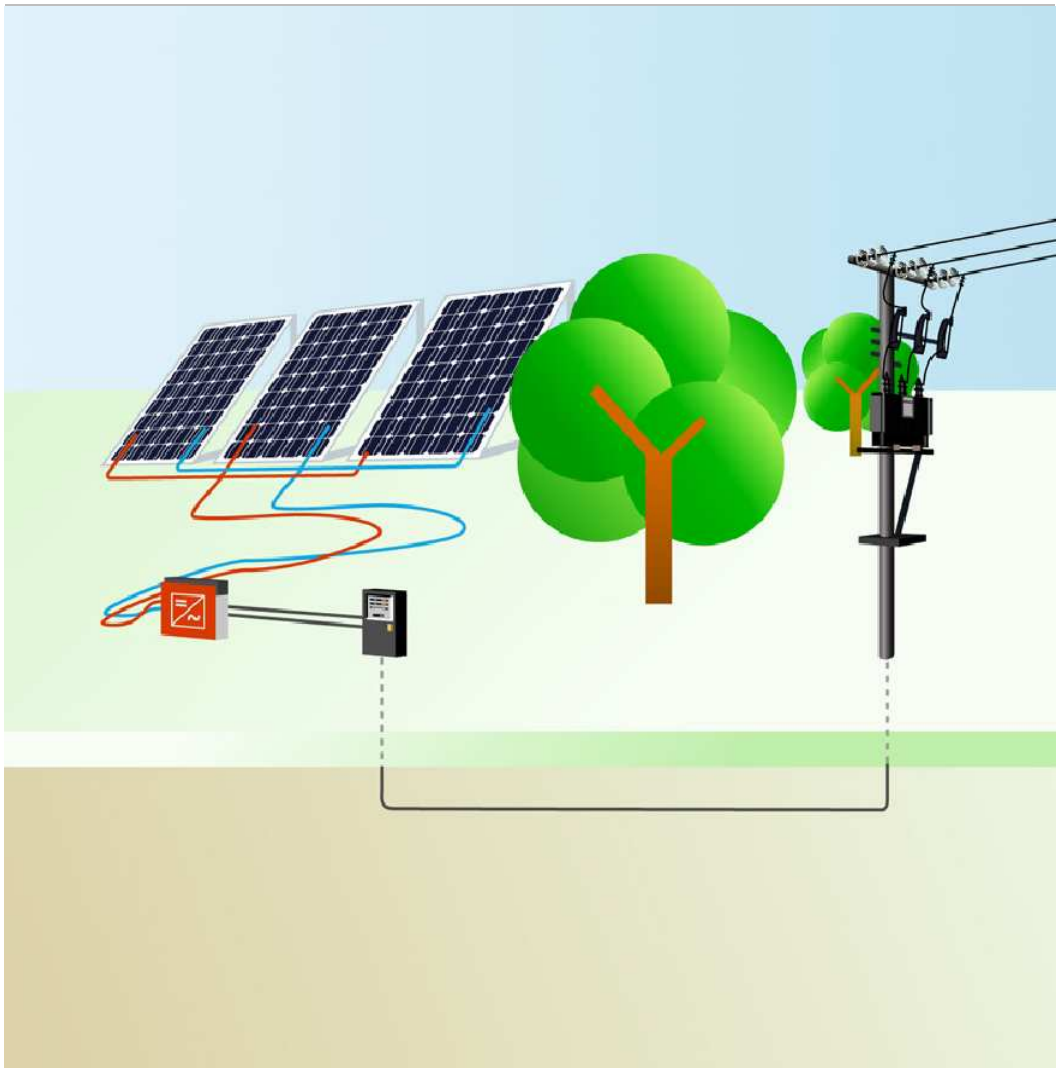
TOTAL PRET : 6602,24 euro

- Pretul nu contine costurile de transport materiale si costurile cu deplasarea echipelor.
- Pretul pentru manopera se poate modifica in raport cu gradul de dificultate intampinat la instalarea panourilor



PV System

Location	Cluj-Napoka
Climate Data	6,24 kWp
PV Generator Output	42 m²
Generator Surface	26
Number of PV Modules	1
Number of Inverter	



The Output

PV Array Energy (AC Network)	8169 kWh	
Performance Ratio	87,8 %	
Spec. Annual Yield	1309 kWh/kWp	

Set-up of the system

Location	
Climate Data	Cluj-Napoka
Type of System	Grid Connected PV System
Solar Generator	
Module Area	Module Area 1
Solar Modules*	26 x ET-M660240BB
Manufacturer	ET Solar
Inclination	30 °
Orientation	South (180 °)
Installation Type	Mounted - Roof
Generator Surface	42 m²
Losses	
Shade	0 %
Inverter	
Module Area	Module Area 1
Inverter 1*	1 x TLX 6k
Manufacturer	Danfoss Solar Inverters
Configuration	MPP 1: 1 x 13 | MPP 2: 1 x 13
Displacement Power Factor (cos φ)	+/- 1

Simulation results

PV System

PV Generator Output	6,2 kWp
Spec. Annual Yield	1309 kWh/kWp
Annual Grid Feed-in	8169 kWh/year
Stand-by Consumption	13 kWh/year
Performance Ratio	87,8 %

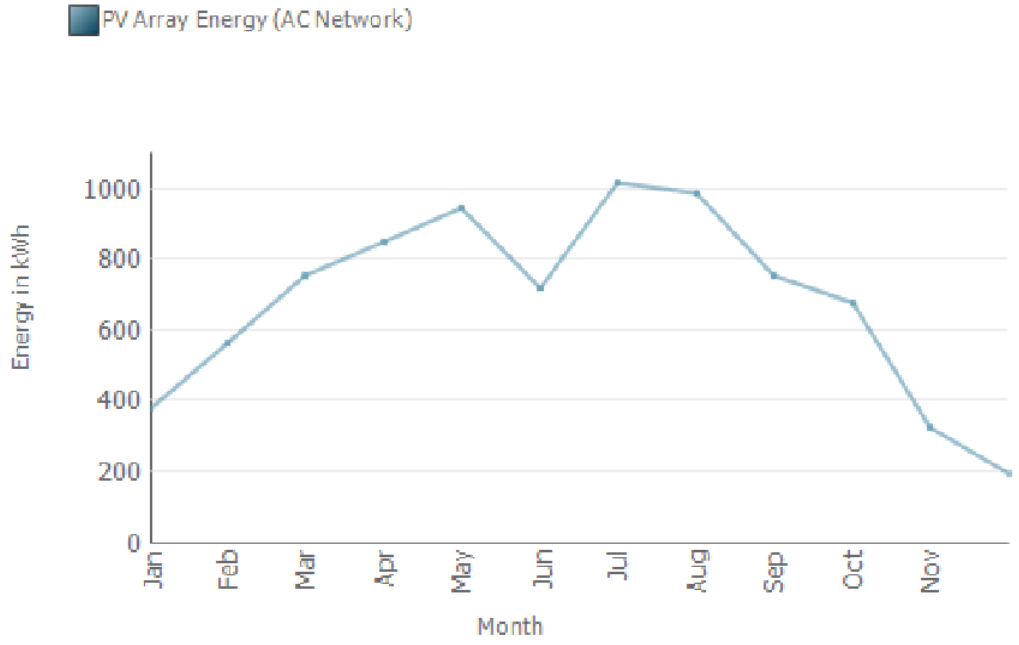


Figure: Production Forecast

PV Module: ET-M660240BB

Manufacturer	ET Solar
Available	Yes
Electrical Data	
Cell Type	Si monocrystalline
Only Transformer Inverters suitable	No
Number of Cells	60
Number of Bypass Diodes	3
Mechanical Data	
Width	992 mm
Height	1640 mm
Depth	40 mm
Frame Width	11 mm
Weight	19,32 kg
Framed	No
U/I Characteristic at STC	
MPP Voltage	30,12 V
MPP Current	8,02 A
Output	240 W
Open Circuit Voltage	37,37 V
Short-Circuit Current	8,6 A
Increase open circuit voltage before stabilisation	0 %
U/I Part Load Characteristics	
Standard Part Load Operation	No
Irradiation	200 W/m²
Voltage in MPP at Part Load	28,4681 V
Current in MPP at Part Load	1,604 A
Open Circuit Voltage (Part Load)	33,6385 V
Short Circuit Current at Part Load	1,72 A
Further	
Voltage Coefficient	-115,85 mV/K
Electricity Coefficient	1,72 mA/K
Output Coefficient	-0,44 %/K
Incident Angle Modifier	97 %
Maximum System Voltage	1000 V
Spec. Heat Capacity	920 J/(kg*K)
Absorption Coefficient	70 %
Emissions Coefficient	85 %

Inverter: TLX 6k

Manufacturer	Danfoss Solar Inverters
Available	Yes
Electrical Data	
DC Power Rating	6,2 kW
AC Power Rating	6 kW
Max. DC Power	6,2 kW
Max. AC Power	6 kW
Stand-by Consumption	10 W
Night Consumption	1 W
Feed-in from	20 W
Max. Input Current	24 A
Max. Input Voltage	1000 V
Nom. DC Voltage	700 V
Number Feed-in Phases	3
Number of DC Inlets	2
With Transformer	No
Change in Efficiency when Input Voltage deviates from Rated Voltage	0,3 %/100V
MPP Tracker	
Output Range < 20% of Power Rating	99 %
Output Range > 20% of Power Rating	99,9 %
No. of MPP Trackers	2
Max. Input Current per MPP Tracker	12 A
Max. recommended Input Power per MPP Tracker	6 kW
Min. MPP Voltage	250 V
Max. MPP Voltage	800 V