



PV SOLAR POWER TECH

210013, ranavangulam, vaduakar
Opp Athikalathu Alangara Maligai, Pudukkottai - 6220
Phone: 9655287856, 96552895
Mail: pvsolarpowertech@gmail.com
www.pvsolarpowertech.com

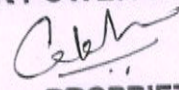
Date: 2.12.2022

To

The Principal,
Sri Bharathi Engineering College for Women,
Kaikkurichi,
Pudukkottai - 622 303

Respected Madam,

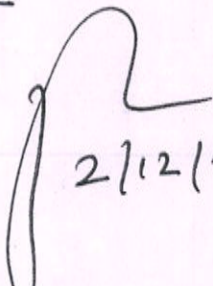
Satisfied with the prior consultancy work of the Department of Electrical and Electronics Engineering of your institution in solar panel estimation and selection, we request assigning faculty members for on-site evaluation and estimation.

For PV SOLAR POWER TECH

PROPRIETOR



forwarded to

HOD / EEE



2/12/22

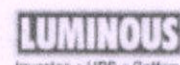

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

"The Experts"


Su-Kam
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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Pudukkottai - Aranthangi Road,

Kaikkurichi, Pudukkottai - 622 303.

Date : 06.12.2022

To

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai - 622 001.

Dear Sir,

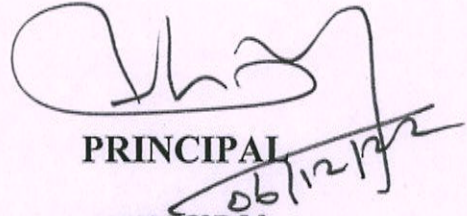
Greetings from Sri Bharathi Engineering College for Women!

With reference to the letter dated 2/12/2022, we are in immense pleasure for offering the opportunity to carry out the technical assistance in Estimation of rating and numbers of Solar PV Panel required for your clients. Our college faculty from Department of Electrical and Electronics Engineering will carry out the proposed work within stipulated time. We would like to bring to your kind notice that the work may cost around Rs.5000 in total for a single estimation.

We are looking for your kind consideration and reply.

Thanking you


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.


PRINCIPAL
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT



PV SOLAR POWER TECH

2700/3, Pallavangulam, vadakar
Opp Athikalathu Alangara Maligai, Pudukkottai - 6220
Phone: 9655287856, 96552895
Mail: pvsolarpowertech@gmail.co
www.pvsolarpowertech.co

Date: 15.12.22

From

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai – 622 001.

To

The Principal,
Sri Bharathi Engineering College for Women,
Kaikkurichi,
Pudukkottai – 622 303.

Respected Madam,

We would like to confirm the quotation that we have received from your institution. We insist to start the work once you have received this letter and finish the work within 7 to 10 days.



For PV SOLAR POWER TECH

Colaba
PROPRIETOR

Hand / EEG

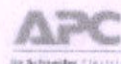
for necessary action please

[Signature]

[Signature]

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

"The Experts"





SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Kaikkurichi, Pudukkottai - 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CONSULTANCY PROJECT WORK

REPORT

**Estimation of Power Rating and Numbers of Solar PV Panel Require for
Installation in Mobile Store**

SUBMITTED

TO

PV Solar Power Tech,

2700/3, Pallavankulam,

Vadakarai,

Pudukkottai – 622 001.

REPORT DATE: 22.12.2022

**Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.**

As requested, / Order by PV Solar Power Tech, Pudukkottai dated 15.12.22, the following are the details for your kind perusal.

1. Load estimation

Load	Watts	Hour/Day	Number of loads	Watt-Hr
LED	10	11	10	1100
CFL	20	11	05	1100
Fan	60	11	3	1980
BLDC Fan	30	11	2	660
LCD TV (55'')	150	11	1	1650
Laptop	40	11	2	880
Personal computer	210	11	1	2310
Total Daily Watt-Hour/day or Wh/day	880			9680

1.a. Load Estimation with power factor of 0.8 approximately.

Load	Watts	Hour/Day	Number of loads	Watt-Hr
LED	10	11	10	1100
CFL	20	11	05	1100
Fan	60	11	3	1980
BLDC Fan	30	11	2	660
LCD TV (55'')	150	11	1	1650
Laptop	40	11	2	880
Personal computer	210	11	1	2310
Total Daily Watt-Hour/day or Wh/day	1100			12100

2. Determining the inverter rating:

The require energy is supplied from a battery bank through an inverter. The total load that would be connected to the inverter is around 1100 [880/0.8] Watt.

Then, the inverters power handling capacity should be around 1500 Watt as available in market.

3. Daily energy supplied to the inverter:

The daily energy consumed by the load is 12100 Wh.

The energy input to the inverter with the efficiency of 93%, is $(12100)/(0.93) = 13010.75$ Wh, approximated to 13011 Wh.


Dr. S.THILAGAVATHI M.E.,Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

4. Deciding the system voltage:

1 Battery of 24V can be used to have typical PV system voltage as 24V.

5. Sizing of batteries:

The required charge capacity = $(13011\text{Wh}) / (24\text{ V}) = 542.12\text{ Ah}$.

The number of batteries of rating 24V, 200 Ah with Depth of Discharge (DOD) of 70% required is $(543\text{ Ah}) / (100 \times 0.70) = 7.75$.

6. Sizing of PV modules:

The energy supplied at the input of battery terminal with battery efficiency of 90% is, $(12100\text{ Wh}) / (0.90) = 13444.44\text{ Wh}$.

The total Ampere hour to be supplied by PV Panel should be, $13444.44\text{ Wh} / (24\text{ V}) = 560.18\text{ Ah}$.

The total amperes from the PV modules, $(560.18\text{ Ah}) / (8.5\text{ h}) = 65.9\text{ Ampere}$.

The typical value of voltage and current of 440 W_p module at maximum power point (V_m and I_m) would be about 49 V and 11 A, respectively.

The number of PV modules required is, $66 / 11 = 6$. Therefore, 6 PV Panels required as per calculation.

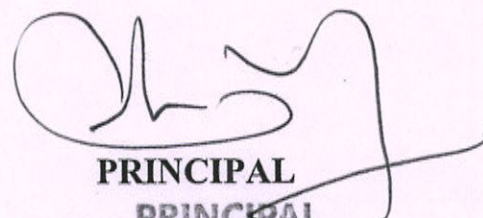
Considering various environmental factors and solar efficiency 6 panels of rating 440 W_p is required to deliver Total Daily Watt- Hour/day of 9680.

Sl. No	Description	Rating	Quantity
1.	Inverter	1500 Watt	01
2.	Battery	24V, 200 Ah	04
3.	Solar PV Panel	440 W_p , 49 V / 11 A	06


PROJECT INVESTIGATOR

[T. PARTHIBAN, AP/EEE]


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.


PRINCIPAL
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303,
PUDUKKOTTAI DISTRICT



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
Pudukkottai - Aranthangi Road,
Kaikkurichi, Pudukkottai - 622 303.

Date : 22/12/2022


Utilization Certificate

Certified that the amount of rupees Rs.5000 (Five thousand only) sanctioned by PV Solar Power Tech, Pudukkottai, during the academic year (2022-2023), in favour of Department of Electrical and Electronics Engineering Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai has been utilized for Estimation of Solar PV Panel requirement. The purpose of amount sanctioned has been fulfilled and delivered as per conditions of grant were satisfied.


PROJECT INVESTIGATOR

[T. PARTHIBAN, AP/EEE]


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.


PRINCIPAL
22/12/22

PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT



PV SOLAR POWER TECH

Z/00/3, Panavangulam, vadakar

Opp Athikalathu Alangara Maligai, Pudukkottai - 6220

Phone: 9655287856, 96552895

Mail: pvsolarpowertech@gmail.co

www.pvsolarpowertech.co

Date: 24.10.2022

To

The Principal,
Sri Bharathi Engineering College for Women,
Kaikkurichi,
Pudukkottai - 622 303

Respected Madam,

We look forward the quotation for Estimation of rating of Solar Photovoltaic Panel for domestic loads and other necessities, for our clients. In this connection the technical assistance may be invited from your institution by submitting as proposal for the above-mentioned work.



For PV SOLAR POWER TECH

Calahan
PROPRIETOR

100/EEG

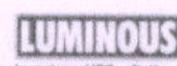
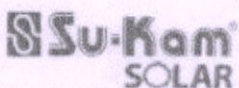
Preparat ad evaluation

may please be sent
at the earliest - *[Signature]*

[Signature]

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

"The Experts"





SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Pudukkottai - Aranthangi Road,

Kaikkurichi, Pudukkottai - 622 303.

Date : 31/10/2022

To

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai – 622 001.

Dear Sir,

Greetings from Sri Bharathi Engineering College for Women!

With reference to the letter dated 24/10/2022, we are in immense pleasure for offering the opportunity to carry out the technical assistance in estimation of rating and numbers of Solar PV Panel required for your clients. Our college faculty from Department of Electrical and Electronics Engineering will carry out the proposed work within stipulated time. We would like to bring to your kind notice that the work may cost around Rs.3250 in total for a single estimation.

We are looking for your kind consideration and reply.

Thanking you

Dr. **S. THILAGAVATHI M.E., Ph.D.,**
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

PRINCIPAL
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT

Date: 9.11.2022

From

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai – 622 001.

To

The Principal,
Sri Bharathi Engineering College for women,
Kaikkurichi,
Pudukkottai – 622 303

Respected Madam,

We would like to confirm the quotation that we have received from your institution. We insist to start the work once you have received this letter and finish the work within 7 to 10 days.

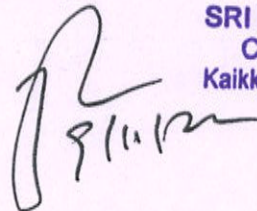


For PV SOLAR POWER TECH


PROPRIETOR

Head / EEG

for necessary action
please


9/11/22


Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Kaikkurichi, Pudukkottai - 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CONSULTANCY PROJECT WORK

REPORT

**Estimation of Power Rating and Numbers of Solar PV Panel Require for
Installation in Domestic Appliances**

SUBMITTED

TO

PV Solar Power Tech,

2700/3, Pallavankulam,

Vadakarai,

Pudukkottai – 622 001.

REPORT DATE: 15.11.2022


Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

As requested, / Order by PV Solar Power Tech, Pudukkottai dated 9.11.22, the following are the details for your kind perusal.

1. Load estimation

Load	Watts	Hour/Day	Number of loads	Watt-Hr
Tube light	40	6	3	720
Fan	60	12	3	2160
TV (21'')	150	7	1	1050
Personal Computer	250	4	1	1000
Total Daily Watt-Hour/day or Wh/day	700			4930

1.a. Load Estimation with power factor of 0.8 approximately.

Load	Watts	Hour/Day	Number of loads	Watt-Hr
Tube light	40	6	3	720
Fan	60	12	3	2160
TV (21'')	150	7	1	1050
Personal Computer	250	4	1	1000
Total Daily Watt-Hour/day or Wh/day	875			6162.5

2. Determining the inverter rating:

The require energy is supplied from a battery bank through an inverter. The total load that would be connected to the inverter is around 875 Watt [$700 \text{ W}/0.8 = 875 \text{ W}$].

Then, the inverters power handling capacity should be around 1000 Watt as available in market.

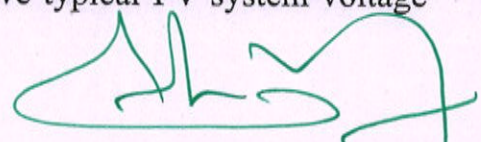
3. Daily energy supplied to the inverter:

The daily energy consumed by the load is 6163 Wh.

The energy input to the inverter with the efficiency of 93%, is $(6163)/(0.93) = 6626.88 \text{ Wh}$, approximated to 6627 Wh.

4. Deciding the system voltage:

2 Batteries each of 12V connected in series to have typical PV system voltage as 24V.



Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

5. Sizing of batteries:

The required charge capacity = $(6626.88 \text{ Wh}) / (24 \text{ V}) = 276.12 \text{ Ah}$.

The number of batteries of rating 12V, 100 Ah with Depth of Discharge (DOD) of 70% required is $(276.12 \text{ Ah}) / (100 * 0.70) = 3.944$, so 4 number of batteries can be preferred. Total Batteries required is 8 with 4 parallel connection with each 2 set of battery.

6. Sizing of PV modules:

The energy supplied at the input of battery terminal with battery efficiency of 90% is, $(6163 \text{ Wh}) / (0.90) = 6847.77 \text{ Wh}$.

The total Ampere hour to be supplied by PV Panel should be, $6847.77 \text{ Wh} / (24 \text{ V}) = 285.32 \text{ Ah}$.

The total amperes from the PV modules, $(285.32 \text{ Ah}) / (8 \text{ h}) = 35.66 \text{ Ampere}$.

The typical value of voltage and current of 335 W_p module at maximum power point (V_m and I_m) would be about 38.10 V and 8.80 A, respectively.

The number of PV modules required is, $35.66 / 8.80 = 4.05$.

Considering various environmental factors and solar efficiency 5 panels of rating 335 W_p is required to deliver Total Daily Watt- Hour/day of 4930.

Design Details:

Sl. No	Description	Rating	Quantity
1.	Inverter	1000 Watt	01
2.	Battery	12V, 100 Ah	08
3.	Solar PV Panel	335 W_p , 38.10 V/ 8.80 A	05


PROJECT INVESTIGATOR

[T. PARTHIBAN, AP/EEE]


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.


PRINCIPAL

PRINCIPAL

SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT



SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Pudukkottai - Aranthangi Road,

Kaikkurichi, Pudukkottai - 622 303.

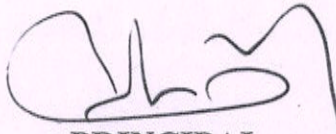
Date : 15.11.22

Utilization Certificate

Certified that the amount of rupees Rs.3250 (Three thousand two hundred and fifty only) sanctioned by PV Solar Power Tech, Pudukkottai, during the academic year (2022-2023), in favour of Department of Electrical and Electronics Engineering Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai has been utilized for Estimation of Solar PV Panel requirement. The purpose of amount sanctioned has been fulfilled and delivered as per conditions of grant were satisfied.


PROJECT INVESTIGATOR

[T. PARTHIBAN, AP/EEE]


PRINCIPAL
15/11/22


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

PRINCIPAL
SRI BHARATHI ENGINEERING
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KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT



PV SOLAR POWER TECH

2700/3, Pallavangulam, Vadakar
Opp Athikalathu Alangara Maligai, Pudukkottai - 6220

Phone: 9655287856, 96552895

Mail: pvsolarpowertech@gmail.com

www.pvsolarpowertech.com

Date: 12.7.2022

To

The Principal,
Sri Bharathi Engineering College for Women,
Kaikkurichi,
Pudukkottai - 622 303

Respected Madam,

Satisfied with the prior consultancy work of the Department of Electrical and Electronics Engineering of your institution in solar panel estimation and selection, we request assigning faculty members for on-site evaluation and estimation.



For PV SOLAR POWER TECH

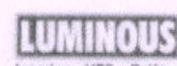
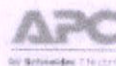
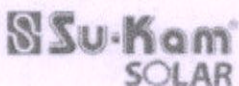
[Signature]
PROPRIETOR

Forwarded to
HOD/EEE

[Signature]
12/07/22

[Signature]
Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kalkkurchi - 622 303, Pudukkottai Dt.

"The Experts"





SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Pudukkottai - Aranthangi Road,

Kaikkurichi, Pudukkottai - 622 303.

Date : 18/7/2022

To

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai - 622 001.

Dear Sir,

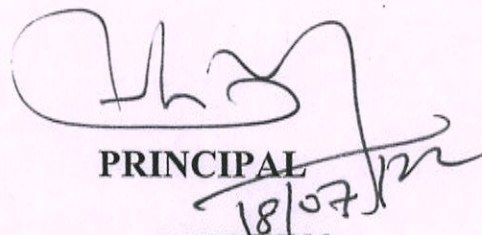
Greetings from Sri Bharathi Engineering College for Women!

With reference to the letter dated 12/7/2022, we are in immense pleasure for offering the opportunity to carry out the technical assistance in Estimation of rating and numbers of Solar PV Panel required for your clients. Our college faculty from Department of Electrical and Electronics Engineering will carry out the proposed work within stipulated time. We would like to bring to your kind notice that the work may cost around Rs.3250 in total for a single estimation.

We are looking for your kind consideration and reply.

Thanking you


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.


PRINCIPAL
18/07/22
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
KAIKKURICHI - 622 303.
PUDUKKOTTAI DISTRICT



PV SOLAR POWER TECH

2700/3, Pallavangulam, Vadakarai
Opp Athikalathu Alangara Maligai, Pudukkottai - 62201
Phone: 9655287856, 965528951
Mail: pvsolarpowertech@gmail.com
www.pvsolarpowertech.co

Date: 25.7.2022

From

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai - 622 001.

To

The Principal,
Sri Bharathi Engineering College for women,
Kaikkurichi,
Pudukkottai - 622 303

Hud/EEG
for necessary action
please
20/7/22

Respected Madam,

We would like to confirm the quotation that we have received from your institution. We insist to start the work once you have received this letter and finish the work within 7 to 10 days.



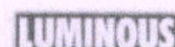
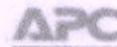
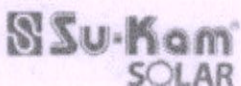
For PV SOLAR POWER TECH

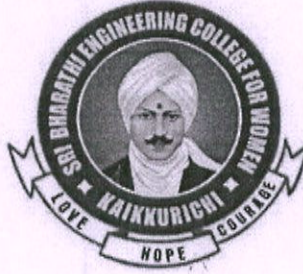
C. S. S.
PROPRIETOR

[Handwritten Signature]

Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

"The Experts"





SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Kaikkurichi, Pudukkottai - 622 303.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CONSULTANCY PROJECT WORK

REPORT

**Estimation of Power Rating and Numbers of Solar PV Panel Require for
Installation in Domestic Appliances**

SUBMITTED

TO

PV Solar Power Tech,
2700/3, Pallavankulam,
Vadakarai,
Pudukkottai – 622 001.

REPORT DATE: 3.8.2022


Dr. S. THILAGAVATHI M.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurichi - 622 303, Pudukkottai Dt.

As requested, / Order by PV Solar Power Tech, Pudukkottai dated 25.7.22, the following are the details for your kind perusal.

1. Load estimation

Load	Watts	Hour/Day	Number of loads	Watt-Hr
CFL	20	6	3	360
LED	10	5	3	150
Fan	60	10	2	1200
LCD TV (32'')	70	7	1	490
Desktop computer	220	4	1	880
Total Daily Watt-Hour/day or Wh/day	500			3080

1.a. Load Estimation with power factor of 0.8 approximately.

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CFL	20	6	3	360
LED	10	5	3	150
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LCD TV (32'')	70	7	1	490
Desktop computer	220	4	1	880
Total Daily Watt-Hour/day or Wh/day	625			3850

2. Determining the inverter rating:

The require energy is supplied from a battery bank through an inverter. The total load that would be connected to the inverter is around 625 [500/0.8] Watt.

Then, the inverters power handling capacity should be around 1000 Watt as available in market.

3. Daily energy supplied to the inverter:

The daily energy consumed by the load is 3850 Wh.

The energy input to the inverter with the efficiency of 93%, is $(3850)/(0.93) = 4139.78$ Wh, approximated to 4140 Wh.

4. Deciding the system voltage:

1 Battery of 24V can be used to have typical PV system voltage as 24V.


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5. Sizing of batteries:

The required charge capacity = $(4140 \text{ Wh}) / (24 \text{ V}) = 172.5 \text{ Ah}$.

The number of batteries of rating 24V, 200 Ah with Depth of Discharge (DOD) of 70% required is $(173 \text{ Ah}) / (100 * 0.70) = 2.47$, so 3 number of batteries can be preferred. But it's enough to 2 number of 24V / 200 Ah battery.

6. Sizing of PV modules:

The energy supplied at the input of battery terminal with battery efficiency of 90% is, $(3850 \text{ Wh}) / (0.90) = 4277.77 \text{ Wh}$.

The total Ampere hour to be supplied by PV Panel should be, $4277.77 \text{ Wh} / (24 \text{ V}) = 178.24 \text{ Ah}$.


The total amperes from the PV modules, $(178.24 \text{ Ah}) / (8 \text{ h}) = 22.28 \text{ Ampere}$.

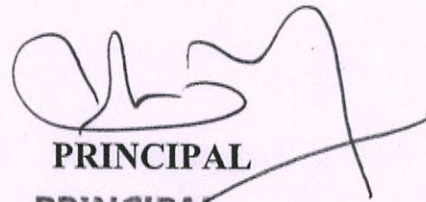
The typical value of voltage and current of 440 W_p module at maximum power point (V_m and I_m) would be about 49 V and 11 A, respectively.

The number of PV modules required is, $22.28 / 11 = 2.02$ Therefore, 2 PV Panels required as per calculation.

Considering various environmental factors and solar efficiency 2 panels of rating 440 W_p is required to deliver Total Daily Watt- Hour/day of 3080.

Sl. No	Description	Rating	Quantity
1.	Inverter	1000 Watt	01
2.	Battery	24V, 200 Ah	02
3.	Solar PV Panel	440 W_p , 49 V / 11 A	02


PROJECT INVESTIGATOR
[J. SATHYARAJ, AP(EEE)]


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PUDUKKOTTAI DISTRICT


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SRI BHARATHI ENGINEERING
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SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Pudukkottai - Aranthangi Road,

Kaikkurichi, Pudukkottai - 622 303.

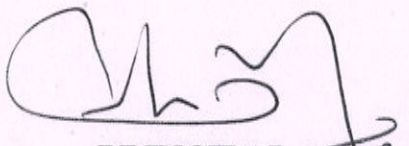
Date : 3/8/22

Utilization Certificate

Certified that the amount of rupees Rs.3250 (Three thousand two hundred and fifty only) sanctioned by PV Solar Power Tech, Pudukkottai, during the academic year (2022-2023), in favour of Department of Electrical and Electronics Engineering Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai has been utilized for Estimation of Solar PV Panel requirement. The purpose of amount sanctioned has been fulfilled and delivered as per conditions of grant were satisfied.


PROJECT INVESTIGATOR

[J. SATHYARAJ, AP/EEE]


PRINCIPAL
03/08/22


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