

महाराष्ट्र MAHARASHTRA

O 2019 O

VP 379606

2 8 SEP 2014

Strong Head Clerk / St. Comp

# **Affidavit**

I M/s Bijlee LED Lighting Pvt. Ltd has done the project of 50KW for Taywade College, Mahadula, Koradi, Tal.- Kamptee, Dist.- Nagpur hereby declare that the above mentioned project is commissioned by abiding following:

The standards and norms set by Ministry of New and Renewable Energy (MNRE) is maintained while installation of project.

The project has been installed under the supervision of electrical contractor/supervisor, the electrical parameters involved in the project have been considered under supervision of electrical contractor/supervisor.

All electrical norms are followed, electrical safety measures are taken in consideration and the project is electrically safe. Electrical contractor/supervisor has authorized the electrical safety measures and norms.

(Cont....2)



The mechanical safety norms while designing and installation of structure are strictly followed. The solar hot dip structure is tested, approved from engineer and is capable of bearing the load of solar panels, withstand natural parameters (wind, rain) over the duration of project life.

The roof of the building is capable of bearing the load of hot dip galvanised structure and solar panel over the period of project life.

I will be responsible for maintenance of the project over the period of Comprehensive Maintenance Contract (CMC) i.e., 5 years and for the remaining 20 years the beneficiary is responsible for undertaking the maintenance work of the project.

In case of any mishap from the solar project with the parameter mentioned above, I will be responsible. I hereby undertake for the above.

Sign of Project Developer: Bijlee LED Lighting Pvt Ltd.

Stamp:

Sign: •

Beneficiary Name: The Principal of Taywade College, Mahadula,

Koradi, Tal.- Kamptee,

Dist.-Nagpur

Prinetpal
Taywade College
Taywade Noradi Dist NAGPUR

MEDA Official Sign: Office Stamp:

# Taywade College (Arts, Commerce, Science) Mahadula-Koradi, Tal. Kamptee Dist. - Nagpur

Date: 23<sup>rd</sup> September 2019

To, MSEDCL Saoner

Sub: Request for Bi-directional Net Meter and Current Transformer Testing

Dear Sir,

We thank you for your sanction for connecting Solar Roof-top PV system of 50 kW on roof top on our premises of Taywade College (Arts, Commerce, Science) Situated at Mahadula – Koradi Tal.-Kamptee, Dist- Nagpur under Net Metering having consumer No. 410140005847.

We are hereby submitting Bi-directional Net Meter and Current Transformer for testing as detailed below:

Make : Secure
Model : Premier 300
Accuracy Class : 0.5 s
Type : 3 Phase Meter
Sr. No. of Bi-directional meter : XH411678

Make : Ashmor CT Ratio : 100/5

Sr. No. of CT : 70610016, 70610022, 70610023

Kindly do the needful and install the same at our premises at the earliest.

Thanking You, Yours Faithfully

Principal
Taywade College
Wahedula, Koraui Dist Mappur

For Head Mistress Taywade College (Arts, Commerce, Science) Mahadula – Koradi Ta- Kamptee Dist- Nagpur

Enclosed to this letter: Net Meter Test Certificate CT Test Report

Taywade College



# METER TEST CERTIFICATE

## 

Serial number : XH411678

Voltage : 240V CT Ratio : 100/5A Accuracy Class : 0.5s Ref. Standard : IS:14697

| 1.   | AC VOLTAGE TEST   | Rel. | Stand |
|------|---|------|-------|
| 6.   | TEST OF NO LOAD CONDITION                                     | :-   | PASS  |
| 4.   | TEST OF STARTING CURRENT CONDITION INSULATION RESISTANCE TEST | :-   | PASS  |
| 40   | POWER CONSUMPTION   | :    | PASS  |
| 6.   | TEST OF METERS CONSTANTS                                      |      | PASS  |
| 7.   | LIMIT OF ERROR  | · ·  | PASS  |
| 7/-1 | S. LKKOK  | 1.   | PACC  |

## IMPORT MODE ERRORS

| Load % Ib                          | 0.5 Lag               | 0.8 Lead | I UPF                          |
|------------------------------------|-----------------------|----------|--------------------------------|
| 200  <br>100  <br>10  <br>5  <br>2 | -0.16<br>0.00<br>0.13 |          | -0.11<br>0.01<br>0.02<br>-0.01 |

(e) %Reactive F de 3p4w)

| Load % Ib             | 0.5 Lag | 0.8 Lead |
|-----------------------|---------|----------|
| 200<br>100<br>10<br>2 |         | 0.01     |

### EXPORT MODE ERRORS

|   | (d) %Active Err | ors(Bala                                      | ance Mode                                       | 3p4w)                             | (e) %Reactive Errors(Balance Mode 3p4w)  |
|---|-----------------|---|---|-----------------------------------|--|
| + | Load % Ib  0    | .5 Lag (<br>-0.17 <br>0.00 <br>0.14 <br>-0.08 | 0.8 Lead <br>-0.04 <br>0.00 <br>-0.03 <br>-0.12 | -0.09 <br>0.00 <br>0.01 <br>-0.03 | Load % Ib  0.5 Lag 0.8 Lead   200  -0.06  -0.15  100  -0.01  0.01  10  -0.05  0.11  2  -0.13  0.10 |

Date :- 03/08/2019

This is a computer generated test certificate. No signature required.

Taywade College MAHADULA KORADI DIST NAGPUR

Secure Meters Limited Secure meters Emilied F 373-380 Bhamashah Industrial Area Kaladwas, Udaipur 313 003, India

*p*: +91 294 2650301-305 *f*: +91 294 2650310 e: udaipur@securemeters.com

Regd. & Head Office
"E" Class
Pratapnagar Industrial Area
Udaipur 313 003, India CIN No.: U74899RJ1987PLC029106

p: +91 294 2492300-305 f: +91 294 2492310 e: mktg@securemeters.com www.securemeters.com

# SKIPPER INDUSTRIES

W - 18 & 16, MIDC, Tq. Sinnar, Diel, Nasik - 422 103

Realn Cast Pine Tune LT o

# TEST REPORT FOR LT CT

Inner,- M/s Aakrutt Power Engineers Nagour,

|              | properties in the second   | HAND IN CORPORATION IN COLUMN | Rosin    | ast Ring   | TypeLT           | 01                                    |  |   |  |           |
|--------------|--|-------------------------------|----------|--|------------------|---------------------------------------|--|---|--|-----------|
| 1            | ol Testing 1-  | ng faliang and many up a      | 27/08/20 | )19  |                  | Freq. :- 50                           | нг   |   |  |           |
| A            | ed CT Ratio:   | 100/5A                        |          | VA:  | 6                | IS :-27051                            | The state of the s |   |  |           |
| Fo           | Rating :   | 5KA, 18                       | IFC .    | A STATE OF THE PARTY OF THE PAR | s.Level:         | · · · · · · · · · · · · · · · · · · · | 1332   | 19-140-2  | The special  |           |
| E.N          | lo :- R-70610001 T   |                               |          | Section of the last  | · 中华的特殊 的复数的现在分词 | 0.66/3KV                              |  | Class :   | 0.58   |           |
| DESCRIPTION. | CONTRACTOR STATEMENT OF STREET AND ASSESSED.   | W TOO TOO                     | 124      | Total C  | hty - 24 N       | OB .                                  |  | 4467  |  |           |
| Teat.        | No. :  | TT THE STREET                 |          |  |                  |                                       | P  | ago No:-  | 01/1   |           |
|              |  |                               | V        | A  | Call Salas       |                                       |  | CONTRACTOR AND PROPERTY AND PROPERTY AND PARTY. | /.A  |           |
| lp%          | * SR NO  |                               | 5        |  | 1,25             | SRNO                                  |  | 5   | A PRINCIPAL PRIN | 1.25      |
| 7            |  | R.E.V.                        | P.E. Min | and columns of the laboration in a   | P.C. Min.        |                                       | RE.%   | P.E. Min.                                       | AR.E.%   | P.E. Mi   |
| 120          |  | -0.79                         | 18       | 0.04   | 3                | R 70610022                            | 0.80   | 16  | A-0.01   | 6         |
| 7            | And the state of the   | -0.80                         | 9        | -0.33  | 3                |                                       | -0.08  | e l   | 0.32   | 4         |
| 120          |  | -0.10                         | 17       | 0.00   |                  | R = 70010023                          | -0.82  | 1.00 15   | 5×0.02   | 8         |
| 1            | A STATE OF THE STA | -0.78                         | 16       | 0.30   | 5.               | ALC: N                                | -0.03  | ± 18  | 0.30   | 3         |
| 120          | R - 70610003   | 90.07                         | 15       | 0.04   | A                | R - 70610024                          | -0.83  | 19  | +0.02  | 7         |
| 1            | The state of the s | -0.85                         | 78       | 0.03   | 5                | 350                                   | -0.05  | 8   | 0.32   | . 2       |
| 120          | R - 70010004   | -0.09                         | 0        | 0.30   | 8                |                                       | -1   |   |  | Carrier 1 |
| 1            | TO MORINGO   | -0.81                         | 16       | 0.01   | 7                |                                       |  |   | British of the   |           |
| 120          | R + 70010005   | -0.10                         | 7        | 0.28   | /2               |                                       |  |   | Charles (  |           |
| 1            | R - 70010006   | -0.61                         | 10       | 0.03   | 9                |                                       |  |   |  | 46 de 1   |
| 120          | 7,0010000  | -0.06                         | 6        | 0.26   | 5                |                                       |  |   |  |           |
| 用            | R - 70610007   | -0.77                         | 19       | 40.01  | p. 2.7           |                                       |  |   |  |           |
| 20           | The state of the s | +0.05                         | B        | 0.33   | 5                |                                       |  |   |  |           |
| 1            | R - 70510008   | +0.84                         | 16       | 0.02   | 7                | Velocity and the                      |  |   |  |           |
| 20           |  | 6-0.11                        | 0        | 0.34   | 2                | Maria                                 |  | 0   |  |           |
| 20           | R + 70510009   | -0.81                         | 17       | +0.03  | 6                | Market Comments                       |  |   |  |           |
| 1            |  | -0.05<br>+0.76                | В        | 0.32   | 2                |                                       |  |   | ters.  |           |
| 20           | R - 70610010   | -0.03                         | 18       | 0.04   | 5                |                                       |  |   |  |           |
| 1            |  | -0.77                         | 19       | 0.26<br>+0.05  | 2                | Section Plantage                      |  |   |  |           |
| 20           | R - 70610011   | -0.09                         | 5 1      | 0.33   | 8<br>5           | Projection in the second              | 2000 - 100 - |   |  | 1155.10   |
|              | R - 70610012   | -0.85                         | 19       | -0.01  | 6                |                                       |  |   |  |           |
| 0            | 10010012   | -0.04                         | 9        | 0.31   | 2                |                                       |  | 45.5  |  |           |
|              | R 4 70810013   | -0.79                         | 17       | -0.03  | 7                |                                       |  |   | 3.62   |           |
| 20 /         | 10010010   | -0.04                         | 8        | 0.27   | 2                |                                       |  |   |  |           |
|              | RF 70510014  | -D.84                         | 18       | 0.02   | 8                |                                       |  |   |  | * 2       |
| 0            | 134  | -0.12                         | - 8      | 0.30   | - 5              | Liberta (a. F                         |  |   |  |           |
| _            | R - 70610015   | -0.83                         | 17       | -0.05  | 8                |                                       |  |   |  |           |
| 0.           |  | +0.09                         | 7        | 0.33   | 4                |                                       |  |   |  |           |
|              |  |                               |          |  |                  |                                       |  |   |  |           |

Over Voltage Interturn Test: OK Polarit

1) Parmary to Sec Frame & Earth 3KV for 1 min OK Pelarity Test: OK

-0.79

-0.03

-0.84

-0,03 -0.83

-0.10

-0.80

-0.03

48.0

-0.03

-0.84

-0.11

R - 70610016

R - 70610017

R - 70510018

R - 70610019

R - 70610020

R - 70610021

120 - 1

120

1

120

2)Sec to Frame & Earth 3KV for 1 min OK

Esting Tacharge

Taywade College MAHADULA KORADI DIST NEGPUR

0.33

0.28

0.01

0.27

-0.02 0.34 -0.04 0.27 -0.01

0.25

-0.02

0.33

8

17

8

8

6

16

6

8

1

8

9

6



Shri Sachhidanand Shikshan Sanstha's

# **TAYWADE COLLEGE**

(Arts, Commerce, Science) (U.G. & P.G.) Mahadula - Koradi, Tah. Kamptee Dist. - Nagpur NAAC ACCREDITED 'B' GRADE Recognised Centre for Higher Learning and Research

Principal Dr. Sharyou B. Taywade 9822716608

Chairman Dr. Babanrao Taywade 9422145290

......

Ref. No.: 7cm C/2408/2019

Date :20/9/2019

प्रति, सहाय्यक अभियंता, महाराष्ट्र राज्य इलेक्ट्रक वितरण लिमिटेड कंपनी, खापरखेडा

विषय : ट्रान्सफॉरमची क्षमता वाढविण्याबाबत

महोदय.

वरील विषयाचे अनुषंगाने आपणस विनंती करण्यात येते की आमचे तायवाडे महाविद्यालयातील ग्राहक क्र. ४१०१४०००५८४८ असुन आम्हाला सोलर रूफ टफ च्या परवानगीकरीता जुने ट्रान्सफॉरमर १०० kw क्षमतेचे असून आम्हाला २०० kw क्षमतेचे ट्रान्सफॉरमर MSEDCL च्या १००% योजने अंतर्गत मंजुर करून देण्यात यावे हि विनंती.

Receipt Clerk

M.S.D. Co. Ltd. S/Dn. Khaparkheda (डॉ.सौ. शरयू बबनराव तायवाडे) Taywatte College

तायवीडे अमहाविद्यासम्ब

महादुला, कोराडी, जि. नागपूर.

## MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.



Office of The Executive Engineer (Saoner Division)

Gangasadan, Ward No. 3, Saoner,

**2** Ph.: (0711) 3232020,

Email: eenagpur2msedcl@gmail.com

No. EE/SAO/Tech/Solar RT/ 4469

Dtd 18/09 /2019

TO, M/s Tayawade Collage Koradi .

Sub:- Sanction for connecting the solar PV projects/systems of 50 KW on Rooftop or any mounting Structure in your premises to the Distribution network of MSEDCL.

Ref: - 1. MERC (Net Metering for Roof-top Solar Photo Voltaic Systems) Regulations. 2015

2. MSEDCL, Commercial Circular No. 258.

3. Your Application vide No.21232640 Dt.14.8.19 received

4. Registration Fees paid vide M.R.No. QSBI7759420261 DT 15.07.2019.

Dear Sirs,

In exercise of the powers delegated as per the Commercial Circular No. 258 dated 25/01/2016 clause - 12(12.4) the undersigned is pleased to sanction your application for connecting the solar PV projects/systems on Rooftop or any mounting structure in your premises to the Distribution network of MSEDCL to your unit at above address.

| Consumer No. | Voltage<br>Level                     | Sanctioned<br>Connected load<br>KW | Proposed AC capacity of<br>Roof-top Solar PV System to<br>be installed | Purpose     |
|--------------|--------------------------------------|------------------------------------|--|-------------|
| 410140005847 | 400/415<br>Volts<br>(DTC<br>4364007) | 50 KW                              | 3 20 Kw  | Residential |

EE/SAO/Tech/Solar RT/ @4

Date: - 9 9 19

### 1) VALIDITY

The validity of this sanction letter is for a period of six months from the date of issue. You will have submit the work completion report, along with relevant details (such as technical specifications, test reports received from manufacturer / system provider, etc.), with a request to the Distribution Licensee for the testing and commissioning of the Roof-top Solar PV System within the period of validity.

MSEDCL reserves the right to revalidate the sanction subject to the conditions prevailing at the time of revalidation.

### 2) VOLTAGE LEVEL

The Net metering will be connected as per consumer supply Voltage level.

Principal
Taywade College
MAHADULA KORADI DIST NAGPUR

3

## 3) DOCUMENTS:

You shall have to furnish the following documents in triplicate duly attested,

xxv) work completion report,

xxvi) technical specifications, test reports of the Roof-top Solar Photo Voltaic Systems received from manufacturer / system provider

#### 4) METERING:-

i) The Net Meter in the premises of the Eligible Consumer shall be procured and installed by MSEDCL at its own cost and in accordance with the provisions of the Electricity Supply Code. The Eligible Consumer may opt to procure the Net Meter confirming to the standards specified by the CEA at his cost. The testing and installation will be done by the MSEDCL.

ii) The Eligible Consumer shall install, at his own cost, a Solar Generation Meter conforming to the applicable CEA Regulations at an appropriate location to measure the energy generated from the Roof-top Solar PV system, if he is an Obligated Entity and desires

that such energy be counted towards meeting its RPO.

iii) MSEDCL shall install, at its own cost and with the consent of the Eligible Consumer, Solar Generation Meter conforming to the applicable CEA Regulations at an appropriate location to measure the energy generated from the Roof-top Solar PV System if it desires that such energy be counted towards meeting its RPO.

## 5) SPACE FOR EQUIPMENTS

The Net Meter and the Solar Generation Meter shall be installed at such locations in the premises of the Eligible Consumer as would enable easy access to the MSEDCL for meter reading.

# 6) ENERGY ACCOUNTING &. SETTLEMENT:

The energy accounting and billing shall be carried out as per MERC orders in the matter time to time.

## 7) ARREARS

You will have to clear all the outstanding arrears, if any, prior to installation of net meter.

# 8) NET METERING CONNECTION AGREEMENT:

The Eligible consumer shall execute a Net metering Connection Agreement on Stamp Paper of Rs.200 with MSEDCL as per Regulation No. 9 of MERC (Net Metering for Rooftop Solar Photo Voltaic Systems) Regulations, 2015

## 9) GENERAL CONDITIONS:

- i) The connectivity of Rooftop solar PV installation net metering systems shall be governed by CEA (Technical Standard of connectivity of the Distributed Generation Resources) Regulations CEA (Measures relating to Safety and Electricity Supply), Regulations, 2010and MERC State Grid code 2006 or as may be specified in future.
- ii) MSEDCL shall have the right to disconnect the Roof top Solar PV system from its Network at any time in the event of any threat of accident or damage from such System to its distribution system so as to avoid any accident or damage to it. However, the Eligible Consumer may use his Roof top Solar PV system in islanding mode for his own consumption.
- iii) This connection for Roof Top Solar PV system under Net Metering is abide with the principal conditions of MSEDCL's Commercial Circular No 258 dtd 25.01.2016

  Taywade College

MAHADULA KORADI DIST NAGPUR

## 9) ACCEPTANCE

Please arrange to submit your acceptance in writing for the above terms and conditions. On completion of the above formalities further action for net metering will be taken from our end.

In case of any doubt/difficulty or clarification needed, may please contact this office on any working day during working hours.

MSEDCL shall have the right to disconnect the Roof-top Solar PV System from its Network at any time in the event of any threat of accident or damage from such System to its distribution system so as to avoid any accident or damage to it. However, the Eligible Consumer may use his Roof-top Solar PV System in islanding mode for his own consumption.

Thanking you,

Yours faithfully,

Exe. Engineer, O&M Saoner Dn MSEDCL,

Copy to:

- 1) Exe Engineer Testing Dn.(Rural), MSEDCL, Nagpur.
- 2) Dy. Executive Engineer, Khaperkheda S/dn. MSEDCL
- 3) Dy. Manager (F&A), Saoner Dn., MSEDCL, Saoner

Principal
Taywade College
MAHADULA KORADI DIST NAGPUR















Meter, Inverter and Solar panel of Solar Power plant of capacity 50kW on the Roof of Taywade College



## Annexure -V: Lighting Survey (2020 - 21)

### List of Assumptions:

- During the survey specific hours for each class room, wash room, office space was assessed and accordingly average daily hours were considered
- The kW ratings of the installed lights is taken from the College data
- The calculations cover the two approaches
  - Approach: Calculation of LED contribution based on the total lighting load energy consumption.

Note: The Lumen/Watt for 28 W tube light is up to 110; which is almost same as LED is: 110-12011

- The Green Audit Team acknowledges the criteria for introduction of LED lights as LED lights do not have disposal problems. Tube lights face problem of mercury contamination.
- Conversely the college also faces the problem of disposal of existing tube lights. The sudden disposal of tube lights on large scale and within their service life will lead to huge amount of e-waste which has critical impact on environment. The college management is thus looking for the replacement policy and lighting (tube light, CFL) will be upgraded to eco-friendly LED after failure of existing lighting system.

Lux Levels observed at working place - 250

Calculated Contribution of various lighting arrangements: Calculated for 200 working days

| Light Sources | Daily Wh<br>Consumption |
|---------------|-------------------------|
| Tube light    | 28760                   |
| LED           | 18690                   |
| CFL           | 420                     |

| Light Sources | Number |  |
|---------------|--------|--|
| Tube light    | 146    |  |
| LED           | 168    |  |
| CFL           | 7      |  |

| Light Sources | % Contribution |
|---------------|----------------|
| Tube light    | 60%            |
| LED           | 39%            |
| CFL           | 1%             |

| Light Sources | % Contribution |
|---------------|----------------|
| Tube light    | 45%            |
| LED           | 52%            |
| CFL           | 3%             |

11<a href="https://www.google.co.in/amp/s/www.bijlibachao.com/lights/comparing-led-lights-with-fluorescent-lights.html%3fisamp=1">https://www.google.co.in/amp/s/www.bijlibachao.com/lights/comparing-led-lights-with-fluorescent-lights.html%3fisamp=1</a>



### Integrated Green, Environment and Energy Audit: S.S.S.S. Taywade College, Koradi, Nagpur

## Lighting Survey 2020 - 21

| Room Name / No.    | Tube<br>light | Watt<br>s | Daily<br>average hrs | W.hr | LED               | W<br>att | Daily average<br>hrs | W.hr | CF<br>L | Watt<br>s | Daily average<br>hrs | W.h              | Fan | W<br>att | Daily average<br>hrs | W.hr |
|--------------------|---------------|-----------|----------------------|------|-------------------|----------|----------------------|------|---------|-----------|----------------------|------------------|-----|----------|----------------------|------|
| Principal Office   | 1             | 40        | 8                    | 320  | 14                | 20       | 8                    | 2240 | 7       | 10        | 6                    | 420              | 3   | 80       | 8                    | 1920 |
| Office             | 1             | 40        | 8                    | 320  | 7                 | 20       | 8                    | 1120 |         | -         | 12                   | 140              | 7   | 80       | 8                    | 4480 |
| Home Eco. Lab      | 4             | 40        | 6                    | 960  | 1                 | 20       | 6                    | 120  | 82.0    | :=::      |                      | O# 5             | 3   | 80       | 6                    | 1440 |
|                    | 1             | 40        | 6                    | 240  | 1                 | 20       | 6                    | 120  | 92.0    | (4)       | 949                  | 1225             | 1   | 80       | 6                    | 480  |
| Microbiology Lab   | 3             | 40        | 6                    | 720  | 1                 | 20       | 6                    | 120  | 95.     | 27.5      | : <del>*</del> :     |                  | 4   | 80       | 6                    | 1920 |
| Seminar Hall       | -             | -         | 72                   | -    | 3                 | 20       | 2                    | 120  |         | -         | -                    | 743              | 8   | 80       | 6                    | 3840 |
| Chemistry Lab      | 4             | 40        | 6                    | 960  | 1                 | 20       | 6                    | 120  |         |           | *                    | 140              | 8   | 80       | 2                    | 1280 |
| New Lab            | 1             | 40        | 6                    | 240  | 13                | 20       | 6                    | 1560 | -       | 127       | 947                  | 240              | 3   | 80       | 6                    | 1440 |
|                    | *             |           | 3.50                 | 5.   | 1                 | 15       | 6                    | 90   |         | -9)       | -                    |                  | er. | -        |                      | *    |
| Geography Lab      | 3             | 40        | 6                    | 720  | 3.                | (4)      | -                    | -    | 35.     | -         | -                    | +/               | 2   | 80       | 6                    | 960  |
| Room No. 2         | 1             | 40        | 5                    | 200  | 4                 | 20       | 5                    | 400  |         |           | 3€                   | 1997             | 4   | 80       | 5                    | 1600 |
| Meeting Room       | 2             | 40        | 6                    | 480  | -                 | -        | -                    |      | -       | +         | +                    | -                | 2   | 80       | 6                    | 960  |
| Passage            | 2             | 40        | 2                    | 160  | 4                 | 20       | 2                    | 160  | -       | (4)       | -                    | 14.77            | 1   | 80       | 2                    | 160  |
| Staff Room         | 1             | 40        | 6                    | 240  | 2                 | 20       | 6                    | 240  |         | -         | S <del>.</del>       | 9 <del>8</del> 2 | 3   | 80       | 6                    | 1440 |
|                    |               |           | ~                    | 2    | 1                 | 10       | 6                    | 60   | -       | 949       | 9¥3                  | ~                | 箱   |          | : <del>-</del>       | =    |
| N.S.S. Room        | 2             | 40        | 6                    | 480  | ( <del>=</del> ); | 170      | 100                  | -    | (2)     | 17.       | 3E                   | S <del>5</del> 8 | 3   | 80       | 6                    | 1440 |
| Room No.3          | 4             | 40        | 5                    | 800  |                   | -        | *-                   | -    | -       | -         | 24                   | 144              | 3   | 80       | 5                    | 1200 |
| Physics Lab        | 3             | 40        | 6                    | 720  |                   | (*)      | -                    | *    |         | 190       | St#1                 | ( <del>*</del> ) | 3   | 80       | 6                    | 1440 |
| Dark Room          | 1             | 40        | 2                    | 80   | 320               | -        | 12                   | 4    | -       | -         | 3527                 | -                | 1   | 80       | 2                    | 160  |
| Zoology Lab        | 1             | 40        | 6                    | 240  | 5                 | 20       | 6                    | 600  | 75      | 190       | -                    | 5 <del>-</del> 5 | 12  | 80       | 6                    | 5760 |
| Zoology Staff Room | 2             | 40        | 6                    | 480  | 1                 | 20       | 6                    | 120  | (4)     |           | 75-27                | - LC             | 3   | 80       | 6                    | 1440 |
| Computer Lab       | -             |           | -                    | -    | 41                | 20       | 6                    | 4920 | 10.     | -         | 0+1                  | (*)              | 17  | 80       | 6                    | 8160 |
| Botany Lab         | 1             | 40        | 6                    | 240  | 2                 | 20       | 6                    | 240  | -       | •         |                      |                  | 5   | 80       | 6                    | 2400 |
| Room No. 4         | -             | (#)       | 5-3                  | -    | 1                 | 20       | 6                    | 120  | -       | -         | (i <b>e</b> )        |                  | 4   | 80       | 6                    | 1920 |
| Stock Room         | =             | 7-        | -                    | -    | 1                 | 20       | 6                    | 120  | -       | -         | -                    | -                | - 4 | -        | -                    | -    |
| Passage            | 2             | 40        | 6                    | 480  | 3                 | 20       | 6                    | 360  | 9.1     | 190       | (( <del>-</del> ))   | 1940             | 191 | -        | (J+)                 |      |



## Integrated Green, Environment and Energy Audit: S.S.S.S. Taywade College, Koradi, Nagpur

|                           |    |                |     |       |                   |      |      |     |                  | I    | AYWADE             |         |     |  |      |      |
|---------------------------|----|----------------|-----|-------|-------------------|------|------|-----|------------------|------|--------------------|---------|-----|--|------|------|
| Library Corridor          | 9  | 40             | 6   | 2160  | -                 |      | -    | ~   | 14.              |      | (i=)               |         | 3   | 80   | 6    | 1440 |
| Library                   | 19 | 40             | 6   | 4560  | 3                 | 20   | 6    | 360 | -                | -    | 1170               |         | 20  | 80   | 6    | 9600 |
| Library Seminar Hall      | 14 | 40             | 2   | 1120  | 1                 | 20   | 2    | 40  | 14-              | -    | 71±1               | -       | 9   | 80   | 2    | 1440 |
| Library Stairway          | 2  | 40             | 6   | 480   | 170               | (*)  | 1971 |     | ie i             | 550  | 850                | 157/4   | 100 | STATE OF THE PARTY | 1000 | -    |
| Junior College Room       | 2  | 40             | 6   | 480   | 2                 | 20   | 6    | 240 | 12               | -    | -                  | +       | 4   | 80   | 6    | 1920 |
| Commerce Staff Room       | 2  | 40             | 6   | 480   | 2                 | 20   | 6    | 240 | 3 <del>-</del> 1 | -    | 83 <del>4</del> 1  | (*)     | 3   | 80   | 6    | 1440 |
| Room No. 6                | -  | 2              |     | 20/ 1 | 2                 | 20   | 5    | 200 | -                | -    | 1/21               | -       | 2   | 80   | 5    | 800  |
| Room No. 7                | -  | 10 <b>7</b> 13 | S=- | -     | 2                 | 20   | 5    | 200 | 17               | 1.57 | 9 <del>1</del> 0   | 10#12   | 2   | 80   | 5    | 800  |
| Room No. 8                | 1  | 40             | 5   | 200   | 1                 | 20   | 5    | 100 | -                | -20  |                    | -27     | 3   | 80   | 5    | 1200 |
| Room No. 9                | 2  | 40             | 6   | 480   | 3                 | 20   | 5    | 300 |                  | -    | (1 <del>-1</del> ) | S#5     | 5   | 80   | 5    | 2000 |
| Room No. 10               |    | -              | -   | -     | 4                 | 20   | 5    | 400 |                  | 3/   | -                  | -       | 4   | 80   | 5    | 1600 |
| Room No. 13               | 4  | 40             | 5   | 800   | -                 | (+)  | -    | -   | -                |      | -                  | (#)     | 4   | 80   | 5    | 1600 |
| Room No. 14               | -  | -              |     | 7.0   | 4                 | 20   | 5    | 400 | -                | -    |                    | -       | 3   | 80   | 5    | 1200 |
| YCMOU 1                   | 2  | 40             | 6   | 480   | 1                 | 20   | 6    | 120 | -                | 340  |                    | (4)     | 3   | 80   | 6    | 1440 |
| Exam Room                 | 3  | 40             | 6   | 720   |                   | 7.2  | 3.5  | 5-  | -                | -    | -7                 | -       | 2   | 80   | 5    | 800  |
| Room No. 15               | 2  | 40             | 5   | 400   | 1411              | 745  | 0.00 | -   | -                | (4)  | 10-21              | 141     | 2   | 80   | 5    | 800  |
| Room No. 16               | 2  | 40             | 5   | 400   | 17.0              | 170  | 9.70 | =   | 100              | 17/  | - 7                | 178     | 3   | 80   | 5    | 1200 |
| Room No. 17               | 2  | 40             | 5   | 400   | 4                 | (2)  | -    | 12  | 12               | 120  | 945                | 124     | 3   | 80   | 5    | 1200 |
| Room No. 18               | 6  | 40             | 5   | 1200  | 2                 | 20   | 5    | 200 | 7                | 300  | 1.7                |         | 5   | 80   | 5    | 2000 |
| Room No. 19               | 6  | 40             | 5   | 1200  | 121               | 0.20 | -    | -   | 12               | -    | -                  | 020     | 5   | 80   | 5    | 2000 |
| Room No. 20               | 4  | 40             | 5   | 800   | ( <del>*</del> )) |      |      | +   | -                |      |                    | - #1    | 3   | 80   | 5    | 1200 |
| Room No. 21               | 3  | 40             | 5   | 600   | 1                 | 20   | 5    | 100 | 12-1             | 120  |                    | 1927    | 3   | 80   | 5    | 1200 |
| Room No. 22               | 2  | 40             | 5   | 400   |                   | (9)  | -    | -   | 11 1             | -    | (*)                |         | 3   | 80   | 5    | 1200 |
| Passage                   | 14 | 40             | 2   | 1120  | 6                 | 20   | 2    | 240 | -                | -    | -                  |         | 14  | -  | -    | -    |
| Washroom Gents            | -  | *              |     | -     | 1                 | 20   | 2    | 40  | -                |      | (                  | -       | -   |  |      | -    |
| Washroom Girls            | ¥  | 121            | -   | -     | 1                 | 20   | 2    | 40  | 14               | 190  | -                  | 121     | -   | 12   | -    |      |
| Placement Cell            | -  | (4)            |     | -     | 2                 | 20   | 6    | 240 | +                |      | -                  | (36))   | 1   | 80   | 6    | 480  |
| Department Of<br>Language | 1  | 40             | 6   | 240   | 1                 | 20   | 6    | 120 | 87.11            |      | 13.7.0             | 1577,51 | 2   | 80   | 6    | 960  |
| Toilet                    | 2  | 4              |     | 2     | 1                 | 20   | 2    | 40  | (4)              | -    | -                  | -20     |     | 121  | -    |      |

### Integrated Green, Environment and Energy Audit: S.S.S.S. Taywade College, Koradi, Nagpur



|                               |     |                 |                    |       |     |    |   |       |                   | G    | OLLEGE |              |     |     |   |       |
|-------------------------------|-----|-----------------|--------------------|-------|-----|----|---|-------|-------------------|------|--------|--------------|-----|-----|---|-------|
| Life Sciences Research<br>Lab | 4   | 40              | 6                  | 960   | 8   | 20 | 6 | 960   | 947)              | 9=3  | \$     | 1924         | 5   | 80  | 6 | 2400  |
| Store Room                    | -   | - #X            | Se.                | -     | 1   | 20 | 2 | 40    | -                 | 3.50 | 5.00   | □ ★☆         |     | 383 | - | -     |
| Staff Room                    | 121 | -1              | 951                | 21    | 2   | 20 | 6 | 240   | 92.0              | -    | 329    | 128          | 2   | 80  | 6 | 960   |
| Boys Common Room              | -   |                 | ::*:               |       | 2   | 20 | 2 | 80    |                   |      | · *:   | (#I)         | 4   | 80  | 2 | 640   |
| PG Class Room 1               | #   | 59.0            | / <del>-</del>     | -     | 2   | 20 | 5 | 200   | -                 | -    | -      | 59.9         | 2   | 80  | 5 | 800   |
| PG Class Room 2               | -   | (*)             | (1 <del>-</del> 1) | -     | 2   | 20 | 5 | 200   |                   | -    | -      | ( <b>*</b> ) | 2   | 80  | 5 | 800   |
| PG Class Room 3               |     |                 |                    | -     | 2   | 20 | 5 | 200   | -                 | -    | -      |              | 2   | 80  | 5 | 800   |
| PG Class Room 4               | =   | - <del></del> - | 1.4                | =     | 2   | 20 | 5 | 200   | 9 <del>4</del> -> | -    |        | 3 <b>4</b> 3 | 2   | 80  | 5 | 800   |
| Total                         | 146 |                 |                    | 28760 | 168 |    |   | 18690 | 7                 |      |        | 420          | 216 |     |   | 92560 |









On & off culture practiced in college





Use of LED lights in college

Sensor based lighting installed in college

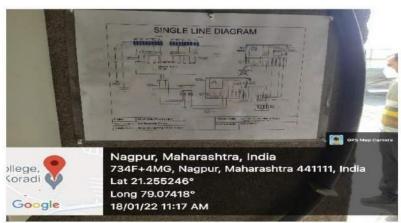


## Annexure -IX: Solar Panel Installations

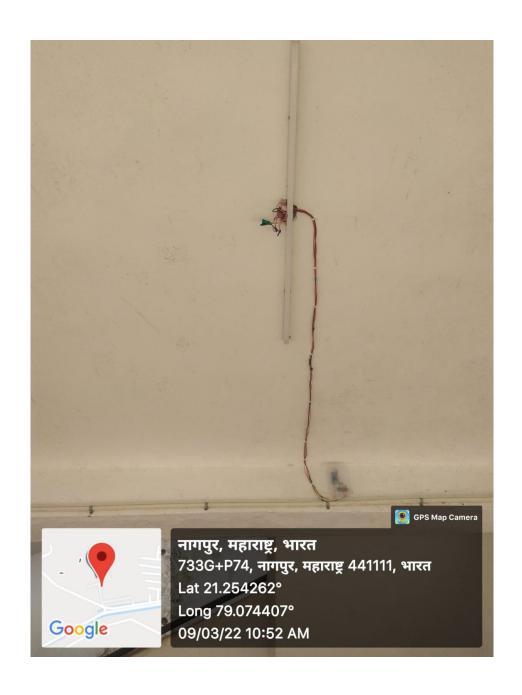


Solar Panels Installation on the College Roof





Junction Box and Net Meter



Sensor based light







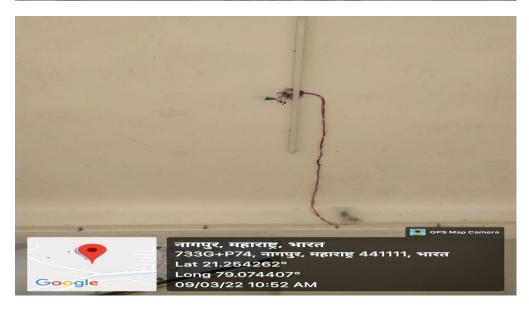












Sensor based light