



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

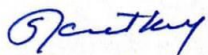
Principal  
Dr. Sharyou B. Taywade  
9822716608


Chairman  
Dr. Babanrao Taywade  
9422145290

NAAC 2022/ Metrics Level Deviations/Cr7-1

Date:- 09-/05/2022

<b>Criteria 7.1.2:</b>	The Institution has facilities for alternate sources of energy and energy conservation measures. 1. Solar energy 2. Biogas plant 3. Wheeling to the Grid 4. Sensor-based energy conservation 5. Use of LED bulbs/ power efficient equipment
<b>Findings of DVV</b>	1) Kindly Provide Bills for the purchase of equipment's for the facilities
<b>Response/ Clarification</b>	1) Documents and photographs showing facility alternate facility for energy( <b>Appendix-I</b> ) 2) Invoice/ Bills for the purchase of equipment's for the facilities attached. ( <b>Appendix-II</b> )

  
IQAC Coordinator  
TAYWADE COLLEGE  
Mahadula, Koradi, Dist. Nagpur

  
Principal  
Taywade College  
MAHADULA KORADI DIST NAGPUR

# Appendix-I

Supporting showing the facilities for alternative sources of  
energy





महाराष्ट्र MAHARASHTRA

© 2019 ©

NAGPUR TREASURY

VP 379606

26 SEP 2014

Group Head Clerk / St. Clerk

## Affidavit

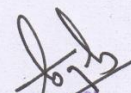
I M/s Bijlee LED Lighting Pvt. Ltd. has done the project of 50KW for Taywade College, Mahadula, Koradi, Tal.- Kamptee, Dist.- Nagpur hereby declare that the above mentioned project is commissioned by abiding following:

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)

  
Principal  
Taywade College  
MAHADULA KORADI DIST NAGPUR



-Page-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.

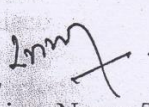
I will be responsible for maintenance of the project over the period of Comprehensive Maintenance Contract (CMC) i.e., 5 years and for the remaining 20 years the beneficiary is responsible for undertaking the maintenance work of the project.

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



  
Principal  
Taywade College  
MAHADULA KORADI 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.

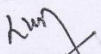
We are hereby submitting Bi-directional Net Meter and Current Transformer for testing as detailed below:

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  
Mahadula, Koradi Dist. Nagpur

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

  
Principal  
Taywade College  
MAHADULA KORADI DIST NAGPUR

**SECUR****METER TEST CERTIFICATE**

Serial number : XH411678

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

- |                                       |         |
|---------------------------------------|---------|
| 1. AC VOLTAGE TEST                    | :- PASS |
| 2. TEST OF NO LOAD CONDITION          | :- PASS |
| 3. TEST OF STARTING CURRENT CONDITION | :- PASS |
| 4. INSULATION RESISTANCE TEST         | :- PASS |
| 5. POWER CONSUMPTION                  | :- PASS |
| 6. TEST OF METERS CONSTANTS           | :- PASS |
| 7. LIMIT OF ERROR                     | :- PASS |

- 7(a) Conditions-Vref = 240V Ib = 5A Amb. Temp. = 27°C +/- 2°C Relative Humidity < 70%.  
 7(b) Errors shown in the tables are given after accounting the error of reference meter.  
 7(c) Reference meter serial no. BTLT1001 class 0.2S traceable to national & international standards.

**IMPORT MODE ERRORS**

(d) %Active Errors(Balance Mode 3p4w)				(e) %Reactive Errors(Balance Mode 3p4w)			
Load % Ib	0.5 Lag	0.8 Lead	UPF	Load % Ib	0.5 Lag	0.8 Lead	
200	-0.16	-0.07	-0.11	200	-0.09	-0.15	
100	0.00	0.01	0.01	100	0.00	0.01	
10	0.13	-0.01	0.02	10	-0.03	0.10	
5			-0.01	2	-0.03	-0.21	
2	-0.01	0.00					
1			0.16				

**EXPORT MODE ERRORS**

(d) %Active Errors(Balance Mode 3p4w)				(e) %Reactive Errors(Balance Mode 3p4w)			
Load % Ib	0.5 Lag	0.8 Lead	UPF	Load % Ib	0.5 Lag	0.8 Lead	
200	-0.17	-0.04	-0.09	200	-0.06	-0.15	
100	0.00	0.00	0.00	100	-0.01	0.01	
10	0.14	-0.03	0.01	10	-0.05	0.11	
5			-0.03	2	-0.13	0.10	
2	-0.08	-0.12					
1			-0.02				

Date :- 03/08/2019

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

*[Signature]*  
 Principal  
**Taywade College**  
 MAHADULA KORADI DIST NAGPUR

Secure Meters Limited  
 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 & 18, MIDC, Tq.-Sinnar, Dist. Nashik - 422 103

## TEST REPORT FOR LT CT

Order:- M/s Askul Power Engineers, Nagpur.

Description:- Resin Cast Ring Type LT CT

Date of Testing:- 27/08/2019

Freq:- 50HZ

Rated CT Ratio:- 100/5A

VA:- 8

IS :- 2705 / 1992

CT Rating :- 5KA, 1SEC.

HSV/Ins.L Level:-

0.66/3KV

Class :- 0.5S

Lot No:- R-70610001 TO R-70610024

Total Qty - 24 Nos

Ref. No.:-

Page No:- 01 / 1

Page No:- 0171

Ip%	SR NO	VA				SR NO	VA			
		5		1.25			5		1.25	
		R.E.%	P.E. Min.	R.E.%	P.E. Min.		R.E.%	P.E. Min.	R.E.%	P.E. Min.
1	R- 70610001	-0.79	13	0.04	5	R- 70610022	-0.80	16	-0.01	6
120		-0.07	9	0.33	3		-0.05	8	0.32	4
1	R- 70610002	-0.80	17	0.00	5	R- 70610023	-0.82	15	-0.02	8
120		-0.10	6	0.30	5		-0.03	8	0.30	3
1	R- 70610003	-0.78	15	0.04	4	R- 70610024	-0.83	19	-0.02	7
120		-0.07	5	0.32	5		-0.05	8	0.32	2
1	R- 70610004	-0.85	18	0.03	8					
120		-0.09	8	0.30	4					
1	R- 70610005	-0.81	16	0.01	7					
120		-0.10	7	0.28	2					
1	R- 70610006	-0.81	10	0.03	9					
120		-0.06	6	0.26	5					
1	R- 70610007	-0.77	19	-0.01	7					
120		-0.05	8	0.33	5					
1	R- 70610008	-0.84	16	0.02	7					
120		-0.11	6	0.34	2					
1	R- 70610009	-0.81	17	-0.03	6					
120		-0.06	6	0.32	2					
1	R- 70610010	-0.76	18	0.04	5					
120		-0.03	6	0.25	2					
1	R- 70610011	-0.77	19	-0.05	8					
120		-0.09	5	0.33	5					
1	R- 70610012	-0.85	19	-0.01	6					
120		-0.04	9	0.31	2					
1	R- 70610013	-0.79	17	-0.03	7					
120		-0.04	8	0.27	2					
1	R- 70610014	-0.84	18	0.02	8					
120		-0.12	8	0.30	5					
1	R- 70610015	-0.83	17	-0.05	8					
120		-0.08	7	0.33	4					
1	R- 70610016	-0.79	18	0.01	8					
120		-0.03	8	0.26	1					
1	R- 70610017	-0.84	17	0.01	8					
120		-0.03	8	0.27	3					
1	R- 70610018	-0.83	19	-0.02	5					
120		-0.10	8	0.34	6					
1	R- 70610019	-0.80	15	-0.04	7					
120		-0.03	6	0.27	6					
1	R- 70610020	-0.84	16	-0.01	9					
120		-0.03	8	0.25	6					
1	R- 70610021	-0.84	19	-0.02	7					
120		-0.11	8	0.33	3					

Over Voltage Interturn Test: OK

Delovert Test: OK

Over Voltage Interturn Test:- OK

Polarity Test: OK

HV Power Frequency Test

1) Primary to Sec.Frame & Earth :3KV for 1 min OK

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

Tested by:-

Checked by:-

*[Signature]*  
Principal  
Taywade College  
MAHADULA KORAOLI DIST NAGPUR







Shri Sachhidanand Shikshan Sanstha's

# TAYWADE COLLEGE

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Principal  
Dr. Sharyou B. Taywade  
9822716608

Chairman  
Dr. Babanrao Taywade  
9422145290

Ref. No. : *TCMC/2408/2019*

Date : *20/9/2019*

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

विषय : ट्रान्सफॉर्मची क्षमता वाढविण्याबाबत

महोदय,

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

RECEIVED

*20/09/19*  
Receipt Clerk  
M.S.D. Co. Ltd.  
S/Dn. Khaparkheda

(डॉ.सौ. शरयू बबनराव तायवाडे)

Principal  
Taywade College

Mahadula - Koradi, Dist. Nagpur

तायवाडे महाविद्यालय  
महादुला, कोराडी, जि. नागपूर.

• Phone : 07109 - 262204 • Fax : 07109-262525 • Website : acsckoradi.com • Email : acscollegekoradi@gmail.com

Formerly Known as Arts, Commerce & Science College, Koradi



MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.



Office of The Executive Engineer  
(Saoner Division)  
Gangasadan, Ward No. 3, Saoner,  
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 MSSEDCL.

Ref: - 1. MERC (Net Metering for Roof-top Solar Photo Voltaic Systems) Regulations. 2015  
2. MSSEDCL, Commercial Circular No. 258.  
3. Your Application vide No.21232640 Dt.14.8.19 received  
4. Registration Fees paid vide M.R.No. QSB17759420261 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 MSSEDCL to your unit at above address.

Consumer No.	Voltage Level	Sanctioned Connected load KW	Proposed AC capacity of Roof-top Solar PV System to be installed	Purpose
410140005847	400/415 Volts (DTC 4364007)	50 KW	32 Kw	Residential

EE/SAO/Tech/Solar RT/ 04

Date:- 29/9/19

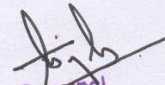
**1) VALIDITY**

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.

MSSEDCL 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  
Tayawade College  
MAHADULA KORADI DIST NAGPUR



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 Roof-top 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, 2010 and 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 conditions of MSEDCL's Commercial Circular No 258 dtd 25.01.2016

  
Principal  
**Taywade College**  
MAHADULA KORADI DIST NAGPUR



9) ACCEPTANCE

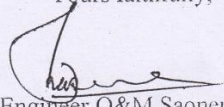
Please arrange to submit your acceptance in writing for the above terms and conditions. On completion of the above formalities further action for net metering will be taken from our end.

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.

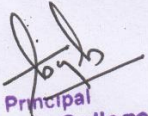
Thanking you,

Yours faithfully,

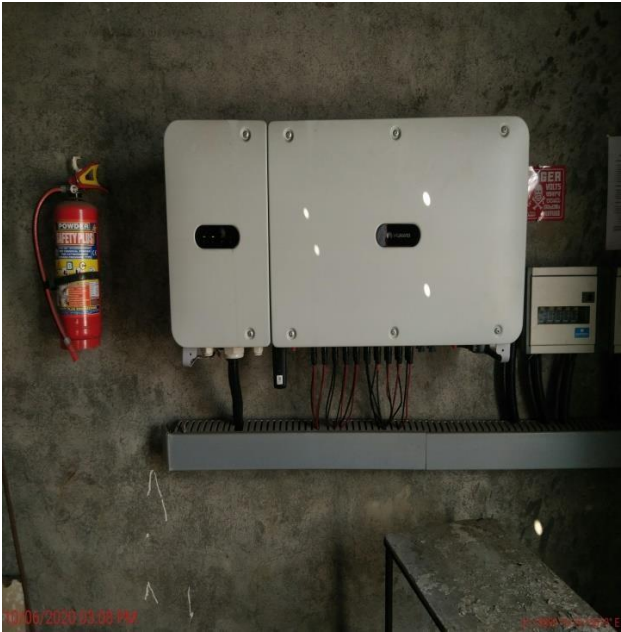
  
Exe. Engineer, O&M Saoner Dn  
MSEDCL,

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: 110-120lm**

- 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 Consumption
Tube light	28760
LED	18690
CFL	420

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

Light Sources	Number
Tube light	146
LED	168
CFL	7

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

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





Lighting Survey 2020 – 21

Room Name / No.	Tube light	Watts	Daily average hrs	W.hr	LED	Watts	Daily average hrs	W.hr	CF L	Watts	Daily average hrs	W.hr	Fan	Watts	Daily average 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	-	-	-	-	7	80	8	4480
Home Eco. Lab	4	40	6	960	1	20	6	120	-	-	-	-	3	80	6	1440
	1	40	6	240	1	20	6	120	-	-	-	-	1	80	6	480
Microbiology Lab	3	40	6	720	1	20	6	120	-	-	-	-	4	80	6	1920
Seminar Hall	-	-	-	-	3	20	2	120	-	-	-	-	8	80	6	3840
Chemistry Lab	4	40	6	960	1	20	6	120	-	-	-	-	8	80	2	1280
New Lab	1	40	6	240	13	20	6	1560	-	-	-	-	3	80	6	1440
	-	-	-	-	1	15	6	90	-	-	-	-	-	-	-	-
Geography Lab	3	40	6	720	-	-	-	-	-	-	-	-	2	80	6	960
Room No. 2	1	40	5	200	4	20	5	400	-	-	-	-	4	80	5	1600
Meeting Room	2	40	6	480	-	-	-	-	-	-	-	-	2	80	6	960
Passage	2	40	2	160	4	20	2	160	-	-	-	-	1	80	2	160
Staff Room	1	40	6	240	2	20	6	240	-	-	-	-	3	80	6	1440
	-	-	-	-	1	10	6	60	-	-	-	-	-	-	-	-
N.S.S. Room	2	40	6	480	-	-	-	-	-	-	-	-	3	80	6	1440
Room No.3	4	40	5	800	-	-	-	-	-	-	-	-	3	80	5	1200
Physics Lab	3	40	6	720	-	-	-	-	-	-	-	-	3	80	6	1440
Dark Room	1	40	2	80	-	-	-	-	-	-	-	-	1	80	2	160
Zoology Lab	1	40	6	240	5	20	6	600	-	-	-	-	12	80	6	5760
Zoology Staff Room	2	40	6	480	1	20	6	120	-	-	-	-	3	80	6	1440
Computer Lab	-	-	-	-	41	20	6	4920	-	-	-	-	17	80	6	8160
Botany Lab	1	40	6	240	2	20	6	240	-	-	-	-	5	80	6	2400
Room No. 4	-	-	-	-	1	20	6	120	-	-	-	-	4	80	6	1920
Stock Room	-	-	-	-	1	20	6	120	-	-	-	-	-	-	-	-
Passage	2	40	6	480	3	20	6	360	-	-	-	-	-	-	-	-



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



Library Corridor	9	40	6	2160	-	-	-	-	-	-	-	3	80	6	1440
Library	19	40	6	4560	3	20	6	360	-	-	-	20	80	6	9600
Library Seminar Hall	14	40	2	1120	1	20	2	40	-	-	-	9	80	2	1440
Library Stairway	2	40	6	480	-	-	-	-	-	-	-	-	-	-	-
Junior College Room	2	40	6	480	2	20	6	240	-	-	-	4	80	6	1920
Commerce Staff Room	2	40	6	480	2	20	6	240	-	-	-	3	80	6	1440
Room No. 6	-	-	-	-	2	20	5	200	-	-	-	2	80	5	800
Room No. 7	-	-	-	-	2	20	5	200	-	-	-	2	80	5	800
Room No. 8	1	40	5	200	1	20	5	100	-	-	-	3	80	5	1200
Room No. 9	2	40	6	480	3	20	5	300	-	-	-	5	80	5	2000
Room No. 10	-	-	-	-	4	20	5	400	-	-	-	4	80	5	1600
Room No. 13	4	40	5	800	-	-	-	-	-	-	-	4	80	5	1600
Room No. 14	-	-	-	-	4	20	5	400	-	-	-	3	80	5	1200
YCMOU 1	2	40	6	480	1	20	6	120	-	-	-	3	80	6	1440
Exam Room	3	40	6	720	-	-	-	-	-	-	-	2	80	5	800
Room No. 15	2	40	5	400	-	-	-	-	-	-	-	2	80	5	800
Room No. 16	2	40	5	400	-	-	-	-	-	-	-	3	80	5	1200
Room No. 17	2	40	5	400	-	-	-	-	-	-	-	3	80	5	1200
Room No. 18	6	40	5	1200	2	20	5	200	-	-	-	5	80	5	2000
Room No. 19	6	40	5	1200	-	-	-	-	-	-	-	5	80	5	2000
Room No. 20	4	40	5	800	-	-	-	-	-	-	-	3	80	5	1200
Room No. 21	3	40	5	600	1	20	5	100	-	-	-	3	80	5	1200
Room No. 22	2	40	5	400	-	-	-	-	-	-	-	3	80	5	1200
Passage	14	40	2	1120	6	20	2	240	-	-	-	-	-	-	-
Washroom Gents	-	-	-	-	1	20	2	40	-	-	-	-	-	-	-
Washroom Girls	-	-	-	-	1	20	2	40	-	-	-	-	-	-	-
Placement Cell	-	-	-	-	2	20	6	240	-	-	-	1	80	6	480
Department Of Language	1	40	6	240	1	20	6	120	-	-	-	2	80	6	960
Toilet	-	-	-	-	1	20	2	40	-	-	-	-	-	-	-

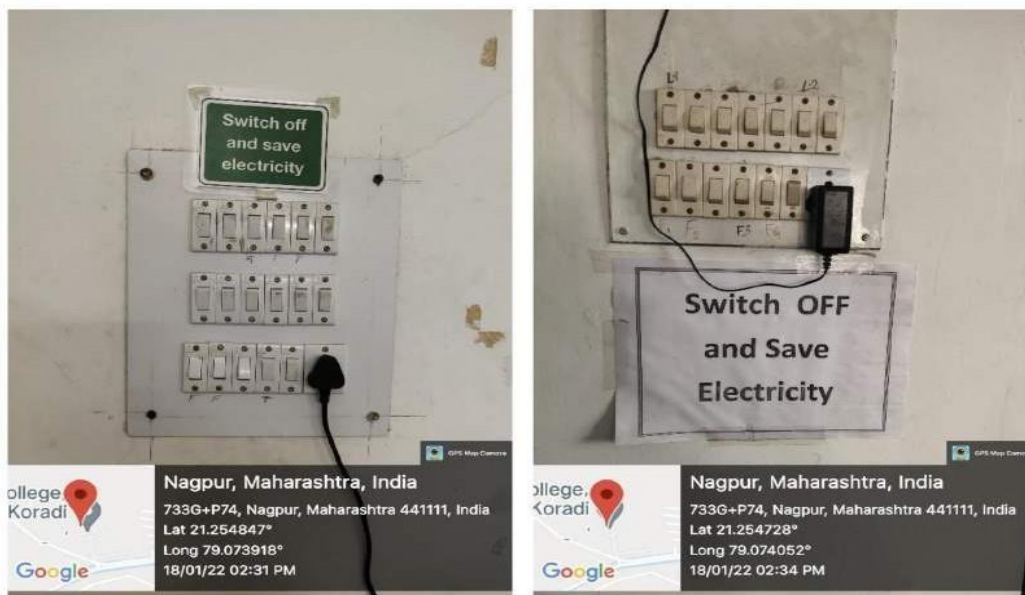


**Integrated Green, Environment and Energy Audit: S.S.S. Taywade College, Koradi, Nagpur**

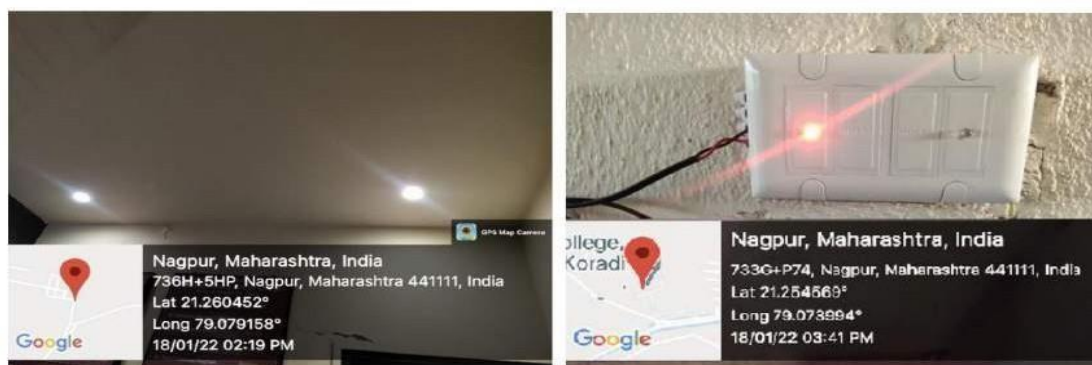


Life Sciences Research Lab	4	40	6	960	8	20	6	960	-	-	-	-	5	80	6	2400
Store Room	-	-	-	-	1	20	2	40	-	-	-	-	-	-	-	-
Staff Room	-	-	-	-	2	20	6	240	-	-	-	-	2	80	6	960
Boys Common Room	-	-	-	-	2	20	2	80	-	-	-	-	4	80	2	640
PG Class Room 1	-	-	-	-	2	20	5	200	-	-	-	-	2	80	5	800
PG Class Room 2	-	-	-	-	2	20	5	200	-	-	-	-	2	80	5	800
PG Class Room 3	-	-	-	-	2	20	5	200	-	-	-	-	2	80	5	800
PG Class Room 4	-	-	-	-	2	20	5	200	-	-	-	-	2	80	5	800
<b>Total</b>	<b>146</b>			<b>28760</b>	<b>168</b>			<b>18690</b>	<b>7</b>			<b>420</b>	<b>216</b>			<b>92560</b>





On & off culture practiced in college



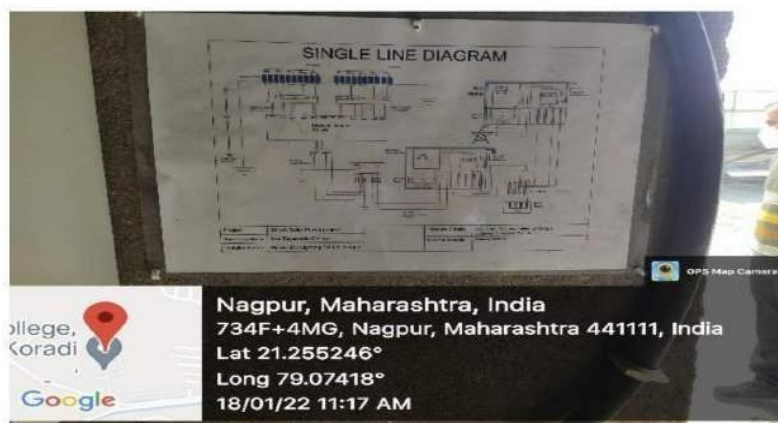
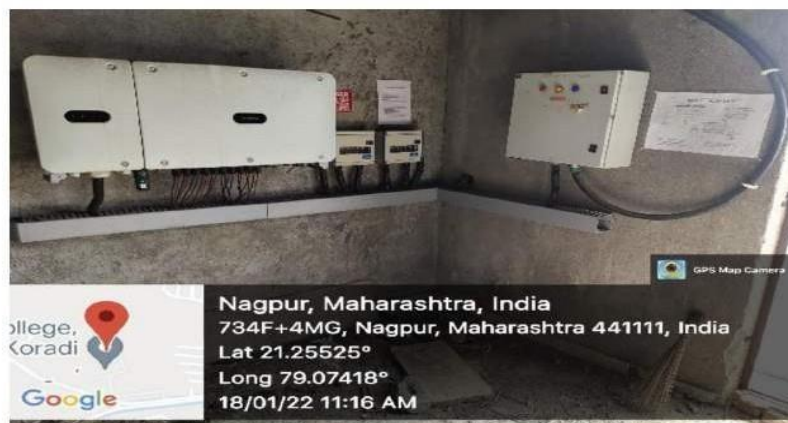
Use of LED lights in college

Sensor based lighting installed in college

## Annexure –IX: Solar Panel Installations

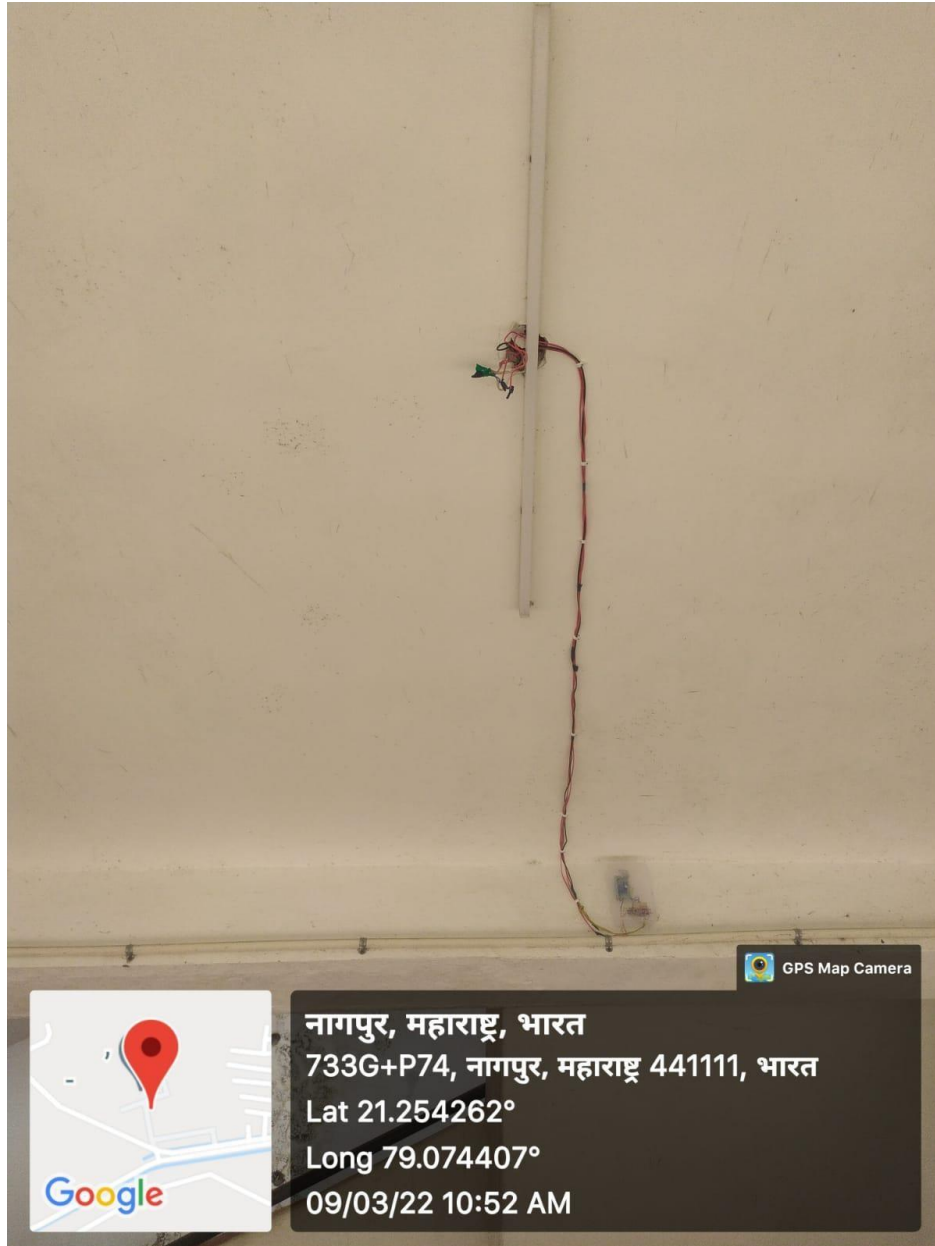


Solar Panels Installation on the College Roof



Junction Box and Net Meter





Sensor based light

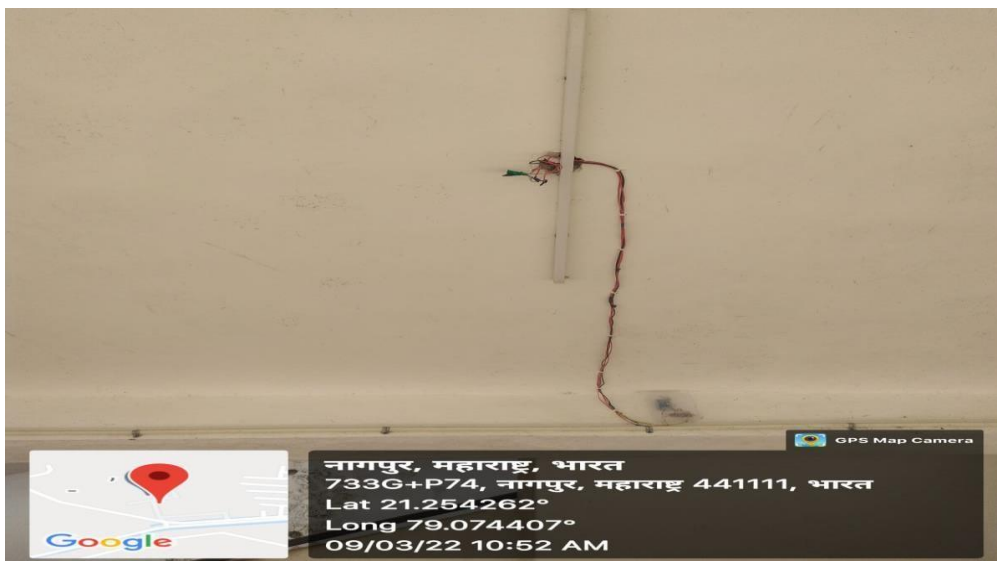












Sensor based light

# Appendix-II

Invoice/bills of solar system, LED bulbs etc



# BIJLEE SOLAR

## BIJLEE LED LIGHTING PVT. LTD.

RESIDENTIAL AND COMMERCIAL SPV POWER PLANT INSTALLER

9535348067, 9860533337

bijleesolar@gmail.com

A/1 Indrasagar Apartment, R.N.T.  
Road CIVIL Lines, Nagpur-440001

GSTIN : 27AAGCB4178F1ZM

### PROFORMA INVOICE

DATE OF PROFROMA INVOICE : 07.06.2019

INVOICE NO. - BIJLEE/2019-20/SPV/PI-  
Taywadecollege-38

**SELLER :**

**BIJLEE LED LIGHTING PRIVATE LIMITED**  
BISASAR HOUSE, OPP. UNION BANK , R.N.T. ROAD,  
CIVIL LINES, NAGPUR 440 001.  
E mail : bijleesolar@gmail.com,  
CONTACT INFO : gagaansilal@gmail.com  
CONTACT NO. : 9535348867 FAX : 0712-2550626  
TIN No. 27351173019

**Beneficiary :**

Taywade College  
Koradi, Nagpur-441115

**BENEFICIARY NAME : BIJLEE LED LIGHTING  
PRIVATE LIMITED.**  
**BENEFICIARY BANK: STATE BANK OF INDIA**  
**BANK ADD:SEVA SADAN CHOWK, C A ROAD,**  
**NAGPUR**  
**BENEFICIARY ACCOUNT: 35566813253**  
**IFSC CODE: SBIN0060279**

Consumer number of  
MSEDCL-  
410022364867

Purchase order- Verbal

PRODUCT DESCRIPTION	Total Capacity	RATE	AMOUNT
1. Grid Tied Roof top Solar power system HSN code : 85	50 kW	52,000/-	26,00,000/-
2. Installation service charges HSN Code : 9954	50 kW	3000/-	1,50,000/-
			<b>Rs. 27,50,000/-</b>

**TOTAL AMOUNT : Twenty Seven Lakhs Fifty Thousand Only**

**AYMENT TERM : 50 % advance on PO and Sanction by SNDL, 50 % on Commission**

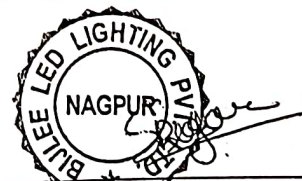
**PRODUCT WARRANTY : As per terms of PO**

**DUTIES & TAXES : GST 5 % extra on Sr. No.1**  
**GST 18% extra on Sr. No.2**

I/We hereby certify that our GST registration certificate under the act, is in force on this date on which the sale of goods specified in this Tax Invoice is made by us and that transaction of sale covered by this tax invoice has been effected by me/us and it shall be accounted for in the turnover at sale while filing of return and the due tax if any, payable on the sale has been paid or shall be paid.

**For, BIJLEE LED LIGHTING PVT. LTD.**

Bijlee LED Lighting Pvt. Ltd. are empanelled as Channel Partner with MNRE, Govt. Of India for Off Grid and Decentralized Solar Application Programme. Our Channel Partner Code is MH-SI/2016/N/18.  
We are also Channel Partner (New Entrepreneur) with MNRE for Grid connected Rooftop and Small Solar Power Plant Programme. Our Empanelment No. : MNRE/EN/GCRT/1781.



**Authorised Signatory**

Principal  
Taywade College  
MAHADULA KORADI DIST NAGPUR

Invoice No. MSO/20-21/2787  
Ref No.

Dated 7-Jan-2021

# MEHADIA SALES ORGN.

57, Yashwant Stadium  
Near Maa Bhagwati Mandir Dhantoli Nagpur  
GSTIN/UIN: 27ACBPM2690K1ZD  
State Name : Maharashtra, Code : 27  
Contact : 0712-2456364/2439470, 08408800060/8408800755  
E-Mail : msoelectricals@gmail.com

Tax Invoice-Cash/Credit/Card

Party : Taywade College Mahadula

Nagpur  
State Name : Maharashtra, Code : 27  
Place of Supply : Maharashtra

Despatch Document No.		Delivery Note					
Through : Pankaj Auto		031/01/20-21 dt. 6-Jan-2021					
SI No.	Description of Goods and Services	HSN/SAC	GST Rate	Quantity	Rate	per	Amount
	Jaquar LED D/L Ultima Slim 36W-6K	94054090	12 %	45 pcs	1,825.89	pcs	82,165.05
	Freight & Forwarding Charges	9968	18 %				750.00
	CGST						4,997.40
	SGST						4,997.40
	Round Off						0.15
Total				45.00			₹ 92,910.00

Amount Chargeable (in words)

E. & O.E

INR Ninety Two Thousand Nine Hundred Ten Only

	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
	82,165.05	6%	4,929.90	6%	4,929.90	9,859.80
	750.00	9%	67.50	9%	67.50	135.00
Total:	82,915.05		4,997.40		4,997.40	9,994.80

Tax Amount (in words) : INR Nine Thousand Nine Hundred Ninety Four and Eighty paise Only

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.  
NO EXCHANGE NO RETURN FOR  
SERVICE CALL CUSTOMER CARE NUMBERS.

for MEHADIA SALES ORGN.

Authorised Signatory

This is a Computer Generated Invoice