



**AMET**  
**(ACADEMY OF MARITIME EDUCATION AND TRAINING)**  
(A *de novo* Category DEEMED TO BE UNIVERSITY Under Section 3 of UGC Act 1956)

**CRITERION 7**

**INSTITUTIONAL VALUES AND BEST PRACTICES**

**Q<sub>i</sub>M / Q<sub>n</sub>M**

**KEY INDICATOR**

**7.1 INSTITUTIONAL VALUES AND SOCIAL  
RESPONSIBILITIES**

**7.1.2 The Institution has facilities for alternate sources of energy and energy  
Conservation measures**

**ADDITIONAL INFORMATION**

## **Institutional Values and Best Practices**

### **7.1.2 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

1. Solar energy

#### **SOLAR INITIATIVE AT AMET UNIVERSITY**



A view of AMET 20kW solar power plant



**AMET**  
**(ACADEMY OF MARITIME EDUCATION AND TRAINING)**  
(A de novo Category DEEMED TO BE UNIVERSITY Under Section 3 of UGC Act 1956)



A view of AMET 10kW solar power plant

### **AMET Rooftop Grid Connected Solar Power Plants**

The AMET University started its solar initialization by installing 10kW solar power plant in November-2014. The 10kWp Solar Photovoltaic (SPV) system installed at AMET at roof-top is estimated to afford an annual energy generation of 16,000 units ( $5\text{units} \times 10\text{kWp} \times 320\text{days}$ ) for captive use under ideal conditions.

The AMET expanded its solar initialization by installing additional 20kWp solar power plant in October-2017. It consists of 64 panels of each 315Wp capacity. The power generated from this plant is connected to the main power supply through the Fronius 20kW grid connected inverter. The 20kWp Solar Photovoltaic (SPV) system at roof-top is estimated to afford an annual energy generation of 32,000 units ( $5\text{units} \times 20\text{kWp} \times 320\text{days}$ ) for captive use under ideal conditions. This power is used to share the part of the loads in the campus. This inverter has inbuilt online data monitoring system.

#### **Technical Specifications of Plant - I:**

##### **Solar PV Module Specifications**



**AMET**  
**(ACADEMY OF MARITIME EDUCATION AND TRAINING)**  
(A de novo Category DEEMED TO BE UNIVERSITY Under Section 3 of UGC Act 1956)

**Total Number of Panels: 42**

<b>Manufacturer:</b> Lubi Electronics, Gandhinagar – 382 325.		
<b>Model: LUBI Make LE18P250</b>		
<b>S. No</b>	<b>Parameters</b>	<b>Ratings</b>
1	Maximum Power, $P_{\max}$	250 W
2	Maximum Voltage, $V_{\max}$	30 V
3	Maximum Current, $I_{\max}$	8.34 A
4	Open Circuit Voltage, $V_{oc}$	36 V
5	Short Circuit Current, $I_{sc}$	9.26 A
6	Module Efficiency	15.44 %
7	Solar Irradiance (STC)	1000 W/m <sup>2</sup>
8	No. of Cells	60 Cells

**Solar Inverter Specifications**

<b>Manufacturer:</b> Schneider Electric	
<b>Model No:</b> Conext TL 10000 E	
<b>Parameters</b>	<b>Ratings</b>
<b>Input (DC)</b>	
MPPT voltage range, full power	350 – 850 V
Operating Voltage range	200 – 1000 V
Max. input voltage, open circuit	1000 V
Number of MPPT	2
<b>Output (AC)</b>	
Normal output power	10 kVA
Nominal output voltage	230 / 400 V
Frequency	50 / 60 Hz

## **Technical Specifications of Plant - II:**

### **Solar PV Module Specifications** Total Number of Panels: 64

<b>Manufacturer:</b> Goldi Green Technologies Pvt. Ltd., Surat. <b>Model No:</b> GOLDI315PM		
<b>S. No</b>	<b>Parameters</b>	<b>Ratings</b>
1	Maximum Power, $P_{max}$	315 W
2	Maximum Voltage, $V_{max}$	37 V
3	Maximum Current, $I_{max}$	8.52 A
4	Open Circuit Voltage, $V_{oc}$	46 V
5	Short Circuit Current, $I_{sc}$	8.9 A
6	Maximum System Voltage	1000 V
7	Solar Irradiance (STC)	1000 W/m <sup>2</sup>
8	No. of Cells	60 Cells

### **Solar Inverter Specifications**

<b>Manufacturer:</b> Fronius <b>Model No:</b> Fronius Symo 20.0-3-M <b>S. No:</b> 28149005	
<b>Parameters</b>	<b>Ratings</b>
<b>Input (DC)</b>	
MPPT voltage range, full power	420 – 800 V
Operating Voltage range	200 – 1000 V
Max. input voltage, open circuit	1000 V
Number of MPPT	2
<b>Output (AC)</b>	
Normal output power	20 kVA
Nominal output voltage	230 / 400 V
Frequency	50 / 60 Hz

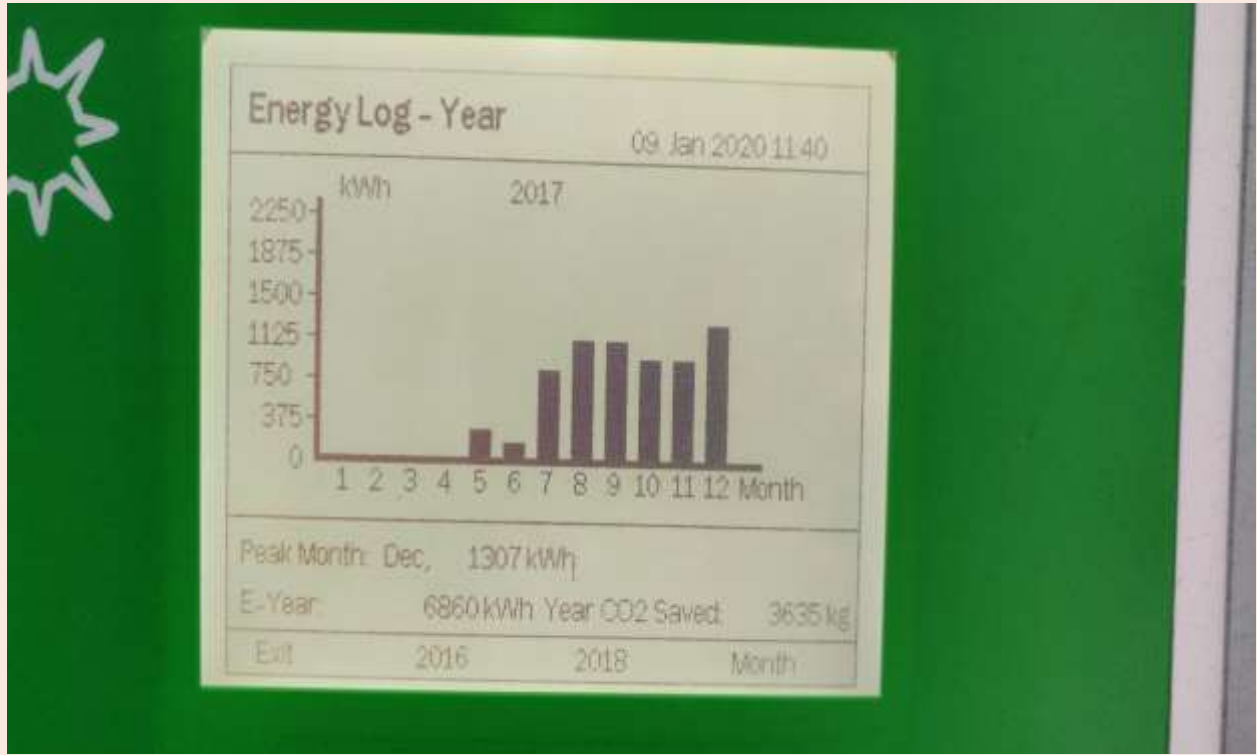


**20kW Solar Power Plant-2 Inverter Setup**

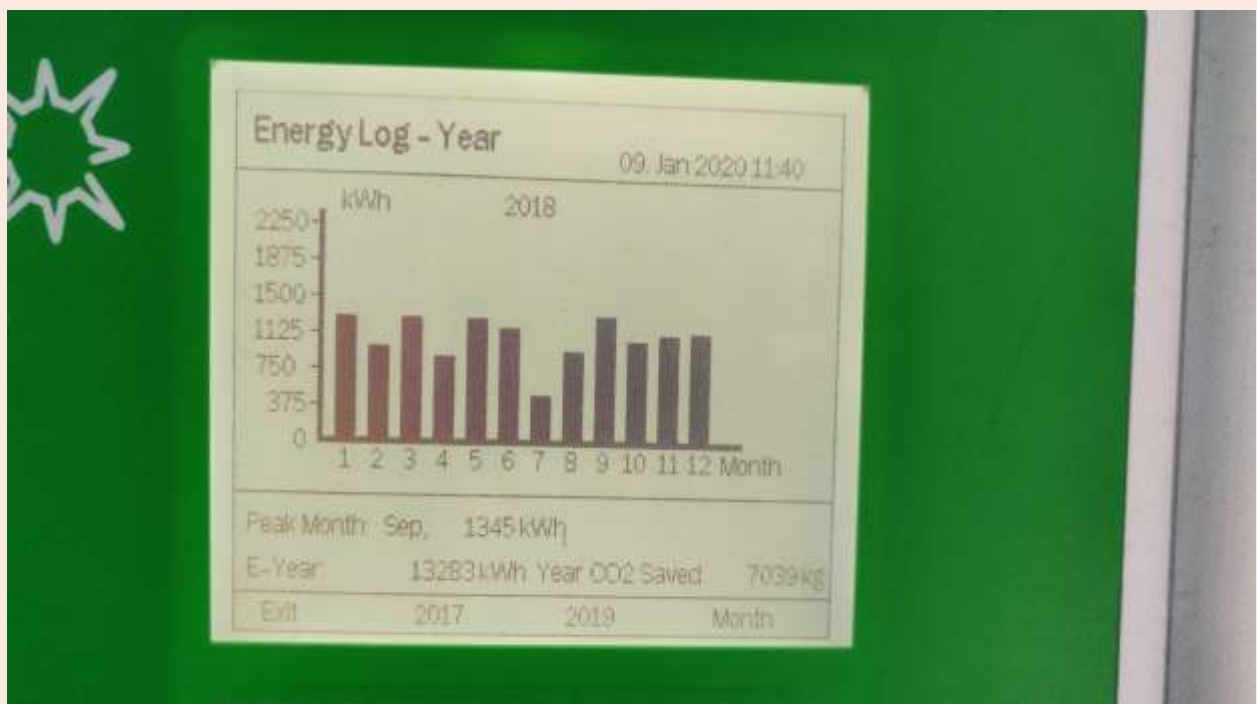


**10kW Solar Power Plant-I Inverter Setup**

### POWER GENERATION-2017



### POWER GENERATION-2018



### POWER GENERATION-2018(MONTH WISE DISTRIBUTION)

2018	PLANT 1 Overall Energy Generation (in kWhr)	Plant 2 Overall Energy Generation (in kWhr)	Total
<b>Jan</b>			
<b>Feb</b>	872.1	2237.37	3109.47
<b>Mar</b>	1301.4	2533.28	3834.68
<b>Apr</b>	892.6	0	892.6
<b>May</b>	1309	0	1309
<b>Jun</b>	1205.2	0	1205.2
<b>Jul</b>	500.7	1846.49	2347.19
<b>Aug</b>	983.6	2193.2	3176.8
<b>Sep</b>	1197.9	2518.5	3716.4
<b>Oct</b>	1101	2117.12	3218.12
<b>Nov</b>	1160	1997.57	3157.57
<b>Dec</b>	1176	2335.53	3511.53
<b>Total</b>	11699.5	17779.1	<b>29478.56</b>

### POWER GENERATION-2019



## POWER GENERATION-2019(MONTH WISE DISTRIBUTION)

<b>2019</b>	<b>PLANT 1 Overall Energy Generation (in kWhr)</b>	<b>Plant 2 Overall Energy Generation (in kWhr)</b>	<b>Total</b>
<b>Jan</b>	1419	2517.77	3936.77
<b>Feb</b>	1332	2477.11	3809.11
<b>Mar</b>	1620	3070.21	4690.21
<b>Apr</b>	1355	2597.66	3952.66
<b>May</b>	1204	2463.74	3667.74
<b>Jun</b>	1031	2052.82	3083.82
<b>Jul</b>	1106	2327.17	3433.17
<b>Aug</b>	1102	2545.39	3647.39
<b>Sep</b>	1129	2498.41	3627.41
<b>Oct</b>	1106	2473.2	3579.2
<b>Nov</b>	1178	2355.04	3533.04
<b>Dec</b>	1136	2308.05	3444.05
<b>Total</b>	14718	29686.57	<b>44404.57</b>



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

**Er. S.JAYACHANDRAN, B.E., (Civil), M.E., (Struct), M.I.E. (India) F.I.V., (India),**

Consultant Civil Engineer, Chartered Engineer (India) Reg. No. M123600,  
Structural Engineer, Approved & Registered Valuer (India) Reg No.F16515,  
Licenced Surveyor Class I (Reg No.1429), Corporation of Greater Chennai,  
Superintending Engineer, PWD (Retd) Government of Tamil Nadu,  
Technical Arbitrator, Structural Designer,

Competent Person for Stability Certificate for Factories, Restaurants, Colleges, & School Buildings.

**RESIDENCE:**

Plot No. 1375, Golden Colony, 7th Street,  
Anna Nagar Western Extension,  
Mogappair, Chennai- 600 050.

**OFFICE:**

Plot No. 1375, Golden Colony, 7th Street,  
Anna Nagar Western Extension,  
Mogappair, Chennai- 600 050.

Ph No. (R) : 044 42845194

Mobile : 98849 45149

Email : anilsutramanjan2006@yahoo.co.in

Ref : Letter No.10/AU/CIVIL/SPP/2020-21

Date: 25.08.2020

To

The Electrical Inspector.

No.77, Plot No.G2, Bharathi Nagar,  
5th Street, Old Perungalathur,  
Mudichur Main Road, Tambaram Post,  
Chennai - 600 063.

Dear Sirs,

**SUB : CERTIFICATE OF STRUCTURAL STABILITY FOR INSTALLATION OF 1X10KW, 1X20KW SOLAR  
POWER PLANT AT RABINDRANATH TAGORE BUILDING (BLACK-B) TERRACE FLOOR – REG**

Your Letter No.TBM 2034 / EI / TBM / Drawing / 2020, Dated : 14.08.2020

With reference to the above stated compliance letter no. TBM 2034 / EI / TBM / Drawing / 2020, dated:14.08.2020, I certify that I have inspected the Rabindranath Tagore building (Black-B) at Terrace floor and examined an additionally which are erected of 1x10KW, 1x20KW (Total capacity : 30KW) Solar Power Plant along with accessories i.e PV Modules, GI Supports, Array Junction Box's, Inverters, Distribution Boards, etc.. that have been installed.

I certify that the all works of engineering & construction in premises and structurally sound well and that their stability will not be endangered by their use of as above installed capacity of 1x10KW, 1x20KW (Total : 30KW) Solar power plant at Rabindranath Tagore building (Black-B) Terrace floor.

Kindly consider and do the needful .

Thanking you,

Yours faithfully,

Er. S.Jayachandran, B.E.,(Civil),M.E.,(Struct),M.I.E(India)F.I.V.,(India)  
Consultant Civil Engineer.

Copy to: 1. AMET University, Chennai.

  
**Er. S. JAYACHANDRAN, M.E., (Struct)**  
T & CP Structural Engineer - Grade-I (SE)

Regn No.CGLRGN/SE/Gr-1/2019/12/055 Dt-12/12/2019  
Dept. of Town & Country Planning Chengalpattu-603001.

  
**Er. S. JAYACHANDRAN, M.E., (Struct)**  
Structural Engineer - Grade-I (SE)


CMDA Regn. No.SE/Gr-I/19/11/223 Dt-26/1/2019  
Chennai Metropolitan Development Authority

**Stability Certificate for solar power plant**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

ENSUN ENERGY SYSTEMS PVT LTD				
Mfrs of : SOLAR PV APPLICATIONS, SOLAR THERMAL SYSTEMS				
Address: No. 6 BH Ram Complex, 4 Road, Chithode, Erode - 638 102				
Phone: 99448 55776, 99448 55664 Web: www.ensun.in mail: ensunindia@gmail.com				
TIN: 33B13064852 CST: 180 / 994903				
To	INVOICE	EES 06	Date :	26.10.2017
AMET UNIVERSITY 135, EAST COAST ROAD, KANATHUR - 603112 CHENNAI		Order	No	2017-18/P/2172
		DATE	Date	06.06.2017
			Date	
		GST :	33AACCE1436B1ZF	
		L.R./R.R. No.		
ITEM	PARTICULARS	Qty	Price	Amount
1	RENEWABLE ENERGY DEVICES SOLAR SYSTEMS			
	20 KW SPV Modules as per IES 61215 Standard, Solar Panel Mounting Structures, FRONIUS 20 KW x 1 nos - 3 ph Solar Grid tied inverter, DC Junction Box, AC Junction Box Cabling & Accessories, Installation & Commissioning			1260000
	SGST 9 %			31500
	CGST 9%			31500
	( RUPEES THIRTEEN LAKHS AND TWENTY THREE THOUSAND ONLY)			
	Total			1323000
E.&O.E. Our responsibility ceases after the goods handed over to the carriers. Claims for leakage or shortage during transit will not be entertained. We reserve the right to recover from you any tax, duty or any other levy applicable to this transaction under any Government enactment and not charged to in this bill. Interest will be charged at 25% if the bill is not paid within due date. Subject to Erode jurisdiction only		For ENSUN ENERGY SYSTEMS PVT LTD 		

Bills for implementation of 20KW Solar power plant



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956



## TAX INVOICE

**EUPHORIA GREEN TECHNOLOGIES**  
#21, PSG TAM Flats,  
29/33, North Mada Street,  
Srinagar Colony, Chennai - 600 015

Buyer  
AMET UNIVERSITY  
135, East coast road,  
Kandanchur, Chennai - 603 112

Invoice No : SLS / 2014 - 15 / 039	Dated : 12.12.2014
TIN NO : 33760864671 CST NO : 1239477 / Dt : 4.2.2014 PAN NO : APGPS8507F	
Buyer's Order No. 1062	Dated 21.10.2014
Buyer's TIN NO :	
Term of Delivery	

S.No.	Description of Goods	Qty	Rate	Amount
1	EGT 10KW Grid Connected Solar Photovoltaic Power Plant Consisting of I. LUBI 250W Wp SPV Modules - 40 Nos II. Schnider 10KW Solar Inverter - 1 No. III. Fixed GI Mounting Structure for 5 KW. IV. Uni-Axis Tilting GI Mounting Structure for 5 KW V. Electrical Earthing VI. Remote Monitoring System with data Logger.	1 Set	902500	9,02,500.00
	Vat 5 %			45,125.00
	Total			9,47,625.00

Amount Chargeable ( in words )

NR Nine Lakhs Forty Seven Thousand Six Hundred twenty Five Only.

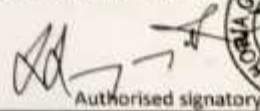
### Our Bank Details

Bank : Canara Bank  
Branch : St.Mary's Road, Abhiramapuram, Chennai - 18  
Acc.No. 1287201002453  
PSC Code : CNRB0001287

### Declaration

We declare that this invoice shows the actual price of  
the goods described and that all particulars are  
true and correct

for Euphoria Green Technologies

  
Authorised signatory



**Bills for implementation of 10KW Solar power plant**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

enSun				
ENSUN ENERGY SYSTEMS PVT LTD				
Mix of : SOLAR PV APPLICATIONS, SOLAR THERMAL SYSTEMS				
Address: No. 8 Sri Ram Complex, 4 Road, Chithode, Erode - 638 122				
Phone: 09446 55775, 95446 55654 Web: www.ensun.in mail: ensunindia@gmail.com				
TIN: 33B13664653, CST: 160 / 954993, GST: 33AACCE1436B12F				
To	DC	66	Date	21.10.2017
AMET UNIVERSITY		Order No	2017-18/P/2172	
135, EAST COAST ROAD KANATHUR - 603112		DATE	06.06.2017	
CHENNAI				
TAMIL NADU				
GST: 33AACCE1436B12F	Party GST			
	LR/R/R No			
ITEM	PARTICULARS	CAPACITY	QTY	
1	FRONIUS SRTING INVERTER Model: Symo 20.0-3-M Serial No.: 28149005	20 K	1	
TOTAL			1	
E&O/E Our responsibility covers after the goods handed over to the carriers. Claims for leakage or shortage during transit will not be entertained. We reserve the right to recover from you any tax, duty or any other levy applicable to this transaction under any Government enactment which is not charged to in this Bill. Interest will be charged at 25% if the bill is not paid within due date. Subject to 3 years arbitration only		For ENSUN ENERGY SYSTEMS PVT LTD. 		
Received By	Authorized Signatory	Official Seal		
Date :	Time:	Place :		
We Checked and Received the Above Said Product with good conditions and without damage				

*Handwritten notes:*  
Onions  
Take Solar  
inverter (20kw)  
received  
V. J. J. J.  
21/10/17

Bills for implementation of Solar power plant

## 2. BIOGAS PLANT

### TECHNICAL SPECIFICATION FOR 5.0M / DAY OF BIOGAS PLANT

Biogas Plant Model	Specifications
Biogas Plant Type	Biogas plant- Water seal model
Feed stock	50KG/Day Food Waste
<b>Bio-Digester Output</b>	
Biogas production (M / day)	~ 5
Average Gas Calorific Value (Kcal/NM )	~ 4,700
Organic Manure Generated (Lit/Day)	~ 60 to 80
<b>Biogas Equivalent to LPG</b>	
5.0M Biogas equivalent to LPG (kg/day)	~ 2.0 to 2.25
5.0M Biogas equivalent to LPG(kg/Month)	~ 60 to 67.5

### Research undertaken on Alternate Energy

Department	Year	Area of study	Publications/Thesis
Marine Biotechnology	2015 (M.Sc.)	Biofuel	Production of Bioethanol from Papaya and Pineapple Wastes using Marine Associated Microorganisms. 2015. Biosciences Biotechnology Research Asia 11(SE):193-199
Physics	2015	Non Destructive Evaluation	Non-destructive Evaluation of Compound Semiconductor Thin-Film Solar Cells by Photothermal Beam Deflection Technique. International Journal of Thermo physics, 2015, 36: 104–118
Mechanical Engineering	2015-2020 PhD	Bio Fuels	Experimental Studies on the Improvement of Performance of a Diesel Engine using karanja Biodiesel



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956



**Bio Gas Plant**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

**AMET**  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

135, East Coast Road, Kanathur - 603112.  
Tel: 91 - 44 - 2744 4625 / 627 / 628 Fax: 91 - 44 - 2747 2604 / 2747 2904  
Website: www.ametuniv.ac.in  
E-Mail: purchase@ametuniv.ac.in, accountsmanager@ametuniv.ac.in  
GSTIN No.: 33AAATP0243L1Z8

**Purchase Order**

To  
AAQIA TRUST  
7/27A, Nallipalayam Post,  
Nemakkal (Tk) & (Dt)  
Tamilnadu  
Pincode: 637003  
Mobile: 9444939071  
E-Mail: aaqiastrust@gmail.com

Purchase No./Date : 2020-21/P/0011 Dt. 17/07/2020  
Indent No./Date : Mr. Sundar / Mr. Sudhakar - AR Dt. 13/07/2020  
Inderting Dept. : CANTEEN  
Your Quotation No. : 65  
Your Quotation Dt. : 16/07/2020

We are pleased to release our Purchase Order towards the supply of the following items:

S.No	Code	Item Description	UOM	Qty.	Rate	Disc %	Disc	GST %	GST	Amount	Required Before
1	L001	Lab Equipments 15.0 MS Day Biogas Plant- Digester & Biogas holder (2.2M DiaX 2.1M Height) 4 SM3 Digester thickness 5.0 mm 3.5M3 Gas Holding thickness 4.0 mmH Biogas Canteen Burner- Single Slowest Gas Pipeline-Nylon Threaded gas hose pipeline & Ball valve connection	Unit	1.00	15900.00	0.00	0.00	0.00	0.00	15900.00	24/07/2020
2	L001	Lab Equipments Solid Waste Management of Composting Pit, Vermi-Compost- Earthworms, Start- up Composter, Compost Booster, Mixing devices	Sets	3.00	6500.00	0.00	0.00	0.00	0.00	19500.00	24/07/2020
3	L001	Lab Equipments Microbial Inoculum, Inclusive of installation and commissioning charges, freight charges, GST not covered for all items	kgs	3.00	1500.00	0.00	0.00	0.00	0.00	4500.00	24/07/2020
Sub Total										15900.00	
Net Amount										15900.00	

Continued Copy

MP AI QUAD CAMERA  
on realme 5 Pro  
10/10/2020  
17/7/2020

AMET  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

FOOT REV: 0011 10.12

Invoice for implementation of biogas plant



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

Amount: One lakh fifty nine thousand only

TERMS & CONDITIONS			
Payment Terms	INR 50% Advance, balance 50% after completion and handing over	Freight Remarks	Included Setting up for Bio gas Plant for main canteen
Mode Of Despatch	As per commercial terms of your quotation		
Destination	Kannathur - Chennai		
Price	For Kannathur		
Prepared By: R.MADHAVAN ( Mobile No :9500098380 )		Purchase Manager	for AMET Authorised Signatory
To be filled by Stores Department Only			
Received Date	Received Quantity		
D.C.No/Date	Shortage, if any		
Informed Indenting Dept	Yes / No	Sign. of the Indenter	
Signature of the Stores in charge			
F2018REV 0001, 12-12			

Controlled Copy

48MP AI QUAD CAMERA  
Shot on realme 5 Pro

Invoice for implementation of biogas plant



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956



## AADIA TRUST

Reg. Office: 7/27A, Nallipalayam Post, Namakkal (Tk) & (Dt)-637003, Tamil Nadu  
Mobile: +91 94449 35071, 87549 23680 - E-mail: aadiatrust@gmail.com  
Website: <https://aadia-trust2.webnode.com/>

AADIA/ 2021/ BGC/ 06

09/01/2021

To,

THE REGISTRAR  
AMET UNIVERSITY  
135, East Coast Road,  
Kanathur - 603112, India

*Pl. pay Rs 15900  
with remittance from Ape Mainsteno  
B. Stokes  
- R*

Respected Sir,

Sub: Submission of Invoice for 50 Kgs per day Biogas Plant and Solid Waste Management system - Reg

As per Mail received from your concern dated on 15<sup>th</sup> July 2020, we are pleased to submit our Invoice as under for setting up Biogas Plant out of Food Waste of 50 Kg / Day and Solid Waste Management system:

(a) DETAILED LIST OF EQUIPMENTS/ PARTICULARS

S.No	Name of the Equipment	Technical Specification	Quantity	Scope of Supply	
				AADIA	Client
1.	5.0 M <sup>3</sup> /Day Biogas Plant-Digester & Biogas holder (2.2M Dia X 2.1M Height)	4.5M <sup>3</sup> Digester thickness 5.0 mm 3.5M <sup>3</sup> Gas Holding thickness 4.0 mm	1 No	✓	
2.	Biogas Canteen Burner	Single Stove	2 No's	✓	
3.	Gas Pipeline	Nylon threaded gas hose pipeline & Ball valve connection	Up to 5 Meters Max.	✓	
4.	Installation and commissioning	As required	Lot	✓	
5.	Water line and cow dung feeding to biogas plant	Cow Dung + Water Content (1:1 Ratio)	Lot		✓
6.	Earth Excavation	As required	Lot		✓
7.	Initial cow dung feeding to biogas plant for First gas generation	2000 Kg to 2300 Kg	Lot		✓
8.	Solid Waste Management of Composting Pit	Vermi-Compost-Earthworms, Start-up Composter, Compost Booster, Mixing devices	Lot	✓	
9.	Microbial Inoculum	As required	3 Kg	✓	

*Sir  
K. J. S. Complete  
11/1/2021  
(M. S. S. S.)*

Head Office: 7/27A, East Street, Nallipalayam Post, Namakkal (Tk) & (Dt)-637003, Tamil Nadu  
Branch Office: 61/43, South Muniyappan Kovil Street, Karungalpatti, Gugai, Salem-636006, Tamil Nadu

**Bill for implementation of biogas plant**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

## (B) PRICING DETAILS

S.No	Particulars	Quantity	Amount in Rs.
1	I. 5.0 M <sup>3</sup> /Day Biogas Plant-Digester & Biogas holder (2.2M Dia X 2.1M Height) – 4.5M <sup>3</sup> Digester thickness 5.0 mm	1 Unit X 1,35,000	1,35,000.00
	3.5M <sup>3</sup> Gas Holding thickness 4.0 mm		
	II. Biogas Canteen Burner-Single Stove		
2	III. Gas Pipeline-Nylon threaded gas hose pipeline & Ball valve connection	3 Sets X 6,500	19,500.00
	I. Solid Waste Management of Composting Pit, Vermi-Compost-Earthworms, Start-up Composter, Compost Booster, Mixing devices		
3	I. Microbial Inoculum	3 Kg X 1,500	4,500.00
Total			1,59,000.00
Amount received for 50% from the total dated on 23/07/2020			79,500.00
Amount received for 25% from the total dated on 12/08/2020			39,750.00
Amount received for 15% from the total dated on 01/10/2020			23,850.00
Remaining Balance for 10% from the Total Amount			15,900.00

(Rupees Fifteen Thousand and Nine Hundred Only)

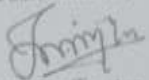
Our Team and representatives successfully installed the biogas plant and trailed the flame with burners and also initiated Solid Waste Management pit work, supplied all the Start-up Microbial Composter, Compost Booster, Earthworms for 3 SWM Pit for waste decomposition purposes.

Hence, we request you to kindly release the remaining balance from the total. Further, we extend our sincere thanks to AMET University for provide us this great opportunity.

For AADIA TRUST

Thanking you

Yours Sincerely

  
Managing Trustee

SEAL



Date : 09.01.2021

Head Office: 7/27A, East Street, Nallipalayam Post, Namakkal (Tk) & (Dt)-637003, Tamil Nadu  
Branch Office: 61/43, South Muniyappan Kovil Street, Karungalpatti, Gungal, Salem-636006, Tamil Nadu

**Bill for implementation of biogas plant**

### 3. Wheeling to the Grid

The energy output of the solar panels are utilized for the power requirements for the university and the power output of the solar panel are also connected to the power grid of the TNEB where the excess power produced by the solar panels are supplied to the grid for which subsidy has been provided by the TNEB for the power consumption of the university. The 30 KW solar panel is to meet out the power requirement of university low range equipment's like lights, fans, etc.



**Wheeling to Grid**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956



AMET  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Under Section 3 of UGC Act 1956)

INDIA'S FIRST DEEMED TO BE UNIVERSITY IN MARITIME EDUCATION

Ref : Letter No.09/AU/ELECT/SPP/2020-21

Date: 27.08.2020

To

The Electrical Inspector,

No.77, Plot No.G2, Bharathi Nagar,  
5th Street, Old Perungalathur,  
Mudichur Main Road, Tambaram Post,  
Chennai - 600 063.

Dear Sir,

Sub : Submission of Completion Report for 30KW (1x10KW, 1X20KW)  
Solar Power Plant, Black-B Terrance Floor - Reg.

Ref : Your Dwg Approval Lr.No.TBM 2034 / EI / TBM / Drawing / 2020, Dated : 14.08.2020

This has reference to the above cited compliance letter.no.TBM 2034 / EI / TBM / Drawing / 2020, dated: 14.08.2020, The following Part B : Specific points have completed the electrical installation work at our premises.

We are herewith enclosing the completion report along with list of equipments erected details for your kind consideration.

**Part B : Specific Condition Replies :**

1. Noted, Building civil structural stability certificate enclosed for your kind review and consideration.
2. Noted, The Reverse Power Relay has been provided in the Incomer of Lighting Distribution Board, Where both Solar & EB Power are fed.

Also, we have enclosed the original challan for Rs. 5000/- (Rupees Five Thousands Only) towards the inspection fees. Hence, We request you to kindly arrange for electrical inspection at our premises and issue the safety clearance of 30kW Solar Power Plant for your earliest conveniences.

Thanking you,

Dr. M. JAYAPRAKASHVEL

Registrar i/c

ACADEMY OF MARITIME EDUCATION AND TRAINING  
(Deemed to be University u/s 3 of UGC Act. 1956)  
# 135, East Coast Road,  
Kanathur - 603 112, Chennai, India.

Yours faithfully,  
for AMET UNIVERSITY,

Copy to: 1. The Chief Electrical Inspector, Guindy.  
2. Amet University, Chennai

Encl: 1. Original Challan No. 798 for Rs. 5000/-, 7,000/- Date: 28/08/2020  
2. 3Sets, Civil structural stability certificate.  
3. 3Sets, List of 30KW Solar Power Plant Equipment Details (Annexure-A)

135, East Coast Road, Kanathur-603 112, Chennai, India. Tel: 044-27444625 / 627 / 628 Fax: 044-27444632

Email : office@ametuniv.ac.in

Website : www.ametuniv.ac.in

Scanned with CamScanner

Requisition Letter for wheeling to Grid



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

SAVE ENERGY

SAVE NATION

**GOVERNMENT OF TAMILNADU  
ELECTRICAL INSPECTORATE**

From  
Er. N.HEMA, B.E.,  
Electrical Inspector,  
Tambaram Division,  
No.77, Bharathi Nagar 5<sup>th</sup> Street,  
Old Perungalathur, Mudichur Main Road,  
Tambaram Taluk, Chennai - 600 063.

To  
M/s. AMET,  
(Academy of Maritime Education and Training)  
No.135, East Coast Road,  
Reddy Kuppam Village,  
Kanathur - 603 112  
Chengalpet District.

**Letter No. TBM 2034/ EI /TBM/SC/ 2020 Dt. 31.08.2020**

Sir,

Sub: Electricity - 30KW (1x10KW, 1x20KW) Solar Power Plant Electrical installations of voltage exceeding 650 V and upto and including 33 kV at the premises of M/s. AMET, (Academy of Maritime Education and Training) No.135, East Coast Road, Reddy Kuppam Village, Kanathur - 603 112, Chengalpet District - - MV Addition/ Alteration of Equipments of voltage upto 650 V Inspection under Regulations 43 Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 on 29.08.2020- Approval - Accorded.

Ref: 1) This office Lr No. TBM 2034/EI/TBM/Drawing/2020, Dt. 14.08.2020.  
2) Your Letter No. 09/AU/ELECT/SPP/2020-21 Dated: 27.08.2020 received along with Completion report.

Approval is hereby accorded under Regulation 43 of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 to commission the Electrical Installations inspected on 29.08.2020 at the above premises as detailed in the Annexure (2 Pages) enclosed herewith subject to complying with the terms and conditions of the supplier.

The date of energisation of the installation should be intimated to this office. The equipments permitted should be commissioned within six months from the date of issue of this letter failing which fresh permission should be obtained.

Under Regulation 46(7) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 the owner of the installation shall maintain and operate the installations in a condition free from danger and as recommended by the manufacturer or by the relevant codes of practice of the Bureau of Indian Standards.

*[Signature]*  
31.08.20  
ELECTRICAL INSPECTOR  
TAMBARAM DIVISION

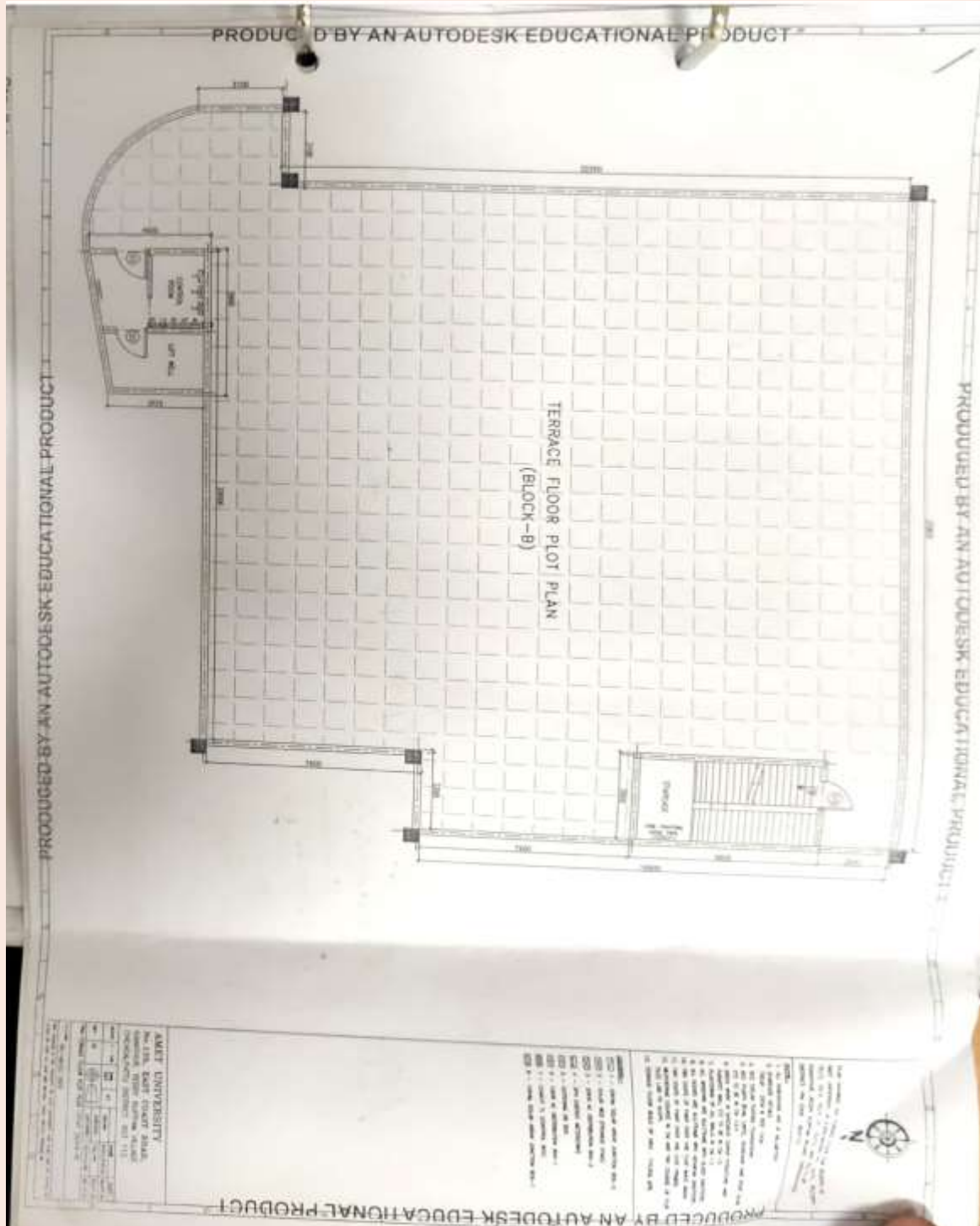
Encl: Annexure containing List of Equipment (06 Pages)  
Copy to: M/s. A.K.Engineering Services, Chennai - 600 036.  
Copy to: The Superintending Engineer/CEDC/South- II /K.K.Nagar  
Copy Submitted to: The Chief Electrical Inspector to Govt/Chennai-32.

**TNEB Order Copy for wheeling to grid**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

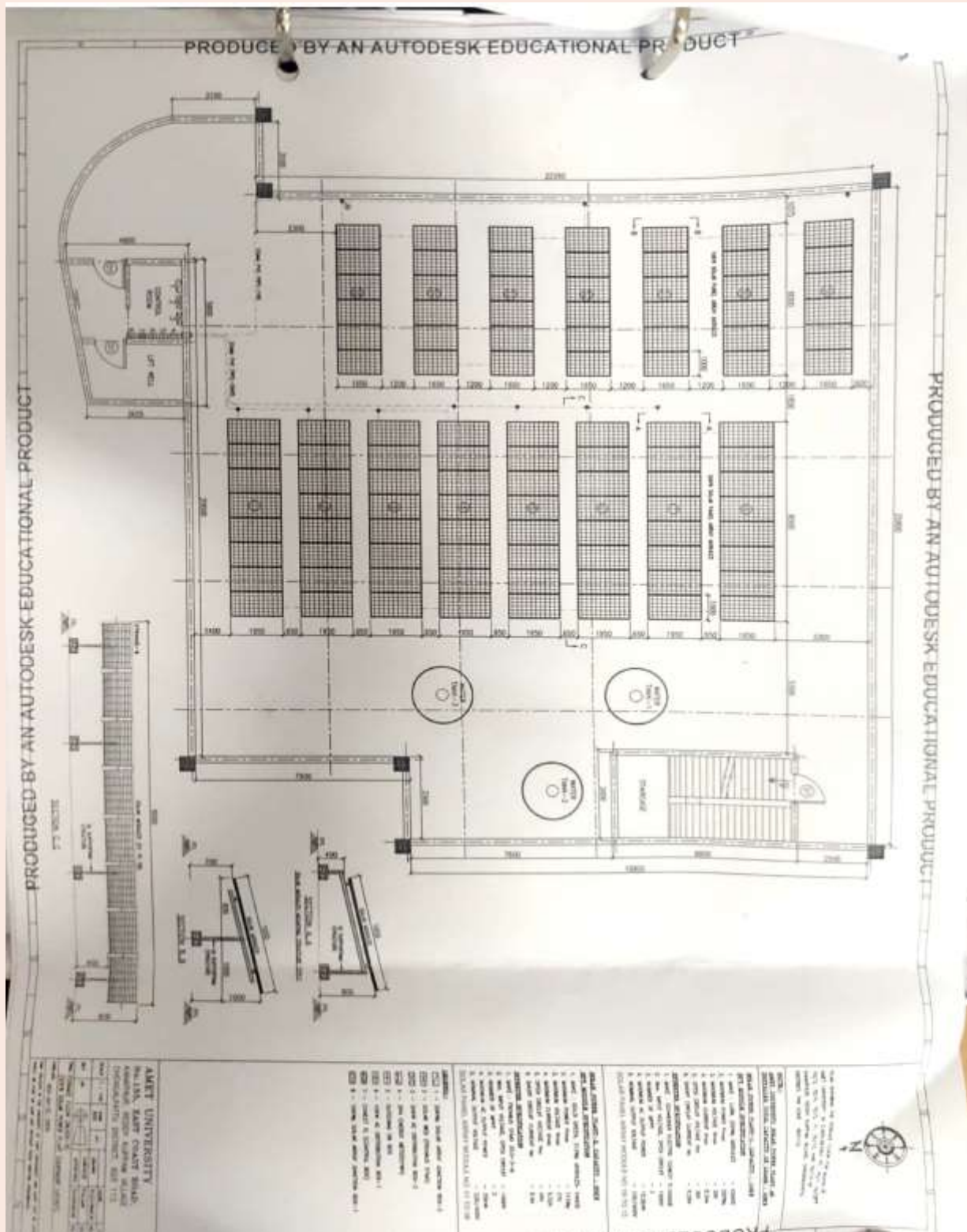


**Solar Power Plant Layout**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956



Solar Plant Layout

#### 4. Sensor-based energy conservation –

Dual ceiling sensor switch is implemented for the closed cabin and meeting room .Here the automatic Light ON/OFF controller is also provided. Due to this energy is been conserved. We have also installed auto pump cut off in over head tanks for consuming power.

#### **AUTO SENSORS USED IN CAMPUS**

<b>S.NO</b>	<b>BLOCKS</b>	<b>NO. OF SENSORS</b>
1	MAIN CANTEEN	1 NOS
2	APM CANTEEN	1 NOS
3	VOC BLOCK	1 NOS
4	RO PLANT YAMUNA PLANT	1 NOS
5	HORIZON PLANT	1 NOS
6	SARASWATHI PLANT	1 NOS
7	KAVERI HOSTEL	1 NOS



**Sensor Based Energy Conservation**



**AMET**  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

TAX INVOICE		Original Copy			
<b>M/s. GE-TECH POWER CONTROLS</b> No. 7, Lakshmanan Natarajan street, Jambukeshwara Colony, Korathur, Chennai - 600 089. TIN No. 3302144459 GSTIN No. 33AAKPE9169N1Z5		Invoice No : GEP/AU/INV/03/2020-21		Date : 23.07.2020	
		Supplier's Ref. PO No 2020-21/P/531-M		Date: 16.07.2020	
		Supplier's Code :			
		Invoice No : 03		Dated : 23.07.2020	
<b>Buyer's Address :</b> <b>M/s. M/s. AMET UNIVERSITY</b> No. 135, East Coast Road, Kanathur, Chennai - 603 112 TAMILNADU GSTIN No. 33AAATP0243L1ZR		Despatched through By Road		Destination By Bike	
		Terms of Delivery Delivery at : AMET University, Kanathur			
<b>Delivery address :</b> <b>M/s. M/s. AMET UNIVERSITY</b> No. 135, East Coast Road, Kanathur, Chennai - 603 112 TAMILNADU		Lorry Receipt No : Nil Packages : As per Invoice			
		Contact person : Mr. Palani - 9884425010 Mr R.Madhavan (Pur) - 95000 98380			
S.No.	Description	QTY	UOQ	Unit Price	Total Price
1	DUAL CELING SENSOR SWITCH FOR CLOSED CABIN / MEETING ROOM AUTOMATIC LIGHT ON/OFF CONTROLLER (LEGRAND - MODEL No.0488-06)  (HSN CODE - 8543)	3.0	NOS	8400.00	25200.00
2	Total	3.0	NOS		25200.00
3	CGST @ 9%				2268.00
4	SGST @ 9%				2268.00
5	100% of Total Invoice values	3.0	NOS		29736.00
Amount chargeable (in words) Indian ruppes : Twenty nine thousand seven hundred and thirty six only.					
Certified that the particulars given above are true and correct and the amount indicated represents the price actually charged and that there is no additional consideration flowing directly or indirectly from the buyer.		For GE-TECH POWER CONTROLS,  Authorized Signatory CH-002			
Subject to Chennai jurisdiction					

16/9/2020  
M. S. S. S. S.

Bill Recd  
K. G. S.  
18.09.2020

**Bills for Implementation of Sensor Based System**



# AMET

ACADEMY OF MARITIME EDUCATION AND TRAINING  
Deemed to be University Under Section 3 of UGC Act 1956

**AMET**  
ACADEMY OF MARITIME EDUCATION AND TRAINING  
DEEMED TO BE UNIVERSITY  
(Order Section 3 of UGC Act 1956)

135, East Coast Road, Kanathur - 603112.  
Tel: 91 - 44 - 2744 4522 / 521 / 528 Fax: 91 - 44 - 2747 2604 / 2747 2904  
Website: www.ametuniv.ac.in  
E-Mail: purchase@ametuniv.ac.in, accountsmanager@ametuniv.ac.in  
GSTIN No: 33AAATP0243L12R

---

**Purchase Order**

<b>To:</b> <b>GE - TECH POWER CONTROLS</b> No. 7, Lakshmana Natarajan Street Jambukeshwarar Colony, Korattur Chennai, Tamilnadu Pincode: 600086 Mobile: 9864523137 E-Mail: getechpower@gmail.com	<b>Purchase No./Date:</b> 2020-21/P/0029 Dt: 18/06/2020 <b>Indent No./Date:</b> Mr. Sudhakar - AR Dt: 13/07/2020 <b>Indenting Dept:</b> MAINTENANCE <b>Your Quotation No:</b> Q11 <b>Your Quotation Dt:</b> 11/07/2020
---	--

---

We are pleased to release our Purchase Order towards the supply of the following items:

S.No	Code	Item Description	UOM	Qty.	Rate	Disc %	Disc	GST %	GST	Amount	Required Before
1	E495	LED Light Dual Ceiling sensor switch for closed cabin/meeting room Automatic light On/OFF Controller. Inclusive of site visit for free demo/installation guide lines 1 day. Make: Legrand	Nos	3.00	8400.00	0.00	0.00	18.00	4536.00	29736.00	18/06/2020
<b>Sub Total</b>										29736.0	
<b>Net Amount</b>										29736.0	

PO Value (in Words): Rupees Twenty nine thousand seven hundred thirty six only

---

**TERMS & CONDITIONS**

Currency: INR Payment Terms: 100% against PO Mode Of Despatch: Thru your Transport Destination: Kanathur - Chennai Price: For Kanathur	Freight: _____ Remarks: _____	Included: V.C. Chancellor room Conference hall
--	----------------------------------	---

*R. Madhavan*  
Prepared By: **R. MADHAVAN**  
( Mobile No : 9500098380 )

*R. Madhavan*  
**Purchase Manager**

---

To be filled by Stores Department Only

Received Date: _____ D.C. No./Date: _____ Informed Indenting Dept: _____	Received Quantity: _____ Shortage, if any: _____ Sign. of the Indenter: _____
--	---

Controlled Copy

Signature of the Stores In charge: \_\_\_\_\_  
 P301/REV 00/01/10/1

**Invoice for Implementation of Sensor Based System**

## 5. Use of LED bulbs / power-efficient equipment

The institution is moving towards 100% led lights. Our students are instructed to use electricity wisely and signage's are displayed to reinforce appropriate use of electricity additionally use of power efficient equipment (five star ac) is used in campus.



**Use of LED bulbs/ power efficient equipment**



**Use of power efficient equipment (five Star AC)**