



**St. Joseph's College For Women (Autonomous)**  
**Visakhapatnam - 530004**

*(NAAC Reaccredited & ISO 9001:2015, 14001:2015 Certified)*





# St. Joseph's College for Women (A)

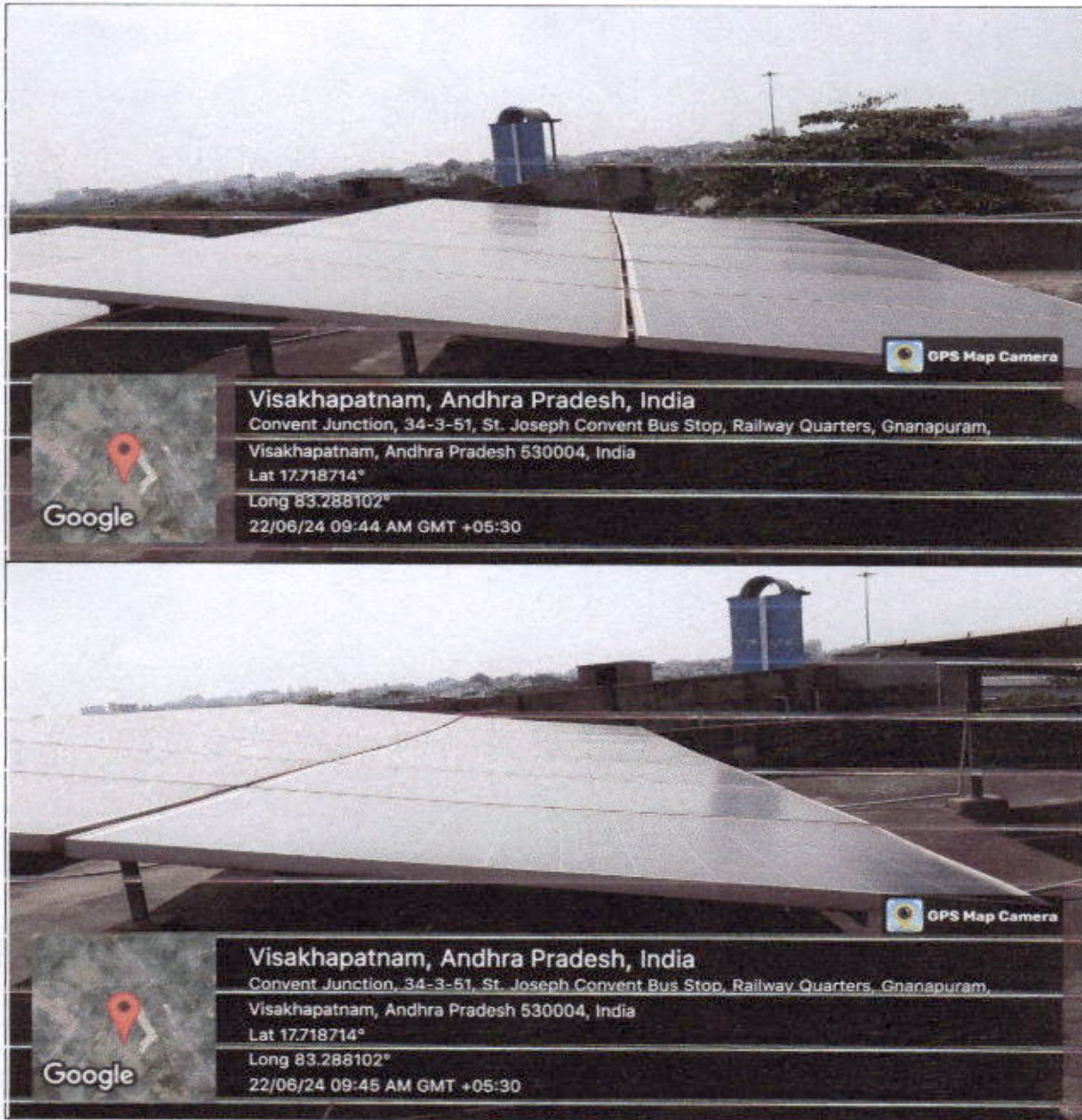
Gnanapuram, Visakhapatnam - 530004 (A.P)

(Affiliated to Andhra University)

Reaccredited by NAAC - ISO 9001:2015, 14001:2015 Certified

Phone Nos: 0891-2558346, 7075856500, E.mail: sjcw@stjosephsvizag.com, Web: www.stjosephscollegevisakhapatnam.ac.in

## 7.1.2(1): SOLAR ENERGY



*T. Bhasini Sulli*  
IQAC Coordinator  
IQAC Coordinator  
St. Joseph's College for Women  
(Autonomous)  
VISAKHAPATNAM-530 004

*A. S. S. S.*  
Principal  
PRINCIPAL  
St. Joseph's College for Women  
(Autonomous)  
VISAKHAPATNAM - 530 004

**GOVERNMENT OF ANDHRA PRADESH**  
**DIRECTORATE OF ELECTRICAL SAFETY**

FROM:  
THE DY.CHIEF ELECTRICAL INSPECTOR,  
2/10 MVP COLONY,  
VISHAKAPATNAM.

To:  
✓ M/S. PRINCIPAL,  
ST.JOSEPHS COLLEGE FOR  
WOMEN(AUTONOMOUS),  
GNANAPURAM,  
VISAKHAPATNAM.

Lr. No. DY.CEIG/ VSP/TECH/HT/VSP/ D.No: 1216 /2022 Dated: 29-12-2022.

Sir,

Sub:-The Electricity Act 2003 and Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010- Electrical Installation of Voltage Exceeding 650 V of M/S. PRINCIPAL, ST.JOSEPHS COLLEGE FOR WOMEN(AUTONOMOUS), GNANAPURAM, VISAKHAPATNAM Statutory Approval under Regulation 43(4) of CEA (MSES) Regulations, 2010 - Accorded.

Ref:- Inspection dated : 28-12-2022

\*\*\*\*\*

Under Regulations 43(4) of Central Electricity Authority ( Measures relating to Safety and Electric Supply) Regulations 2010, the following equipment of your Electrical Installation of voltage Exceeding 650 V are approved for energisation.

Under Regulation 43(4) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010, any additions or alterations of the Electrical Installation shall not be connected to supply until the same are approved in writing by this office.

Under Regulation 13(4), 46(7) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010, you are at all times be solely responsible for the maintenance of the above installation on such condition as to be free from danger.

The above approval accorded is without prejudice to the statutory/mandatory obligations to be fulfilled by you under various other acts and regulations as the case may be.

The approval accorded for energizing the electrical equipment is for the safety of men and machine from electrical hazards in your installation and ipso facto does not confer any right to be used for any other purpose other than for which the approval is accorded.

The Original manufacturer Test Certificates of Transformer, etc., are accepted and returned.

Yours faithfully

Encl: Load List & Test Certificates.

  
DY.CHIEF ELECTRICAL INSPECTOR  
VISHAKAPATNAM

1. Copy to the Executive Engineer/Operation/APEPDCL/VISAKHAPATNAM / zone 1
2. Copy to the Deputy Electrical Inspector/ VISAKHAPATNAM

ANNEXURE TO LETTER NO: D YCEIG/VSP/TECH/HT/VSP/D. No: 1216 /2022 Dated: 29-12-2022

**ELECTRICAL INSTALLATION ABOVE 650V OF M/S. PRINCIPAL, ST.JOSEPHS COLLEGE FOR WOMEN(AUTONOMOUS), GNANAPURAM, VISAKHAPATNAM.** Under Section 54 of The Electricity Act, 2003 & CEA Regulation 43(4) STATUTORY APPROVAL-ACCORDED

S. No	Particulars of Equipment	MAKE & Serial No.	Existing Load Capacity/Voltage Ratio	Additional Load Capacity/Voltage Ratio	Deletion Load Capacity/Voltage Ratio	Total
I	H.V. EQUIPMENT:					
1	Transformers	M.V.K & 368	160 KVA, 11KV/433V	--	--	160KVA,11KV/433V
II	M.V. INSTALLATION					
1	GENERATOR	KIRLOSKAR & C1160084476	62.5KVA	--	--	62.5KVA,415V
2	SOLAR INVERTER-1	K SOLARE & 2101079639	20 KVA	20 KW	20 KVA	20 KW, 400V
3	SOLAR INVERTER-2	K.STAR & 110211074852639900 004	20 KVA	--	--	20 KVA, 400V
4	SOLAR PV MODULES	RENEWSYS	39.43 KWp	39.43 KWp (320WpX62 NOS+300WpX65 NOS)	39.43 KWp	39.43 KWp
5	MOTORS	--	9.5 HP	--	--	9.5 HP,415V
6	CAPACITORS	--	21 KVAR	--	--	21KVAR, 415V
III	L.V. INSTALLATION					
1	LIGHTING LOAD	--	88 KW	-	-	88 KW,230V

  
 DY. CHIEF ELECTRICAL INSPECTOR  
 TO GOVT., VISAKHAPATNAM.

**M/s.PRINCIPAL,,  
ST.JOSEPH'S COLLEGE FOR WOMEN,  
(AUTONOMOUS)  
GNANAPURAM, VISAKHAPATNAM.**

**LIST OF ADDITIONAL LOAD PARTICULARS**

S.No	DESCRIPTION	RATING	SL.NO	MAKE	EXISTING LOAD	DELETED LOAD	ADDITIONAL LOAD	TOTAL LOAD
<b>I.</b>	<b>TRANSFORMER</b>							
1	Transformer	160 KVA, 11KV / 433V	368	M.V.K	160 KVA, 11KV / 433V	-	-	160 KVA, 11KV / 433V
<b>II.</b>	<b>Generator</b>	62.5 KVA	C1160084476	KIRLOSKAR	62.5 KVA	-	-	62.5 KVA
<b>III.</b>	<b>M.V. LOADS</b>							
1	Motors	9.5 HP	-	-	9.5 HP	-	-	9.5 HP
2	Capacitors	21 KVAR	-	-	21 KVAR	-	-	21 KVAR
<b>IV.</b>	<b>SOLAR LOADS</b>							
1	Solar Inverter Load - 1	20 KVA	120000781	RESUSOLAR ELECTRONIC PVT LTD	20 KVA	20 KVA	20 KW	20 KW
2	Solar Inverter Load - 2	20 KVA	1102110748526 39000000	K.STAR	20 KVA	-	-	20 KVA
3	Solar Modules Load	39.43KWp	-	-	39.43KWp	39.43KWp	39.34KWp	39.34KWp
<b>V.</b>	<b>L.V. LOADS</b>							
1	Lighting Load	88.0 KW	-	-	88.0 KW	-	-	88.0 KW

**Consultant**

**J. MANIKANTA**

*J. Manikanta*

License No. A/9785 2-2938

Govt. A-Grade Licensed Electrical

Contractor upto 33KV

Mob: 9052646496

**APPROVED**

*22/11/24*  
Deputy Chief Electrical Inspector to  
Govt. of A.P., Visakhapatnam

**M/s.PRINCIPAL,,**

*S. S. Srinivas*

PRINCIPAL

St. Joseph's College for Women

(Autonomous)

VISAKHAPATNAM - 530 004

**M/s.PRINCIPAL.,**  
**ST.JOSEPH'S COLLEGE FOR WOMEN,**  
**(AUTONOMOUS)**  
**GNANAPURAM, VISAKHAPATNAM.**

**LIST OF ADDITIONAL INVERTER LOAD**

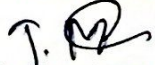
SL.NO	DESCRIPTION	KW	AMPS	VOLTS	SLNO	MAKE
1	INVERTER LOAD - 1	20	-	415V	2101079639	K Solar Energy Pvt Ltd.
	<b>TOTAL</b>	<b>20 KW</b>				

**LIST OF ADDITIONAL SOLAR MODULES LOAD**

SL.NO	DESCRIPTION	WATTS	NOS	TOTAL K.W	SLNO	MAKE
1	SOLAR MODULES LOAD	320	62	19840	-	Renewsys India Pvt Ltd.
1	SOLAR MODULES LOAD	300	65	19500	-	Renewsys India Pvt Ltd.
	<b>TOTAL</b>			<b>39.34 KW</b>		

**Consultant**

**J. MANIKANTA**



License No. A/9785 2-2938  
Govt. A-Grade Licensed Electrical  
Contractor upto 33KV  
Mob: 9052646496

**APPROVED**

  
Deputy Chief Electrical Inspector  
Govt. of A.P., Visakhapatnam

**M/s.PRINCIPAL.,**



PRINCIPAL

St. Joseph's College for Women  
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VISAKHAPATNAM - 530 004

**M/s.PRINCIPAL.,  
ST.JOSEPH'S COLLEGE FOR WOMEN,  
(AUTONOMOUS)  
GNANAPURAM, VISAKHAPATNAM.**

**LIST OF DELETED INVERTER LOAD**

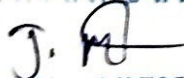
SL.NO	DESCRIPTION	KVA	AMPS	VOLTS	SLNO	MAKE
1	INVERTER LOAD - 1	20	-	415V	120000781	Resusolar Electronic Pvt Ltd
	<b>TOTAL</b>	<b>20 KVA</b>				

**LIST OF DELETED SOLAR MODULES LOAD**

SL.NO	DESCRIPTION	WATTS	NOS	TOTAL K.W	SLNO	MAKE
1	SOLAR MODULES LOAD	20	480	9600	-	-
1	SOLAR MODULES LOAD	157	190	29830	-	-
	<b>TOTAL</b>			<b>39.43 KW</b>		

**Consultant**

**J. MANIKANTA**

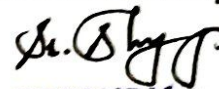


License No. AJ/9785 2-2938  
Govt. A-Grade Licensed Electrical  
Contractor upto 33KV  
Mob: 9052646496

**APPROVED**

*[Signature]*  
Deputy Chief Electrical Inspector to  
Govt. of A.P., Visakhapatnam

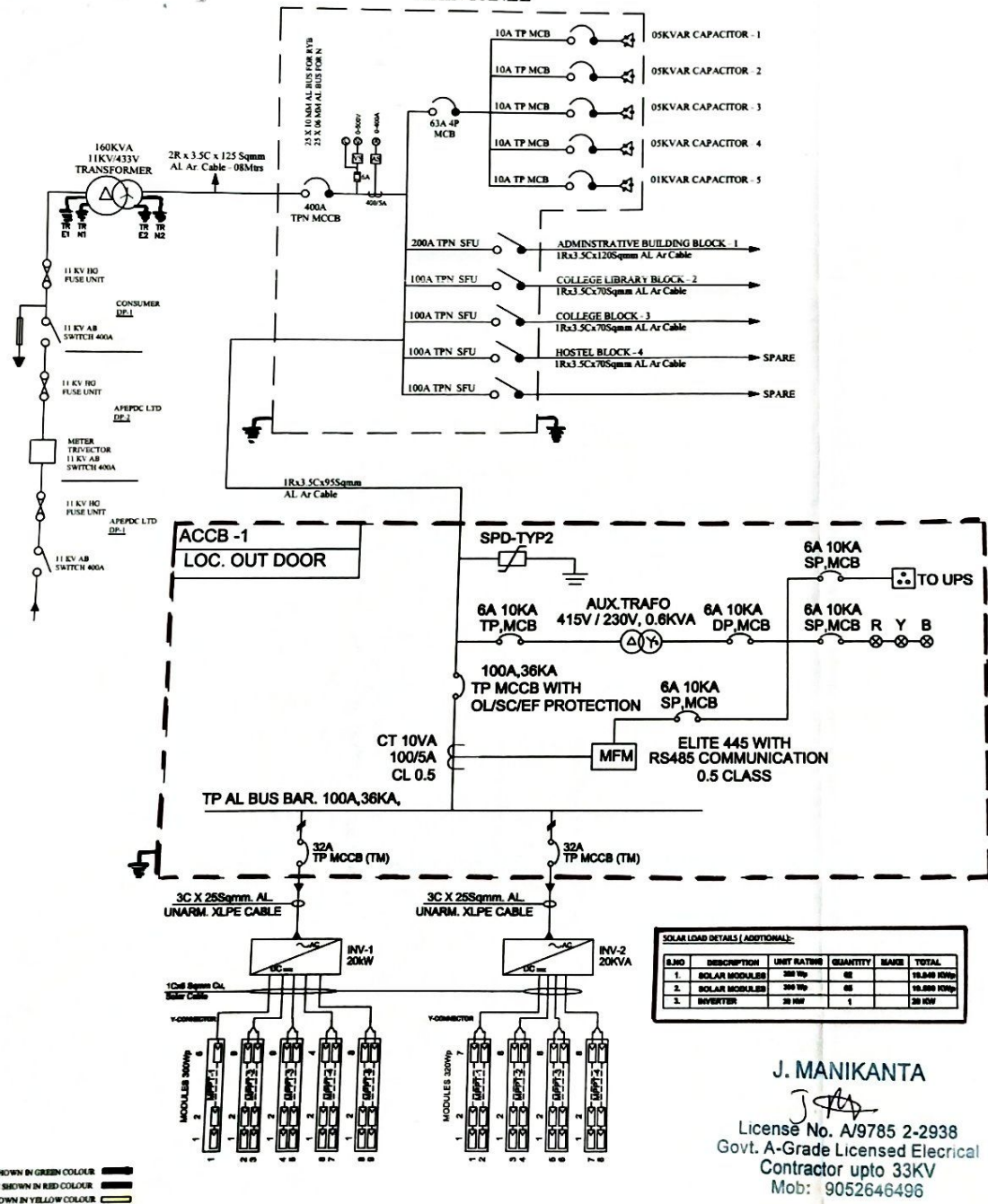
**M/s.PRINCIPAL.,**



**PRINCIPAL**

St. Joseph's College for Women  
(Autonomous)  
VISAKHAPATNAM - 530 004

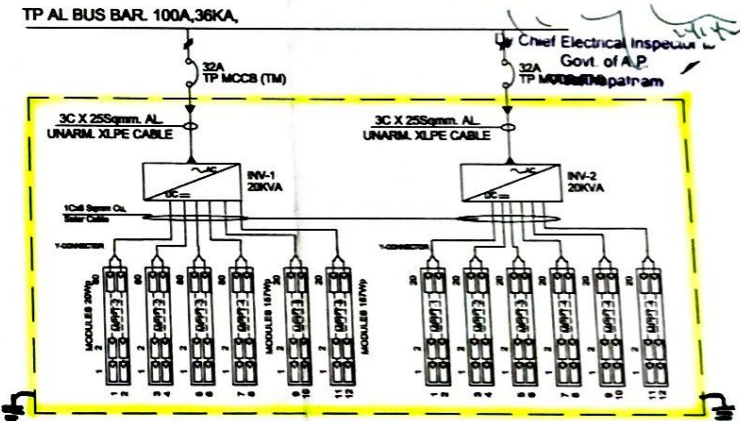
**MAIN PANEL**



**EQUIPMENT RATINGS**

S.NO	DESCRIPTION	EXISTING	DELETED	ADDITIONAL	TOTAL LOAD
<b>A. TRANSFORMERS</b>					
1.	TRANSFORMER	160KVA	-	-	160KVA
2.	M.V GENERATOR-1	62.5KVA	-	-	62.5KVA
<b>B. M.V LOAD</b>					
1.	MOTORS	9.5HP	-	-	9.5HP
2.	CAPACITOR	21 KVAR	-	-	21 KVAR
<b>C. SOLAR LOAD</b>					
1.	SOLAR INVERTES-1	20KVA	-	-	20KVA
2.	SOLAR INVERTES-2	20KVA	20KVA	20KW	20KW
3.	SOLAR MODULES 20Wp X 480N0's 1570Wp X 190N0's	9.6KWP 29.83KWP	9.6KWP 29.83KWP	-	-
4.	SOLAR MODULES 320Wp X 62N0's 300Wp X 65N0's	-	-	19.84KWP 19.50KWP	19.84KWP 19.50KWP
<b>D. LIGHTING LOAD</b>					
1.	LIGHTING LOAD	88.0KW	-	-	88.0KW

**APPROVED**  
 Subject to the Conditions  
 Specified in this Office  
 Lt. No. 105 Dt. 22.12.22  
 Regn. No. 105



**SOLAR LOAD DETAILS (ADDITIONAL):**

S.NO	DESCRIPTION	UNIT RATING	QUANTITY	MARK	TOTAL
1.	SOLAR MODULES	30 Wp	66		19.800 KWP
2.	SOLAR MODULES	30 Wp	65		19.500 KWP
3.	INVERTER	20 KW	1		20 KW

**SOLAR LOAD DETAILS (ADDITIONAL):**

S.NO	DESCRIPTION	UNIT RATING	QUANTITY	MARK	TOTAL
1.	SOLAR MODULES	30 Wp	66		19.800 KWP
2.	SOLAR MODULES	30 Wp	65		19.500 KWP
3.	INVERTER	20 KW	1		20 KW

**J. MANIKANTA**  
 License No. A/9785 2-2938  
 Govt. A-Grade Licensed Electrical  
 Contractor upto 33KV  
 Mob: 9052646496

*S. S. Srinivas*  
 PRINCIPAL  
 St. Joseph's College for Women  
 (Autonomous)  
 VISAKHAPATNAM - 530 004

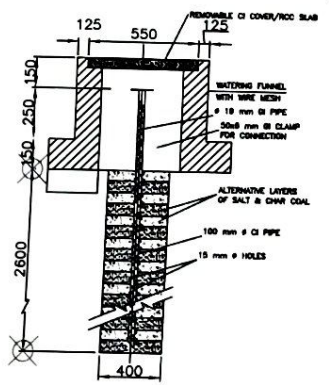
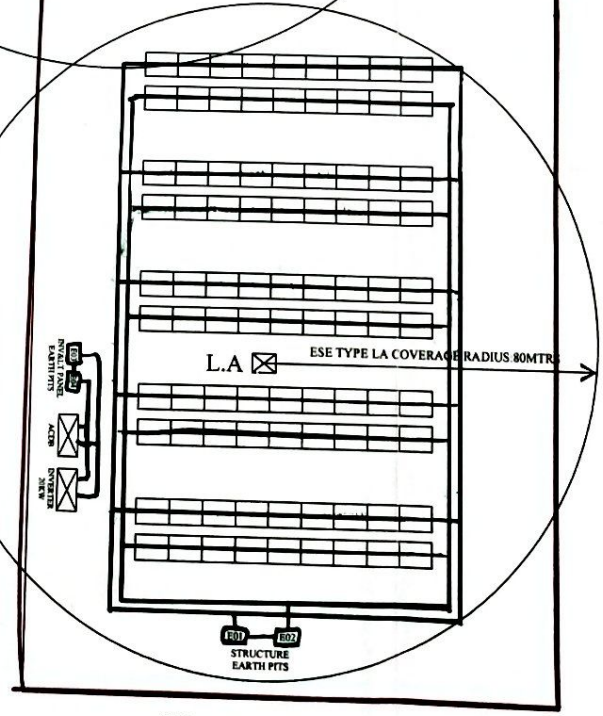
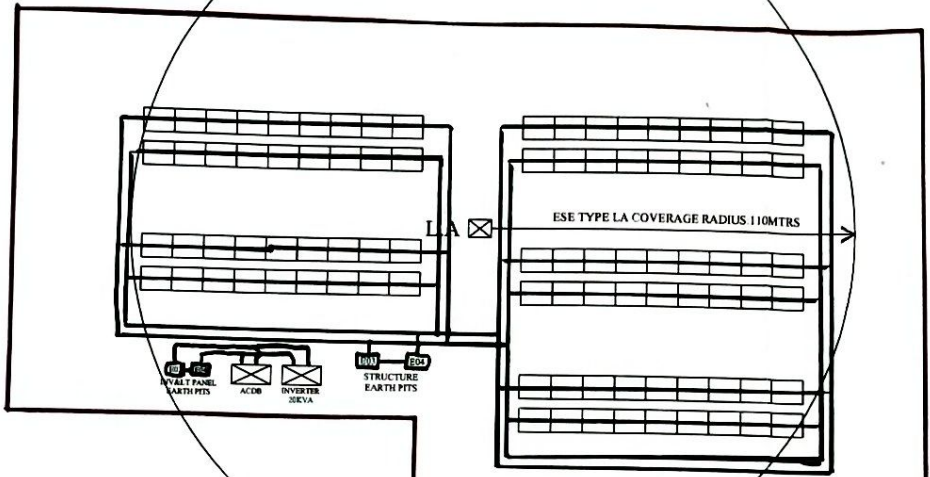
**TITLE:** SINGLE LINE DIAGRAM  
**CUSTOMER:** M/s. PRINCIPAL,  
 ST. JOSEPH'S COLLEGE FOR WOMEN,  
 (AUTONOMOUS),  
 GNANAPURAM, VISAKHAPATNAM.  
**KRISHNA VIJAYA POWER SYSTEMS**  
 Ashwarya Grand Flat No.401, Krishna College Road,  
 HB Colony, Maddilapalem, Visakhapatnam-530022  
**DRG. NO:- 1** **SHEET NO: 1 OF 3**

NOTE:  
 EXISTING ARE SHOWN IN GREEN COLOUR  
 ADDITIONAL ARE SHOWN IN RED COLOUR  
 DELETED ARE SHOWN IN YELLOW COLOUR



APPROVED  
 Subject to the Conditions  
 Specified vide this Office  
 Lr No: U95 Dt. 22.12.22  
 Regn No: \_\_\_\_\_

*[Signature]*  
 Chief Electrical Inspector  
 Govt of A.P.  
 Visakhapatnam



**G.I. PIPE EARTH PIT**  
 AS PER IS 3043

**J. MANIKANTA**

*[Signature]*  
 License No. A/9785 2-2938  
 Govt. A-Grade Licensed Electrical  
 Contractor upto 33KV  
 Mob: 9052646496

NOTE:  
 EARTHING ARE SHOWN IN GREEN COLOUR  
 ADDITIONAL ARE SHOWN IN RED COLOUR  
 DELETED ARE SHOWN IN YELLOW COLOUR

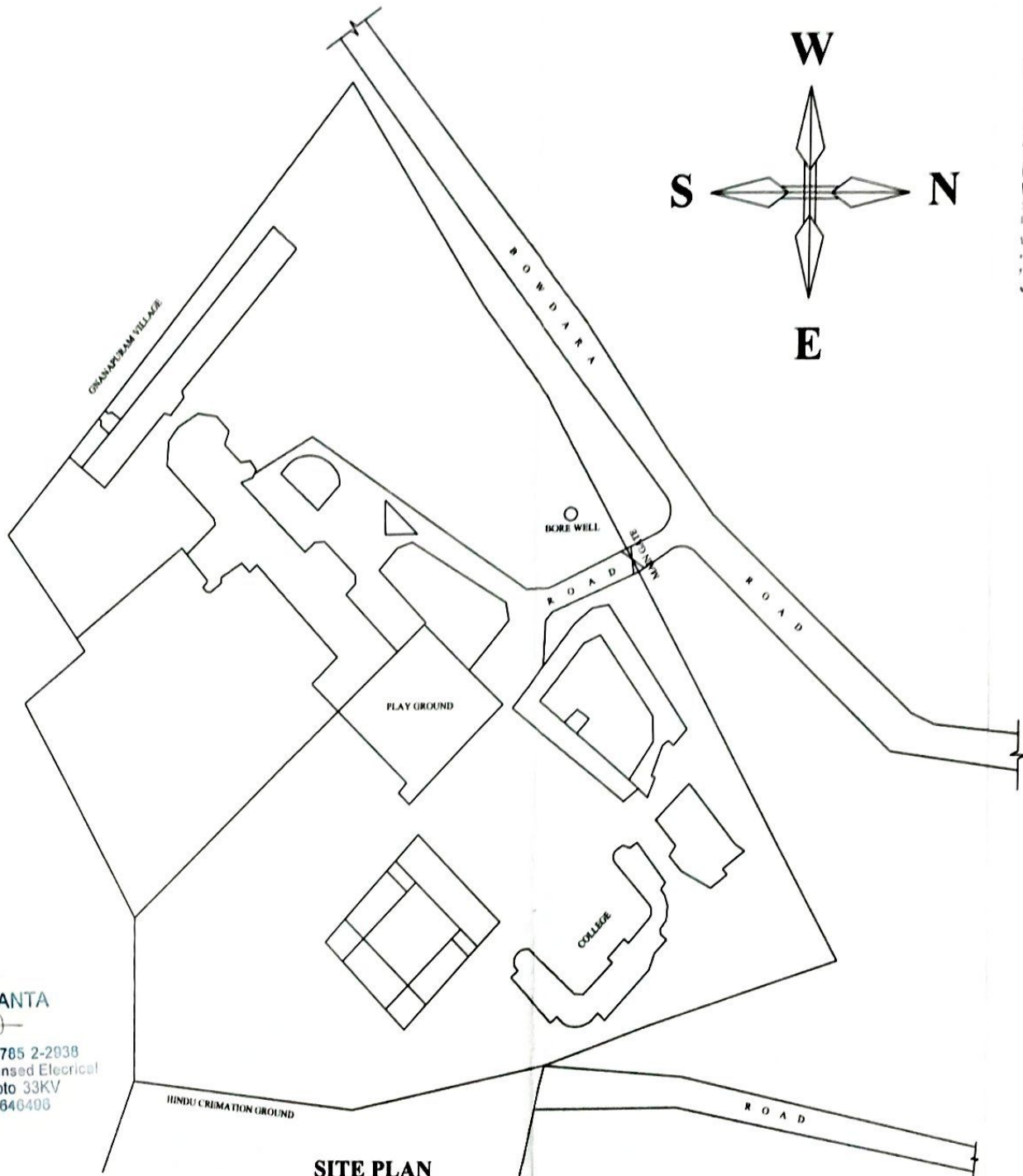
**NOTES :**

- 1 ALL DIMENSIONS ARE IN MM UNLESS SPECIFIED OTHERWISE
- 2 EARTHSTRIP ROUTING SHOWN IN DRAWING IS INDICATIVE. CHANGES SHALL BE MADE TO SUIT SITE CONDITION
- 3 AS FAR AS POSSIBLE STRIP SHOULD BE LAID IN CABLE TRENCH WHERE TRENCH IS NOT AVAILABLE SEPARATE TRENCH SHALL BE EXCAVATED FOR LAYING EARTH STRIP AT MIN 600MM DEEP
- 4 ABOVE QUANTITIES OF EARTHSTRIP IS DERIVED FROM 2D AUTOCAD DRAWING. CONTRACTOR IS REQUESTED TO TAKE ACTUAL MEASUREMENT AT SITE BEFORE STARTING WORK
- 5 CABLE TRAY EARTHING DETAILS\*- CABLE TRAY HAS TO BE INTERCONNECTED WITH EARTHING GRID AT TWO LOCATIONS - NEAR ACCB & MCCB BOX
- 6 FOR MOUNTING OF INVERTER & ACCB, PLEASE REFER RESPECTIVE MOUNTING DRAWING/INSTALLATION MANUAL

*[Signature]*  
**PRINCIPAL**  
 St. Joseph's College for Women  
 (Autonomous)  
 VISAKHAPATNAM - 530 004

<b>TITLE:</b> SOLAR & EARTHING LAYOUT	
<b>CUSTOMER:</b> M/s.PRINCIPAL, ST.JOSEPH'S COLLEGE FOR WOMEN, (AUTONOMOUS), GNANAPURAM, VISAKHAPATNAM.	
<b>KRISHNA VIJAYA POWER SYSTEMS</b> Aishwarya Grand Flat No.401, Krishna College Road, HB Colony, Maddilapalem, Visakhapatnam-530022	
<b>DRG. NO:-</b> 02	<b>SHEET NO:</b> 02 OF 03

**SOLAR & EARTHING LAYOUT**



APPROVED  
 Subject to the Conditions  
 Specified vide this Office  
 Lt. No. 1195 Dt. 22/12/22  
 Regn.No.

*[Signature]*  
 Chief Electrical Inspector  
 Govt. of A.P.  
 Visakhapatnam

J. P. KRISHNANTA  
*[Signature]*  
 License No. A/9785 2-2938  
 Govt. A-Grade Licensed Electrical  
 Contractor upto 33KV  
 Mob: 982846498

*[Signature]*  
 PRINCIPAL  
 St. Joseph's College for Women  
 (Autonomous)  
 VISAKHAPATNAM - 530 004

**SITE PLAN**

NOTE:  
 BARTHING ARE SHOWN IN GREEN COLOUR  
 ADDITIONAL ARE SHOWN IN RED COLOUR  
 DELETED ARE SHOWN IN YELLOW COLOUR

TITLE: SITE PLAN	
CUSTOMER: M/s.PRINCIPAL, ST.JOSEPH'S COLLEGE FOR WOMEN, (AUTONOMOUS), GNANAPURAM, VISAKHAPATNAM.	
KRISHNA VIJAYA POWER SYSTEMS Aishwarya Grand Flat No.401, Krishna College Road, HB Colony, Maddilapalem, Visakhapatnam-530022	
DRG. NO: - 03	SHEET NO: 03 OF 03



# SYT SOLAR SALES & SERVICES



SRI YERNAMMA THALLI

Flat No.15, 4th Floor, Sri lakshmi Enclave, Lalithanagra, Visakhapatnam - 530016.

email: rajeshmollu2012@gmail.com

GST IN: 37AMZPM1930C1ZV

COMPOSITION SCHEME

INVOICE

Invoice No.	ST.JOSEPH/SYTSSS/006	State	AP	Date: 10-07-2023
		State Code	37	
Details of Receiver / Billed to :		Details of Consignere   Shipped to		
Name	The Prinicipal	Name	The Principal, St' Joseph College,	
Address	St' Joseph College, Gnanapuram, VISAKHAPATNAM	Address	Gnanapuram, VISAKHAPATNAM	
GST IN/UIIN		GST IN / UIIN		
State	Andhra pradesh	Sta Code	37	State   ANDHRA PRADESH   Sta Code   37

Sl.No.	Description of Proudct / Service	HSN ACS	UOM	Qty	Rate	Amount
1	Supply New Solar power panels 340W, Repair of Solar 40KW power plant including fixing material, transport, Installation charges, lightening arresting and earth kits testing works.					83000.00
2	Supply of MC4 connectors		Nos.	33	200	6600.00
<b>Total</b>						<b>89600.00</b>

Total Invoice Amount in Words:

(Rupees Eighty Nine Thousand and Six Hundred Only)

## Bank Details

Company Name	SYT Solar Sales & Services,
Bank A/c No.	34750642204
IFSC Code:	SBIN0012838
Bank Name	State Bank of India
Branch	Lalithanagar Visakhapatnam

## Terms &amp; Conditions:

1) Payment mode through RTGS

Certified that the particulars given above are true and correct



Authorise dSignaotry

[E&amp;OE]

# TAX INVOICE



**RAYA RENEWABLE ENERGY SOLUTIONS PVT LTD**  
 PLOT.NO.62,2ND FLOOR,  
 SYNDICATE BANK COLONY,WEST MAREDPALLY,  
 SECUNDERABAD-500026

Invoice No: **35/18-19**  
 Date: **16-Mar-19**  
 P.O No :  
 P.O Date:

**TO**  
 PRINCIPAL  
 M/S St JOSEPHS COLLAGE FOR WOMEN  
 GNANAPURAM  
 VISAKHAPATNAM

PRINCIPAL  
 M/S St JOSEPHS COLLAGE FOR WOMEN  
 GNANAPURAM  
 VISAKHAPATNAM

Sno	Item Code/Description	UOM	Qty	Rate	Value(INR)
1	DESIGN, SUPPLY, INSTALLATION AND COMISSIONING OF 20 KW SOLAR ON GRID POWER PLANT	SET	1	987,000	Rs. 987,000
	<b>TOTAL</b>				Rs. 987,000
	HSN CODE 8500 <u>IGST@5%</u> <u>SGST @2.5%</u> <u>CGST@2.5%</u>				Rs. 49,350
	<b>Grand TOTAL</b>				Rs. 1,036,350
In words : TEN LAKHS THIRTY SIX HUNDRED THREE HUNDRED FIFTY ONLY.					

GSTI: 36AAGCR8615M1ZU  
 PAN: AAGCR8615M

**Bank Details**  
 HDFC BANK, HIMAYATH NAGAR BRANCH, HYDERABAD,  
 Account No: 50200005014200  
 IFSC Code for NEFT: HDFC0000081



RSQ/18-19/083

Date: 05.02.2018

To,  
Principal  
M/S St JOSEPHS COLLAGE FOR WOMEN  
GNANAPURAM  
VISAKHAPATNAM

**Sub: Proposal for Supply, Installation, Testing & Commission of 8 KWp  
RoofTop Solar PV System (Net Metering) for existing 20KW repair work**

Dear Sir,

With reference to the above subject and subsequent discussions with you, we are giving here with our most competitive quotation for solar roof top power plant for your kind consideration as follows:

**Specifications Solar panels On Grid 8 KWp**

S.No	Item Description	Specification
1.	<b>Solar Modules</b>	310 Wp Juna/Renewsys Sunfield make Qty 26
	<b>8 KWp as per design standards.</b>	
	• Performance Tested and Higher Energy delivery rated Crystalline Silicon cells Photovoltaic (PV) Modules	
	• Resistant to PID, Salt Mist Corrosion and Ammonia Tested	
	• IEC Certified PV Modules as per MNRE approved guidelines	
	• Structure Steel as per IS2062:1992 & Galvanization as per Compliance .	

**Financials:**

Total	Rs. 2,56,000.00 (Two Lakh Fifty Six Thousand Only) 5% GST included
Inclusions	Design, Engineering, Procurement, Supply, Installation, Testing & Commission and Transport *

60% - 1,53,600

**RAYA RENEWABLE ENERGY SOLUTIONS PRIVATE LIMITED**

Corporate Office: #154 4th Floor Regus Gumidelli Commercial Complex Opp Shoppers Stop Begumpet Hyderabad - 500016 India. Ph: 011 6701 3958

Branch Office: Flat No.3 2nd Floor Ganga Apartments Prakash Nagar Begumpet Hyderabad - 500016 India.

✉ solutions@rayasolar.com 🌐 www.rayasolar.com

HYDERABAD | BENGALURU | VIJAYAWADA | TIRUPATI | NELLORE | VIZAG

9032 888 779

TORAN19039574035

RSQ/18-19/084

Date: 05.02.2018

To,  
Principal  
M/S St JOSEPHS COLLAGE FOR WOMEN  
GNANAPURAM  
VISAKHAPATNAM

**Sub: Proposal for Design, Engineering, Procurement, Supply, Installation, Testing & Commission of 20 KWp RoofTop Solar PV System (Net Metering)**

Dear Sir,

With reference to the above subject and subsequent discussions with you, we are giving here with our most competitive quotation for solar roof top power plant for your kind consideration as follows:

**Our Proposal includes:**

- Design of Solar Energy System suitable to the end customer are found under System Specifications, Proposal cost.
- Installation, Testing & Commissioning of the System.
- Training on usage of the System.

**Key Benefits:**

- ✓ Reliable & Cost effective
- ✓ No fuel infrastructure required
- ✓ Power bill saving
- ✓ Noise free and eco-friendly
- ✓ Long life
- ✓ Negligible Maintenance and running cost

**RAYA RENEWABLE ENERGY SOLUTIONS PRIVATE LIMITED**

Corporate Office: #454 4th Floor, Regus Gumeddi Commercial Complex, Opp. Shoppers Stop, Begumpet, Hyderabad - 500 016, India. Ph: 040 6704 3958  
Branch Office: Flat No 3, 2nd Floor, Ganga Apartments, Prakash Nagar, Begumpet, Hyderabad - 500 016, India.

✉ solutions@rayasolar.com 🌐 www.rayasolar.com

HYDERABAD | BENGALURU | VIJAYAWADA | TIRUPATI | NELLORE | VIZAG

**System Specifications Solar System On Grid 20 KWp**

S.No.	Item Description	Specification
1.	<b>Solar Modules</b>	315 Wp Juna/Renewsys Sunfield make Qty 64
	<b>20 KWp as per design standards.</b>	
	<ul style="list-style-type: none"> <li>Performance Tested and Higher Energy delivery rated Crystalline Silicon cells Photovoltaic (PV) Modules</li> </ul>	
	<ul style="list-style-type: none"> <li>Resistant to PID, Salt Mist Corrosion and Ammonia Tested</li> <li>IEC Certified PV Modules as per MNRE approved guidelines</li> </ul>	
2.	<b>String Inverters - 20 KVA</b>	20 KVA wifi enabled Ksolar make/Growat/Solax Make Qty 01
	<ul style="list-style-type: none"> <li>IP 66 protection class with remote data monitoring</li> </ul>	
	<ul style="list-style-type: none"> <li>Static and dynamic MPPT efficient, EMI/EMC tested</li> </ul>	
	<ul style="list-style-type: none"> <li>Stable AC voltage and constant frequency</li> </ul>	
	<ul style="list-style-type: none"> <li>97.2% Energy Efficiency with DC in built in box</li> <li>CE. Certified Inverter System. MNRE approved</li> </ul>	
3.	<b>Solar PV Rooftop Mounting Structure</b>	As per site Design Standard 2 feet lower end 4 feet at higher end is idle for standard roof top
	<ul style="list-style-type: none"> <li>MS Hot Dipped Galvanized (&gt;80 Microns) for column post and brackets, cleat, Nuts, Bolts.</li> </ul>	
	<ul style="list-style-type: none"> <li>Wind Speed withstand up to 150 KM/Hr as per MNRE guidelines</li> <li>Structure Steel as per IS2062:1992 &amp; Galvanization as per Compliance .</li> </ul>	
4.	<b>Cables - As per MNRE Guidelines</b>	200/20 Mtrs provided for DC/AC respectively. Polycab/Finolex make or any ISI make
	<ul style="list-style-type: none"> <li>DC- 4 Sq mm Solar Cable Type - I with UV protection.</li> </ul>	
	<ul style="list-style-type: none"> <li>AC - 20 Sq mm flexible 4 core cable</li> </ul>	
	<ul style="list-style-type: none"> <li>Higher Electrical Strength Retention</li> </ul>	
	<ul style="list-style-type: none"> <li>Higher Short Circuit Rating</li> <li>Better Electrical, Mechanical &amp; Thermal Properties</li> </ul>	
5.	<b>AC Distribution Panel Board</b>	As per design
	<ul style="list-style-type: none"> <li>IEC 60947-2 /IS 13947-2 Superior quality, Highly reliable and Superior functioning</li> <li>MCB/MCCB - Rated current up to 1000 A, Trip current may be adjustable and Thermal or thermal-magnetic operation.</li> </ul>	
6.	<b>CMC</b>	Facility
	<ul style="list-style-type: none"> <li>Five Years Complete system warranty against manufacturing defects.</li> <li>No Additional Cost on replaced spares/parts against manufacturing defects</li> </ul>	
7	<b>EARTHING AND LA</b>	
	<ul style="list-style-type: none"> <li>BIS Standard, reputed make.</li> </ul>	

**RAYA RENEWABLE ENERGY SOLUTIONS PRIVATE LIMITED**

Corporate Office: #454 4th Floor Regus Gundelli Commercial Complex Opp. Shoppers Stop Begumpet Hyderabad - 500 016 India. Ph: 010 6704 3958

Branch Office: Flat No.3 2nd Floor Ganga Apartments Prakash Nagar Begumpet Hyderabad - 500 016 India.

✉ solutions@rayasolar.com 🌐 www.rayasolar.com

**HYDERABAD | BENGALURU | VIJAYAWADA | TIRUPATI | NELLORE | VIZAG**

**Financials:**

Total	Rs. 9,87,000.00 (Nine Lakh Eighty Seven Thousand Only) 5% GST extra (GST 49,350/- )Total 10,36350/- (Ten Lakh Thirty Six Thousand Three hundred Fifty Only)
Inclusions	Design, Engineering, Procurement, Supply, Installation, Testing & Commission and Transport *

\* DISCOM EXPENSES FOR FEASIBILITY BI-DIRECTIONAL CT METER, CHARGES, AND MISCELLANIOUS EXPENSES UNDER CUSTOMER SCOPE.

- IN ADDITION TO THIS WE PROVIDE FIRST YEAR FIRE INSURANCE (GAIL, THUDERING, EARTHQUAKE, FIRE) 1.INSURANCE FOR NATURAL CALAMATIES
- 2. SINCE YOU GO GREEN POWER, A FLOWER PLANT
- 3. ONCE IN A QUARTER, FREE SERVICE VISITS (4 TIMES IN FIRST YEAR)
- 4. WIFI /LAN ENABLE TO MONITOR THE HEALTHYNESS OF THE SYSTEM (OPTIONAL)

**WARRANTY TERMS:**

Solar PV Modules are 25 years Life, First 10 years 90% of the output and remaining 15 years 80% of the output.

Standard warranty of 5 year on complete system and AMC there on extra cost at mutually agreed.

\*Note: Output will be terminated at common point of the building. Further Routing, Internal Wiring.

- Standard 2 feet structure will be provided; any change in the design will be customer scope
- Civil Works will be under customer scope or at actuals..

10,36,350/-

60% - 6,21,810/-

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## Commercial Offer- Q703

To St. Joseph's College for Women, Visakhapatnam Date 29-05-2017  
 Atten Principal Ref B.G.S.Varma

*Thanks for your enquiry on our product. As per your request, we are pleased to QUOTE you*

Sl.No	Description	Rating	Price(INR)
1	Refurbishment of Solar 12kW system and synchronizing with Grid	12kW	58,000

### Scope of work : After supervision of site

#### GK Future Technologies

1. Refurbishment and erection of 2KW Solar panels on structures provided
2. Refurbishment, testing and commissioning of 2kw solar panels in synchronization with the 20KVA inverter(Grid -tie)
3. Wiring and respective hardware installation and synchronizing with grid.

*Sa. Shyji*  
 St. Joseph's College for Women  
 Visakhapatnam

*Bill Invoice*

TIN : 375813943

**INVOICE**  
**CASH / CREDIT**

Cell : 7396890099  
8142467100



**GK FUTURE TECHNOLOGIES**

★ SOLAR ★ WIND ★ BIO-MASS ★ LED LIGHTING ★ BATTERY

Flat No. 502, MVV Karuna Apts., Plot No. 77, 78, Daspalla Layout,  
YENDADA, VISAKHAPATNAM - 530 041

S.No. 62

Date: 05/06/2017

To St. Joseph's College for Women,  
Visakhapatnam TIN: \_\_\_\_\_

S.No.	Particulars	Qty.	Rate	AMOUNT	
				Rs.	Ps.
1.	Refurbish mt of Solar 12 kW System	1	55,000	55,000	
<i>Not for sale Only Service OEM chkt</i>		TOTAL			
		VAT%			
		G. TOTAL		55,000	

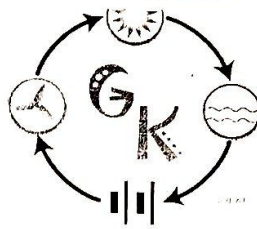
*Paid & Cancelled*

Goods once sold cannot be taken back or exchange  
Subjects to Visakhapatnam Jurisdiction only

For **GK FUTURE TECHNOLOGIES**

*B.G.S.U*  
Authorised Signature.

Thank-Q



**GK Future  
Technologies**

### Terms and Condition

Payment Terms	Advance: 50 % On-completion : 50 %
Transportation	Scope of GK Future Technology
Warranty	No warranty
Project duration	1 week from the date of acceptance along with PO and advance
Payment mode	Net transfer/Cheque/ D.D. in favour of account details provided

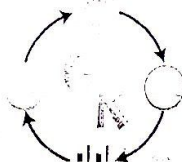
### Account Details:

A/C.Name	M V N S D Keerthi
Bank	CANARA Bank, VUDA Colony branch

Hope the details are in line with your requirement. In case of any clarifications, please contact the undersigned.

Thanks and Regards  
Shankar Varma B.G.  
GK Future Technologies - 8142467100

Flat No: 405, Geethanjali Gardens,  
Mithilapuri, VUDA Colony, Madhurawada,  
Visakhapatnam-530041, A.P.



Mail :gkfuturetechnologies@gmail.com  
Web : www.gkfuturetechnologies.com  
Ph : +91-8142467100, +91-7396890099