



MANOHAR MEMORIAL COLLEGE, FATEHABAD

**Ratia Road, Fatehabad (Haryana)-125050
(Affiliated to Chaudhary Devi Lal University, Sirsa)**



**ALTERNATE SOURCES OF ENERGY AND ENERGY
CONSERVATION MEASURES**

Report

Criteria-7

7.1.2 Alternate Sources of Energy and Energy Conservation Measures:

(A) Title: Adoption of Alternative Energy Sources:

Introduction:

As the global community grapples with the challenges of climate change and environmental degradation, the adoption of alternative energy sources promotes sustainability and reduces their carbon footprint. This report explores the benefits and implementation strategies of integrating alternative energy sources adopted by Manohar Memorial College, highlighting exemplary practices and their positive impact on both the institution and the environment.

Benefits of Adopting Alternative Energy Sources:

- 1. Environmental Sustainability:** Transitioning from fossil fuel-based energy to renewable alternatives such as solar power significantly reduces greenhouse gas emissions and mitigates the adverse effects of climate change. By harnessing clean energy sources, the college contributes to global efforts to combat environmental degradation and preserve natural resources.
- 2. Cost Savings:** While the initial investment in alternative energy infrastructure may be substantial, the long-term cost savings are considerable. Renewable energy sources have minimal operational costs once installed, providing a more predictable and sustainable energy budget. Moreover, government incentives and subsidies further enhance the financial viability of renewable energy projects.
- 3. Educational Opportunities:** Incorporating alternative energy systems into college campus has created valuable educational opportunities for students. By engaging in renewable energy projects, students gain practical experience in sustainable technology, energy management, and environmental stewardship. These hands-on learning experiences prepare students for careers in renewable energy industries and foster a culture of innovation and sustainability within the institution.

Implementation Strategies:

- 1. Energy Audits:** Comprehensive energy audits identify areas of energy inefficiency and prioritize opportunities for implementing alternative energy solutions. The feasibility of installing solar panels based on campus energy consumption patterns and available resources has achieved far reaching benefits.
- 2. Partnerships and Collaboration:** Collaboration with local governments, environmental organizations, and renewable energy providers has leveraged resources and expertise in implementing alternative energy projects. Partnerships with industry stakeholders to access funding opportunities, technical support, and knowledge sharing initiatives have borne fruitful results.
- 3. Capacity Building:** The faculty and student-led initiatives always focused on renewable energy education and training. A lot of opportunities are provided to the faculty members to attend workshops, seminars, and conferences on renewable energy technologies and best practices. Subject societies are formed for student-led sustainability initiatives to promote awareness and engagement in renewable energy initiatives among the student body.

Green University Initiative:

The Green University Initiative (GUI) is a sustainability programme implemented by Manohar Memorial College to aim at reducing carbon emissions and promoting renewable energy adoption on campus. As part of the GUI, the college installed solar panels on rooftops, parking lots, and open spaces to harness solar energy for electricity generation. Additionally, the college implemented energy-efficient lighting systems and water conservation measures to further reduce energy consumption and improve campus sustainability. The GUI also includes educational outreach programmes, research projects, and community engagement initiatives to raise awareness and foster a culture of sustainability among students, faculty, and staff.

Conclusion:

The adoption of alternative energy sources at Manohar Memorial College, shows its commitment by investing in renewable energy infrastructure. The college avails numerous benefits, including cost savings, educational opportunities, and environmental impact reduction. Through strategic implementation strategies and collaborative partnerships, the college serves as catalyst for positive change, inspiring future generations to embrace renewable energy solutions and build a more sustainable future.

SOLAR ENERGY PANEL (48.670 KW)

Bill No. 1

Tax Invoice

TOKIYO SOLAR ENERGY NEAR D.A.V.SCHOOL(KG WING),INDUSTRIAL AREA, FATEHABAD-125050 19-20,BDPO BLOCK,OPP.OLD BUS STAND,G.T.ROAD, FATEHABAD-125050 GSTIN/UIN: 06AAKFT3153F1Z9 E-Mail : tokiyosolar@gmail.com	Invoice No.	Dated
	TSE/17-18/0031	15-Dec-2017
Buyer M M College Ratia Road Fatehabad State Name : Haryana, Code : 06	Delivery Note	Mode/Terms of Payment
	Supplier's Ref.	Other Reference(s)
	Buyer's Order No.	Dated
	Despatch Document No.	Delivery Note Date
	Despatched through	Destination
	Terms of Delivery	

Sl No.	Description of Goods	HSN/SAC	Quantity	Rate	per	Amount
1	Solar Power Gennating Systems 48.670 Kw	0085	1 pc.	22,24,914.29	pc.	22,24,914.29
	<i>Output CGST 2.5%</i>				2.50 %	55,622.86
	<i>Output Sgst 2.5%</i>				2.50 %	55,622.86
	<i>Coin Adj.</i>					(-).01
	Less :					
	Entered in Stock Register on Page No.					
	Deptt. Incharge Bursar					
	Total		1 pc.			₹ 23,36,160.00

Amount Chargeable (in words) **INR Twenty Three Lakh Thirty Six Thousand One Hundred Sixty Only** E. & O E

HSN/SAC	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
0085	22,24,914.29	2.50%	55,622.86	2.50%	55,622.86	1,11,245.72
Total	22,24,914.29		55,622.86		55,622.86	1,11,245.72

Tax Amount (in words) : **INR One Lakh Eleven Thousand Two Hundred Forty Five and Seventy Two paise Only**

Company's PAN : **AAKFT3153F**

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

Company's Bank Details
 Bank Name : **ANDHRA BANK**
 A/c No. : **198311100001042**
 Branch & IFS Code : **FATEHABAD & ANDB0001983**

Authorised Signatory
Raj Kumar

SOLAR ENERGY PANEL 2 (15 KW)

Bill No. 2

Tax Invoice

(ORIGINAL FOR RECIPIENT)

TSE RENEWABLES PVT. LTD.(20-21) SHOP NO 20 GT ROAD PANCHAYAT SAMITI OFFICE FATEHABAD HARYANA - 125050 GSTIN/UIN: 06AAGCTB311G1ZF State Name: Haryana, Code: 06 E-Mail: tserenewables@gmail.com		Invoice No: 20-21/008 Delivery Note:	e-Way Bill No: 361226705831 Dated: 17-Aug-2020 Mode/Terms of Payment: BY RTGS/NEFT Other Reference(s):
Buyer: M.M Collage Ratia Road Fatehabad State Name: Haryana, Code: 06 Passed for payment of Rs. Rupees: Principal:	- total - 6 lac Advance - 4 lac Payment - 2 lac 2 lac 1 lac Principal:	Supplier's Ref: Buyer's Order No.: Despatch Document No.: Despatched through: FATEHABAD Bill of Lading/LR-RR No.:	Dated: Delivery Note Date: Destination: RATIA ROAD FATEHABAD Motor Vehicle No: HR 62 8198 Terms of Delivery: 15 KW ON GRID PLANT

PAID & CANCELLED

Sl No	Description of Goods and Services	HSN/SAC	Quantity	Rate	per	Amount
1	SOLAR POWER GENRATING SYSTEMS 15 KW ON GRID LUBI PANNEL 330 WATT DELTA ON GRID 3 PH INVERTER	8504	1 nos	4,00,000.00	nos	4,00,000.00
2	INSTALLATION AND COMMISIONING 15 KW INSTALLATION & COMMISSIONING	9954	1 nos	1,52,543.00	nos	1,52,543.00
						5,52,543.00
Output CGST						23,728.87
OUTPUT SGST						23,728.87
Total						2 nos ₹ 6,00,000.74

Amount Chargeable (in words) **INR Six Lakh and Seventy Four paise Only** E & O.E

HSN/SAC	Taxable Value	Central Tax Rate	Central Tax Amount	State Tax Rate	State Tax Amount	Total Tax Amount
8504	4,00,000.00	2.50%	10,000.00	2.50%	10,000.00	20,000.00
9954	1,52,543.00	9%	13,728.87	9%	13,728.87	27,457.74
Total	5,52,543.00		23,728.87		23,728.87	47,457.74

Tax Amount (in words) : **INR Forty Seven Thousand Four Hundred Fifty Seven and Seventy Four paise Only**

Entered in Stock Register

on 17/08/20
Deptt. in charge: *[Signature]*
Bursar: *[Signature]*

Declaration: We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.
for TSE RENEWABLES PVT. LTD.(20-21)
[Signature]
Authorised Signatory

Verified for Rs. 600,000/-
02/9/20
M.M (M.M Collage)
M.M (M.M Collage)
M.M (M.M Collage)

This is a Computer Generated Invoice

Details of Energy Conserved in Units

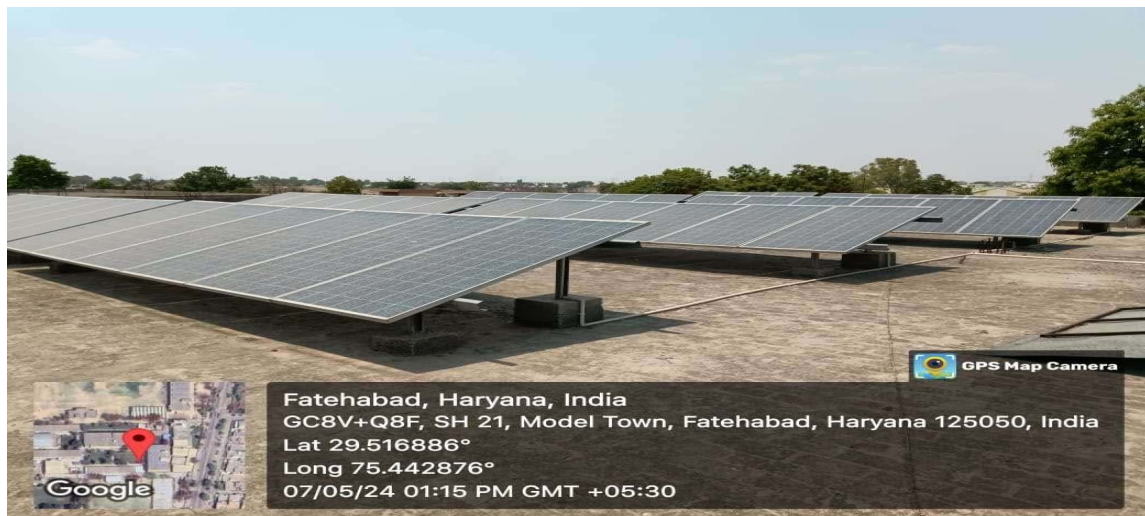
MANOHAR MEMORIAL COLLEGE, FATEHABAD
Detail of Electricity Consumption

Period From	To	Total Consumed Units	Solar Generated Units	Net Billed Units	Amount (Rs.)
08-10-2018	10-07-2019	62300	53870	7160	127892
10-07-2019	10-09-2019	13560	3880	9000	81694
10-09-2019	10-10-2019	6160	2380	3780	36123
01-10-2019	01-11-2019	8195	6866	937	12740
01-11-2019	05-01-2020	8854	6391	2462	36114
05-01-2020	05-02-2020	5121	725	4396	39974
05-02-2020	15-05-2020	11685	2236	9448	94836
15-05-2020	01-06-2020	2110	3105	0	4545
01-06-2020	01-07-2020	7401	5593	813	18956
01-07-2020	01-08-2020	4165	5692	0	27428
01-08-2020	01-09-2020	4760	5272	0	16578
01-09-2020	01-10-2020	5288	5204	0	7960
01-10-2020	01-11-2020	5150	5161	0	8472
01-11-2020	01-02-2021	6752	10551	0	25141
01-02-2021	01-03-2021	3830	4548	0	7652
01-03-2021	01-04-2021	6078	6250	0	8471
01-04-2021	01-05-2021	4178	3854	319	10822
01-05-2021	01-06-2021	3538	4851	0	8472
01-06-2021	01-07-2021	5091	4582	0	8198
01-07-2021	01-08-2021	7359	3952	2602	27096
01-08-2021	01-09-2021	8102	4904	3197	29212
01-09-2021	01-10-2021	5754	4234	1520	16873
01-10-2021	01-11-2021	6029	4526	1503	17102
01-11-2021	01-12-2021	3462	3527	0	7153
01-12-2021	01-01-2022	4353	3140	920	13891
01-01-2022	01-02-2022	3272	2618	654	12184
01-02-2022	01-03-2022	2947	4215	0	6009
01-03-2022	01-04-2022	5665	4896	25	6831
01-04-2022	01-05-2022	10355	4305	6050	45823
01-05-2022	01-06-2022	11922	4055	7867	60785

SOLAR PANEL INSTALLED ON COMMERCE BLOCKS (48.670 KW)



SOLAR PANEL INSTALLED ON ARTS BLOCK (15 KW)



STUDENTS AWARENESS PROGRAMME ABOUT SOLAR POWER ENERGY



GENERATOR



TUBE-WELL

