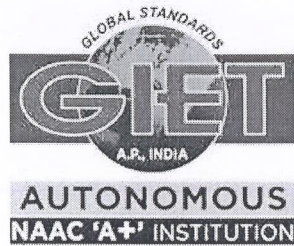




**Godavari Institute of
Engineering & Technology**

Approved by AICTE, Permanently Affiliated to JNTUK, Kakinada
Chaitanya Knowledge City, NH-16, Rajamahendravaram
Andhra Pradesh, INDIA, PIN: 533296 | www.giet.ac.in



7.1.2 INSTITUTE FACILITIES FOR ALTERNATE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES

7.1.2

1. Solar Plant:

As a part of clean energy to make the campus eco-friendly the **Solar Roof Top PV plant project** has been installed and generating power. The capacity of Solar Roof Top PV Plant installed has a capacity of 244 KW at the following blocks.

Solar Roof Top PV Plant	Capacity
Solar power installed on Main Block	130
Solar power installed on Main Block	50
Solar power installed on Visvesvaraya	64

2. Wheeling to the Grid:

The institute is wheeling the power generated from the roof top solar panels to the distribution grid. The Details of Electrical Power Installation at Godavari Institute of Engineering & Technology (A) is given below:

- HT line: 11 KV
- Transformer rating: 315 KVA
- Contact maximum Demand: 200 KVA
- Solar roof top PV Plant: 244KW

Campus Solar power utilisation

Month/Year	Generated (KWh)	Consumed (KWh)	Uploaded to the Grid (KWh)
May-23	24388.31	23282.31	1056
June -23	26571.3	25715.3	856
Julyp-23	17091.4	16164.4	927

Net metering: After successful utilization of Solar Power, the surplus power is exported to APEPDCL (Andhra Pradesh Eastern Power Distribution Company Limited) through Net Metering.

Reduction in HT Bills:

Installation of the solar plant reduced the HT bills of the college. The bills before and after installation are as follows.


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Bills for the Month of June:

7/3/23, 4:53 PM

HT Bill Display

EASTERN POWER DISTRIBUTION COMPANY OF ANDHRA PRADESH LIMITED
HT bill for the month of : 06/2023 Dated : 01-07-2023 GST No. 37AAACE9876B12M

Payable on or before 15-Jul-2023 RIY503
Completed MD (KVA/HP) 244 M/S GODAVARI INSTITUTE OF ENG
Reading Voltage(KV) 11 ENGINEERING AND TECHNOLOGY
Actual Voltage(KV) Comm Fdr) 11 N.H.S, CHAITANYA NAGARRAJANAGARAM, E.G(DIST)
Category IIA(ii) COMMERCIAL-HT

(DISC.DT: 31-Jul-2023) . MC Date : . MF Date : . MRT Date :		KWH	KVAH	KVA.	PF	LF%
Changes	01/07/2023	50144.0000	54164.5000	95.4000		
Reading On (1)(A)	01/06/2023	22965.0000	25034.0000			
Reading On		27179.00	29130.50			
Difference		2	2	2		
Multiplying Factor		54358	58261	190.8000	0.93	32
Total Consumption			4880	195.20		
Monthly Min Consumption	58261	Colony	0	L&F		
Main Consumption						
Demand Charges Normal Rate	Rs	475.00	For	195.2000	KVA	97720.00
Demand Charges Penal Rate (80 %)	Rs	475.00x2	For	0.00	KVA	0.00
Energy Charges Rate(All Units)	Rs	7.65	For	57405	KVAH	439148.25
Excess Energy Charges Rate	Rs		For	0	KVAH	0.00
Electricity Duty Charges		1.00	For	58261	KVAH	58261.00
Colony Charges Rates			For		KVAH	
L&F Charges Rate			For		KVAH	
Energy Charges Include Fuel Cost Adj	Ps		For		KVAH	0.00
Fuel Surcharge Adjustment (.) (.)	Ps		For		KWH	23506.69
True up Charge	Ps		For		KWH	27930.74
FPPCA Charge(5720.34+22210.40)	Rs		For			
				TODCharges		12588.00
				TODIncentive(-)		0.00

Supplier Name	KWH Share	KVA Share	TOD	INCENTIVE	% Wheeling
SOLAR UNITS	856				
					Sub Total 654154.68
					Customer Charges 1406.00
					Grid support charges 3660.00
					Wheeling Charges 0.00
					Transmission Charges 0.00
					RKVAH Surcharge HYDEL 0.00
					RKVAH Surcharge WIND 0.00
					OPEN ACCESS CROSS SUBSIDY 0.00
					ACD SURCHARGE 0.00
					Late Payment Charges 0.00
					Interest On ED 0.00
					Penal Interest 0.00
					Transformer Hire Charges 0.00
					Difference Voltage Charges 0.00
					Load Factor Incentive (-) 0.00
					0.00
					Total 659220.68
					TCS 0.00
					TCS S/F 0.00
					25% Rebate Application 0.00
					Ferro Incentive (-) 0.00
					PooledCost Adj (-) 0.00
					NetTcdAmt(Tcd-Tds)(0.00-0.00) (-) 0.00
					Other Credit Adj 0.00
					Loss (or) Gain 0.32
					Net Bill Amount 659221.00
					(Previous Years)Arrears before 31-Mar-2023 0.00
					(Current Years)Arrears after 01-Apr-2023 -0.20
					Net Payable Rs659221.00

(Rs Six Lakhs Fifty Nine Thousand Two Hundred and Twenty One only)

NOTE:- U/s 206C(1H) of IT Act, TCS at applicable rates will be collected on payments exceeds Rs.50 Lakhs during the year and remitted to IT Dept. For further details please contact SAO/Operation circle.

Senior Accounts Officer

RAJAMAHENDRAVARAM

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Bills for the Month of April:

5/1/23, 8:48 PM

HT Bill Display

EASTERN POWER DISTRIBUTION COMPANY OF ANDHRA PRADESH LIMITED

HT /bill for the month of : 04/2023 Dated : 01-05-2023 GST No. 37AAACE9B76B1ZH

Payable on or before 15-May-2023 **RJYS03**
Contracted MD (KVA/HP) 244 M/S GODAVARI INSTITUTE OF ENG
Specified Voltage(KV) 11 NEERING AND TECHNOLOGY
Actual Voltage(KV)(Comm Fdr) 11 N.H 5, CHAITANYA NAGARRAJANAGAR/M.E.G(DIST)
Category IIA(i) COMMERCIAL-HT

(DISC.DT : 30-May-2023) , MC Date : , MF Date : , MRT Date :		KWH	KVAH	KVA	PF	LF%
Changes						
Reading On (1)(A)	01/05/2023	1245698.0000	1297491.0000	67.4290		
Reading On	01/04/2023	1220482.0000	1271480.1000			
Difference		25216.00	26010.90			
Multiplying Factor		4	4	4		
Total Consumption		100864	104044	269.7160	0.97	53
Monthly Min Consumption			5743	195.20		
Main Consumption	104044 Colony		0	L&F		
Demand Charges Normal Rate	Rs	475.00	For	244.0000	KVA	115900.00
Demand Charges Penal Rate (110.54 %)	Rs	475.00x2	For	25.7160	KVA	24430.20
Energy Charges Rate(All Units)	Rs	7.65	For	104044	KVAH	795936.60
Excess Energy Charges Rate	Rs		For	0	KVAH	0.00
Electricity Duty Charges		1.00	For	104044	KVAH	104044.00
Colony Charges Rates			For		KVAH	
L&F Charges Rate			For		KVAH	
Energy Charges Include Fuel Cost Adj	Ps		For		KVAH	
Fuel Surcharge Adjustment (,) (,)	Ps		For		KWH	0.00
True up Charge	Ps		For		KWH	23506.69
FPPCA Charge	Rs		For		KWH	13981.42
				TODCharges		16388.00
				TODIncentive(-)		0.00

Supplier Name	KWH Share	KVA Share	TOD	INCENTIVE	% Wheeling
					Sub Total 1094186.91
					Customer Charges 1406.00
					Grid support charges 0.00
					Wheeling Charges 0.00
					Transmission Charges 0.00
					RKVAH Surcharge HYDEL 0.00
					RKVAH Surcharge WIND 0.00
					OPEN ACCESS CROSS SUBSIDY 0.00
					ACD SURCHARGE 0.00
					Late Payment Charges 0.00
					Interest On ED 0.00
					Penal Interest 0.00
					Transformer Hire Charges 0.00
					Difference Voltage Charges 0.00
					Load Factor Incentive (-) 0.00
					Total 1095592.91
					TCS 0.00
					TCS S/F 0.00
					25% Rebate Application 0.00
					Ferro Incentive (-) 0.00
					PooledCost Adj (-) 0.00
					NetIcdAmt(1cd-Tds)(115646.00-11565.00) (-) 104081.00
					Other Credit Adj 0.00
					Loss (or) Gain 0.09
					Net Bill Amount 991512.00
					(Previous Years)Arrears before 31-Mar-2023 0.00
					(Current Years)Arrears after 01-Apr-2023 -999.20
					Net Payable Rs 990513.00

(Rs Nine Lakhs Ninety Thousand Five Hundred andThirteen only)

NOTE:- U/s 206C(1H) of IT Act, TCS at applicable rates will be collected on payments exceeds Rs.50 Lakhs during the year and remitted to IT Dept. For further details please contact SAO/Operation circle.

RAJAM
Senior Accounts Officer
Operation Circle, APEPCL
RAJAHMUNDRY

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3. Sensor Based Energy conservation:

The campus is installed with automatic street lighting system by sensing the Day light.

4. Use of LED bulbs/ Power-Efficient equipment:

Currently we are using 3796 LED bulbs which are replaced from fluorescent tube lights and the power consumption is reduce to 50%. As a part of energy conservation our Institute has installed LED bulbs throughout the campus. The list is given below:

S.NO	PLACE	NO.OF LED BULBS
1	Principal Office	50
2	Exam cell	33
3	Administrative Office	167
4	Electrical and Electronics Engineering Department	134
5	ECE department	200
6	Computer Science Engineering department	496
7	Mechanical Department	187
8	APJ block	334
9	Freshmen Engineering Department	517
10	Library	173
11	Girls hostels	585
12	Boys hostels	920

And also installed various energy efficient equipment with 5 Star ratings as per the BEE (Bureau of Energy Efficiency) norms.


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5. Wind and Solar Hybrid Energy:

A hybrid wind and solar energy of 1 KW is established and the details are given below:

- Capacity: 1 KW
- Inverter: 2KVA
- Battery bank: 600AH/12v
- Wind turbine
- Solar panels



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