



**DIGVIJAI NATH POST GRADUATE COLLEGE, GORAKHPUR-273001**

*Affiliated to :D.D.U. Gorakhpur University, Gorakhpur (U.P.)*

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### 7.1.3

Annual power requirement of the Institution met by the renewable energy sources.

#### Solar Panel





Solar Panel

Honor 9N

## Battery to store Solar Energy



## Solar Street Light





## AKARSH ENERGY SOLUTIONS

Bhagat Chauraha, Taramandal, Deoria Bypass road, Gorakhpur  
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GSTIN: 09BKKIP5794SK129  
UAM No. UP/32/0606615

12/12/2019

### TO WHOM SO EVER IT MAY CONCERN

This is certify that M/s Digvijay Nath P.G College are using 2KW Solar Power Generating System (OFF-GRID). The table of Power Generation by the above plant (with +- 5% variant) Is as below

Month	DNI Kwh/m2/day	GHI Kwh/m2/day	2 kw (Unit/day)	Days/month	Monthly Solar Power Generation Units	Electric Tariff Inclusive of Duties	Total Monthly Saving (In Rs.)
Jan	2530	3260	4.89	31	152	9.97	1515.44
Feb	4400	4730	7.09	28	199	9.97	1984.03
Mar	6240	6210	9.31	31	289	9.97	2881.33
Apr	5350	6810	10.21	30	306	9.97	3050.82
May	5450	6940	10.41	31	323	9.97	3220.31
Jun	3860	5870	8.8	30	264	9.97	2632.08
Jul	2620	4770	7.15	31	222	9.97	2213.34
Aug	3440	5130	7.68	31	239	9.97	2382.83
Sep	4220	5090	7.63	30	229	9.97	2283.13
Oct	5630	5150	7.72	31	239	9.97	2382.83
Nov	3930	4210	6.31	30	189	9.97	1884.33
Dec	2430	3200	4.8	31	149	9.97	1485.53
<b>Average</b>	<b>4175</b>	<b>5114.167</b>	<b>7.6667</b>	<b>365</b>	<b>2800</b>		<b>27916</b>

#DNI is Direct Normal Irradiance and GHI is Global Horizontal Irradiance.

# The above report is based on Solar Irradiance source taken from NERL site.

# System Losses considered 25%.

# Above calculation on 330 Wp Poly SPV Module and Total modules 6 nos. making capacity of 1980 Watts.

# 1kw =3.30 panels of 330wp.

Location: - Digvijay Nath PG College.  
Latitude:-26.744737  
Longitude:-83.354

  
Akarsh Energy Solutions  
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**TO WHOM SO EVER IT MAY CONCERN**

**EASTIMATED POWER REQUIREMENT AND GENERATION THROUGH SOLAR**

Power Requirement met by renewable energy sources	Total power requirement	Renewable energy sources	Renewable energy generated and used	Energy supplied to grid
2800unit	2,78,567unit	Solar plant	2800unit	0unit

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Akarsh Energy Solutions  
Proprietor

**AKARSH ENERGY SOLUTIONS**