Best Practice - 2

Title of the Practice:

Solar Power Plant (Renewable Energy Source)

With the location advantage of having bright sunlight throughout the year, Yogi Vemana University has come up with Solar Plant to meet the partial energy demand and make it "Green Campus" in partnership with DISCOM. This is on net metering basis. DISCOM has introduced the scheme of "Solar Net Metering" for those consumers who intend to encourage solar green energy and setup solar PV plants on rooftops of Households, waste lands, buildings of individual households, industries, offices, institutions, residential complexes etc. In view of this DISCOM has provided grid connectivity / necessary permissions to connect rooftop solar power plant and supply solar energy into the distribution network of DISCOM.

Through this net metering facility, University is generating solar power for self-consumption and feeding excess power into the DISCOM network. It records net energy between export of generated energy and import of DISCOM energy on every monthly billing. Alternatively, the meter having feature of recording both the import and export values, besides other parameters notified by CEA metering regulations and APTRANSCO/DISCOM procedures in vogue, is also allowed for arriving net energy for the billing period.

University is paying for the net energy in a billing month as per applicable retail supply tariff decided by regulatory commission of the concerned DISCOM, if the supplied energy by the DISCOM is more than the injected energy by the solar PV sources of the university. Any excess/ surplus energy injected into DISCOM network in a billing month is being paid at APERC pooled cost that is year on year basis. Energy settlement is done in half yearly basis.

PPA agreement was signed between M/s Swelect Energy Systems Limited, Yogi Vemana University and NREDCAP. As per the agreement the agency has invested in the project and power is being delivered at a tariff of Rs. 6.40 per unit. In this project NREDCAP has extended 20% subsidy. This plant was setup in 4 acres land beside the university buildings in the December 2017. The Swelect has agreed to install the plant and do operational and maintenance for the next 25 years. The payments will be processed by Yogi Vemana University.

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In the entire process the area beside the campus allotted for the proposed plant earlier had plants that are planted under Social Forestry scheme. These plants were removed and replaced in other area.

Solar power generation – PV modules

Total 950 KW (4 units per KW)		
1.	Rooftop	
•	Admin	50 KW
•	Library	100 KW
•	Sir CV Raman Building	100 KW
2.	Ground Mounted	700 KW
•	Total number of inverters	19 (each inverter storage is 50 KW
Peek Timing for generation of power		9.30 am to 3.30 pm

Solar Power Park and Roof-top Solar Panels installed on the University Buildings

University Solar Rooftop Net Metering Service

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SNo	Billing Month	Import from APSPDCL KVAH	Export to APSPDCL KWH	Claim for Net Export Units (KWH)	Rate	Net Amount(Rs)
1	May '18	54480	38715	0	5.90	0.00
2	June '18	28815	63480	34665	5.90	204523.50
3	July '18	37177.5	51825	14647.5	5.90	86420.25
4	August '18	60952.5	29197.5	0	5.90	0.00
5	Sept '18	50955	32707.5	0	5.90	0.00
6	Oct '18	57510	59190	1680	5.90	9912.00
7	Nov '18	50850	72397.5	21547.5	5.90	127130.25
8	Dec '18	57030	62175	5145	5.90	30355.50
9	Jan '19	56730	66105	9375	5.90	55312.50
10	Feb '19	43425	82125	38700	3.741	144776.70
11	Mar '19	53820	62970	9150	3.741	34230.15
12	April '19	71580	68085	0	3.741	0.00
13	May '19	53812.5	63960	10147.5	3.741	37961.75
14	June '19	43305	74055	30750	3.741	115035.75
15	July '19	37575	58650	21075	3.741	78841.58
16	Aug '19	54727.5	40575	0	3.741	0.00
17	Sep '19	64957.5	40650	0	3.741	0.00
18	Oct '19	57202.5	47842.5	0	3.741	0.00
19	Nov '19	49395	58065	8670	3.741	32434.47
20	Dec '19	60952.5	56782.5	0	3.741	0.00
21	Jan '20	57135	55627.5	0	3.741	0.00
22	Feb '20	47872.5	68167.5	20295	3.741	75923.60
23	Mar '20	53287.5	66570	13282.5	3.741	49689.83
24	April '20	53737.5	71512.5	17775	3.741	66496.28
25	May '20	35348	88350	53002	3.741	198280.48
26	June '20	46508	74085	27577	3.741	103165.56
		13339141	1553865	214724		1450490.18

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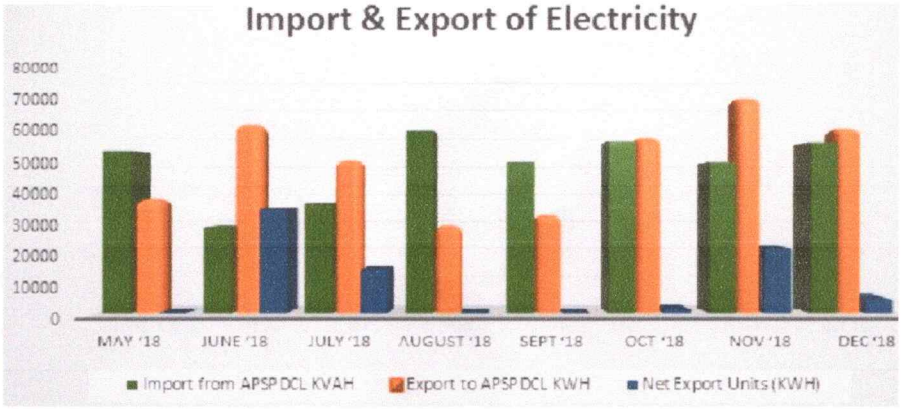

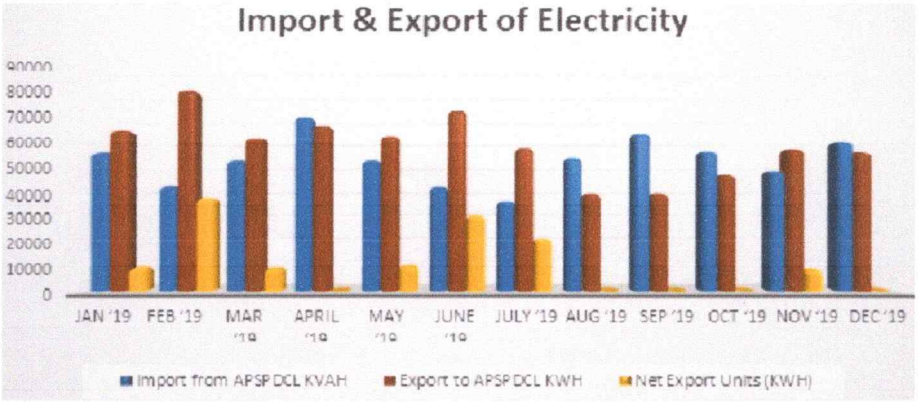

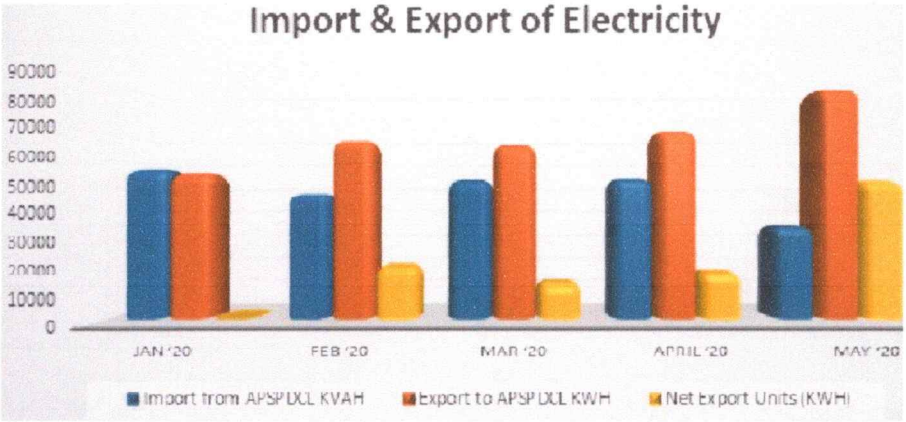

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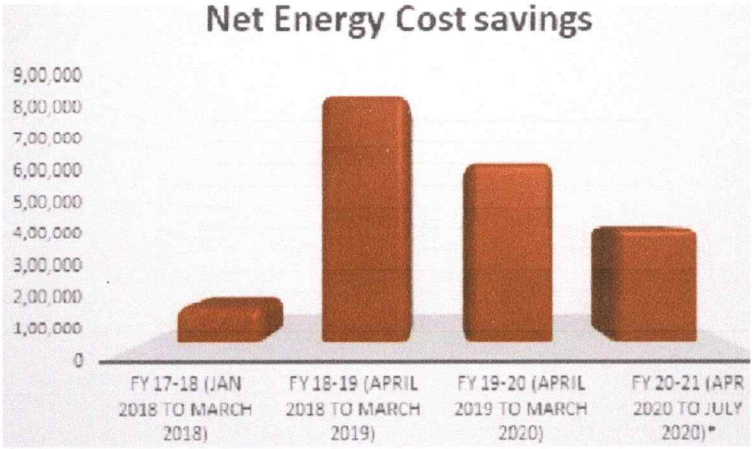
Energy Savings

Period	Net Energy Cost savings (Rs.)
FY 17-18 (Jan 2018 to March 2018)	1,22,850
FY 18-19 (April 2018 to March 2019)	8,94,108
FY 19-20 (April 2019 to March 2020)	6,49,200
FY 20-21 (Apr 2020 to July 2020)*	4,12,047
Total	**20,78,205**



With the usage of renewable energy for energy needs of the campus it also fulfills the Sustainable Development Goals.

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