



VARUNAV SPARCK CONTROL PRIVATE LIMITED

Engineers, Power System Consultants, System Commissioning, Installation Improvement

Ref No. :

Date : 01.08.2021

ENERGY AUDIT OF GUEST HOUSE CAMPUS H.B.T.I. KANPUR

Sr No.	Place	Equipment's	Qty	Load (watt)	Total load (watt)	Recommended of Equipment's* Qty	Qty	Load (watt)
1	Room No. 1	Split AC 1.5 Ton	02	2980	3280	No change	2980	3059
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
2	Room No. 2 V.I.P	Window AC 1.5 Ton	02	3220	3820	Sufficient of 1 No. split A.C. 1.5 Ton As per Volume *1	1490	1648
		Fan (200 watt)	02	400		Fan (40 watt) *2	80	
		Tube Light (40 watt)	02	80		LED Tube Light (12 watt) *2	24	
		C.F.L (20 watt)	06	120		LED Bulb (09 watt) *6	54	
3	Room No. 3 V.I.P	Window AC 1.5 Ton	02	3220	3820	Sufficient of 1 No. split A.C. 1.5 Ton As per Volume of *1	1490	1648
		Fan (200 watt)	02	400		Fan (40 watt) *2	80	
		Tube Light (40 watt)	02	80		LED Tube Light (12 watt) *2	24	
		C.F.L (20 watt)	06	120		LED Bulb (09 watt) *6	54	
4	Room No. 4	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
5	Room No. 5	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
6	Room No. 6	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	

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7	Room No. 7	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
08	Room No. 8	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
09	Room No. 9	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
10	Room No. 10	Window AC 1.5 Ton	01	1610	1910	No Change	1610	1689
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
11	Room No. 11	Split AC 1.5 Ton	01	1490	1790	No Change	1490	1569
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
12	Room No. 12	Window AC 1.5 Ton	01	1610	1910	No Change	1610	1689
		Fan (200 watt)	01	200		Fan (40 watt) *1	40	
		Tube Light (40 watt)	01	40		LED Tube Light (12 watt) *1	12	
		C.F.L (20 watt)	03	60		LED Bulb (09 watt) *3	27	
13	Lounge	Split AC 1.5 Ton	02	2980	4060	Sufficient of 1 No. split A.C. 2.0 Ton As per Volume *1	1986	2236
		Fan (200 watt)	04	800		Fan (40 watt) *4	160	
		Tube Light (40 watt)	06	240		LED Tube Light (12 watt) *6	72	
		C.F.L (20 watt)	02	40		LED Bulb (09 watt) *2	18	
14	Dining Hall	Split AC 1.5 Ton	02	2980	3340	Sufficient of 1 No. split A.C. 1.5 Ton As per Volume *1	1490	1618
		Fan (100 watt)	02	200		Fan (40 watt) *2	80	
		Tube Light (40 watt)	04	160		LED Tube Light (12 watt) *4	48	



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15	Conference Hall	Split AC 1.5 Ton	02	2980	3860	No change	2980	3316
		Fan (100 watt)	06	600		Fan (40 watt) *6	240	
		Tube Light (40 watt)	06	240		LED Tube Light (12 watt) *6	72	
		C.F.L (20 watt)	02	40		LED Bulb (12 watt) *2	24	
16	Corridor (G.F.)	C.F.L (20 watt)	06	120	240	LED Bulb (12 watt) *6	72	144
	(F.F.)	C.F.L (20 watt)	06	120		LED Bulb (12 watt) *6	72	
17	Reception (G.F.)	Fan (100 watt)	02	200	400	Fan (40 watt) *2	80	160
	(F.F.)	Fan (200 watt)	02	200		Fan (40 watt) *2	80	
18	Roof Boundary	Sodium Light (500 watt)	04	2000	3860	No change	2000	2360
	Boundary & Gate	C.F.L (20 watt)	12	240		LED Bulb (15 watt) *12	180	
	Lawn	C.F.L (20 watt)	12	240		LED Bulb (15 watt) *12	180	
		In watt		41650	41650			30550
		In Kilo watt		41.65	41.65			30.55

Advice and Recommendation: -

- 1 Devise of Door Closure essential in each room.
- 2 Installation of control panel along with Energy Meter
- 3 Installation of APFC Panel for Maintain Power Factor 0.99
- 4 If possible, replace of 3-star rating Air Conditioner with 5-star rating.

(A 5-star rated air conditioner consumes significantly lesser power than a 3-star rated AC and is therefore more energy efficient. Based on many researches, a 5-star AC can save up to 28% more energy than a 3-star AC, on average.)

Sr. Engineer & Auditor
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Sr. No.	Place	Equipment's	Qty.	Load/Watt	Total Load/Watt	Recommended Qty. of Equipment's	Load /Watt
1	Room No.1	Split A.C 1.5 Ton	1	1490	1490	No Change	1490
2	Room No.2 V.I.P	Window A.C 1.5 Ton	2	1610	3220	Sufficient of 1 No split A.C. 1.5 Ton As per Volume of Room	1490
3	Room No.3 V.I.P	Window A.C 1.5 Ton	2	1610	3220	Sufficient of 1 No split A.C. 1.5 Ton As per Volum of Room	1490
4	Room No.4	Split A.C 1.5 Ton	1	1490	1490	No Change	1490
5	Room No.5	Window A.C 1.5 Ton	1	1610	1610	No Change	1610
6	Room No.6	Window A.C 1.5 Ton	1	1610	1610	No Change	1610
7	Room No.7	Window A.C 1.5 Ton	1	1610	1610	No Change	1610
8	Room No.8	Window A.C 1.5 Ton	1	1610	1610	No Change	1610
9	Room No.9	Split A.C 1.5 Ton	1	1490	1490	No Change	1490
10	Room No.10	Window A.C 1.5 Ton	1	1610	1610	No Change	1610
11	Room No.11	Split A.C 1.5 Ton	1	1490	1490	No Change	1490
12	Room No.12	Window A.C 1.5 Ton	1	1610	1610	No Change	1610
13	Lounge	Split A.C 1.5 Ton	2	1490	2980	Split A.C. 2 Ton	1986
14	Dining Hall	Split A.C 1.5 Ton	2	1490	2980	Single Split A.C. 1.5 Ton	1490
15	Conference Hall	Split A.C 1.5 Ton	2	1490	2980	No Change	2980

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16	Room, lounge, conference hall , kitchen	Light, fan , Kitchen Equipment's		2000	2000	No Change	2000
		In watt		25310	33000		27056
		In Kilo watt		25.31 KW	33.00 KW		27.06 KW

Advice and Recommendation :-

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