



## Electric Power

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**Electric power:** The rate of electrical work or electrical energy is known as power.

$$P = W/t = ivt / t = i \times v \text{ ( Watt = amp x volt )}$$

Board of trade unit: 1 B.O.T.U is defined as 1000 water power consumed in 1 hour.

$$1 \text{ u} = 1 \text{ K.W.P.H}$$

For example:

3 tube lamps 4 watt each 5 hours on average

2 fans 60 watt each 16 hours on average

TV 100 watt 3 hours each

Fridge 100 watt 12 hours on average

1000 watts heaters 4 hours on the average

1 u costs 6.50 Rs. Let us calculate monthly electric bill ( 30 days )

$$40 \times 5 \times 3 = 600 \text{ watt hr} = 0.60 \text{ KW Hr}$$

$$60 \times 2 \times 16 = 1920 \text{ watt hr} = 1.92 \text{ KW Hr}$$

$$100 \times 3 = 300 \text{ watt hr} = 0.30 \text{ KW Hr}$$

$$100 \times 12 = 1200 \text{ watt hr} = 1.20 \text{ KW Hr}$$

$$1000 \times 4 = 4000 \text{ watt hr} = 4.00 \text{ KW Hr}$$

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8 unit

$$\text{Monthly bill} = 6.50 \times 30 \times 8 = 1560 \text{ Rs.}$$