

AI-00303 Electric Bill Simulation Table

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I am trying to calculate the amount of my electric bill per month. My current ammeter reading is 5Amp, what is the Kw draw if AC voltage source is 240v. The electricity cost is PHP 13/kwh. What is the projected electric cost per hour, per day and per month with a run time of 12 hours per day. Use 30 days in a month and make a table for 1,2,3,4,5,6,7,8,9,10 amp readings with your answer.

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To calculate the kilowatt (kW) draw, you can use the formula: Power (kW) = Current (A) × Voltage (V) ÷ 1000. In this case, for a current of 5 Amps and a voltage of 240V, the kW draw would be:

$$\text{Power (kW)} = 5\text{A} \times 240\text{V} \div 1000 = 1.2 \text{ kW}$$

Now, let's calculate the projected electric cost per hour, per day, and per month with a run time of 12 hours per day, assuming a cost of PHP 13/kWh:

- Cost per hour: $1.2 \text{ kW} \times \text{PHP } 13/\text{kWh} = \text{PHP } 15.60$
- Cost per day: $\text{PHP } 15.60 \times 12 \text{ hours} = \text{PHP } 187.20$
- Cost per month (30 days): $\text{PHP } 187.20 \times 30 \text{ days} = \text{PHP } 5,616.00$

Here's a table showing the projected electric costs for ammeter readings of 1-10 Amps:

Amp Reading	kW Draw	Cost per Month
1	0.24	PHP 3,139.20
2	0.48	PHP 6,278.40
3	0.72	PHP 9,417.60
4	0.96	PHP 12,556.80

5	1.2	PHP 15,696.00
6	1.44	PHP 18,835.20
7	1.68	PHP 21,974.40
8	1.92	PHP 25,113.60
9	2.16	PHP 28,252.80
10	2.4	PHP 31,392.00

Please note that these calculations assume a constant power draw throughout the run time and do not account for any fluctuations or additional factors that could affect the final electricity cost.