



Solar Energy for Sustainable Solution

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Crypto miner on solar: how much PEA power will it use?

System: 8 kW hybrid inverter · 13 kWp solar · 48 kWh battery (48 V) · PEA grid connected · miner running 24 hours a day

Miner power, nonstop

3.75 kW

≈ 90 kWh/day · 2,700 kWh/month

Solar per sunny day

≈ 68 kWh

daytime only, 09:00–16:00 peak

PEA per sunny day (60 A)

35 kWh

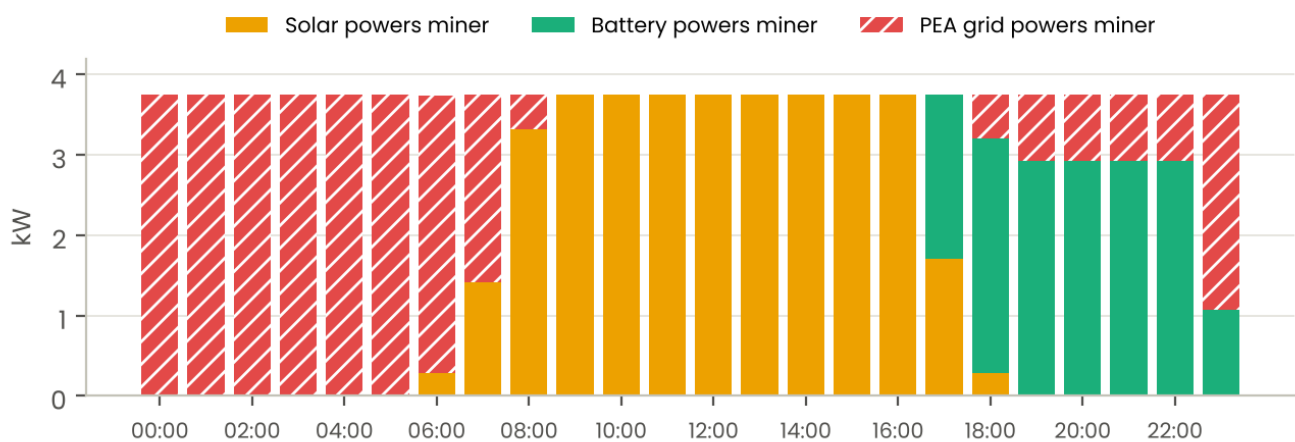
27 kWh if battery set to 150 A

PEA bill per month

≈ 6,200 ฿

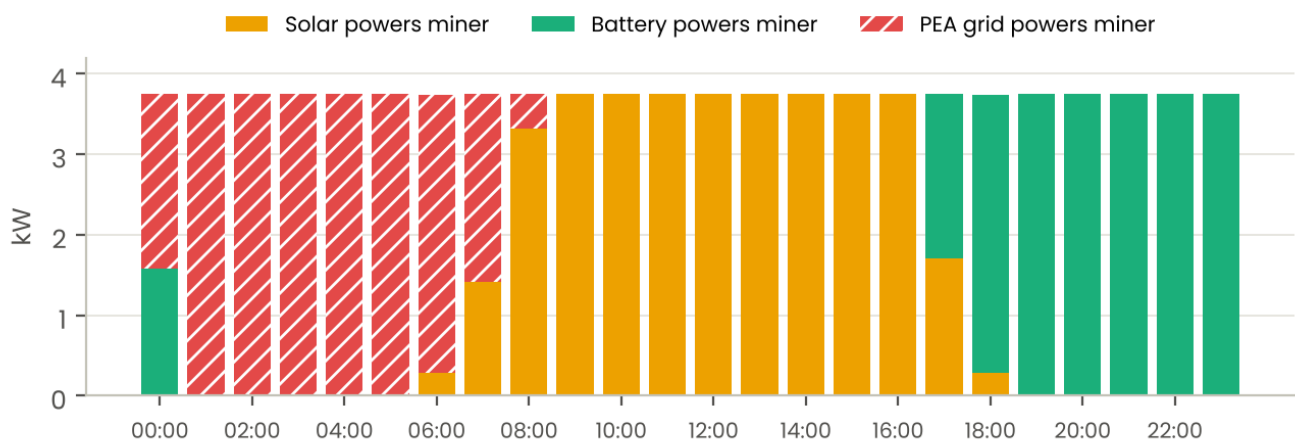
vs ≈ 12,200 ฿ without solar

A sunny day hour by hour, battery limited to 60 A



At 60 A the 48 V battery gives at most ≈ 2.9 kW, less than the miner's 3.75 kW, so PEA tops up every evening hour. The battery can also charge at only ≈ 3 kW, so it stores ≈ 20 kWh and is empty by about 23:00. From then until 08:00 the miner runs fully on PEA.

Same day with the battery limit raised to 150 A



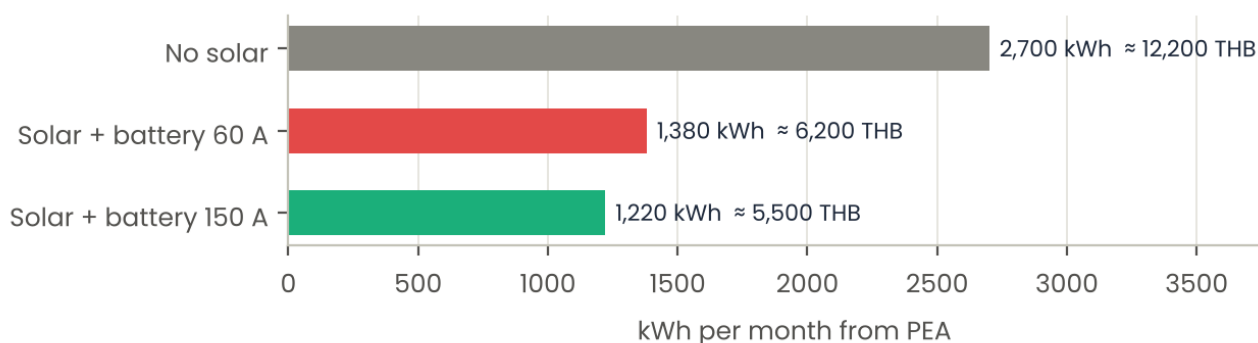
At 150 A the battery covers the whole miner from 18:00 until about midnight and stores ≈ 29 kWh from the sun, with no solar wasted. PEA use drops from 35 to 27 kWh on a sunny day.



PEA use per day

Day type	Battery limit	PEA daytime 06–18	PEA night 18–06	PEA total	Solar wasted
Sunny	60 A	6.2 kWh	29.0 kWh	35.3 kWh	9 kWh
Sunny	150 A	6.2 kWh	20.9 kWh	27.1 kWh	0
Cloudy	60 or 150 A	22.6 kWh	44.9 kWh	67.5 kWh	0
No solar	–	45 kWh	45 kWh	90 kWh	–

PEA energy and cost per month



Based on 20 sunny and 10 cloudy days a month and ≈ 4.5 THB/kWh. The actual PEA rate (tiers + Ft) may differ, so check the bill.

What to do

1. Raise the battery current

Set charge/discharge toward 150 A (≈ 7.7 kW), within the inverter and battery BMS limits. Saves ≈ 700 THB/month on top of solar.

2. Put the miner on the grid side

Not on the backup/EPS output. Miner 3.75 kW + house peak can pass 8 kW and would overload the inverter or drain the battery in a power cut.

3. Wire it for 24-hour load

Dedicated 25 A breaker, THW 4 mm² (6 mm² for long runs). IEC C19/C20 is rated 16 A: use a 20 A-rated cord or hard-wire, and check for heat.

If the miner shares the system with the house load (≈ 69 kWh/day), PEA use rises to ≈ 95 kWh/day sunny and ≈ 136 kWh/day cloudy, almost all at night. Running the miner from the battery every night uses one full battery cycle a day.