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Thailand Home Battery Size Guide: When 5 kWh, 10 kWh or 15 kWh Makes Sense

A practical capacity guide for Thai homes, solar installers and residential storage distributors.

The fast answer Choose the battery size from critical load, backup hours, solar self-consumption and expansion plans, not from kWh alone.

Use this guide for initial residential ESS discussions in Thailand. Final sizing still uses the customer's load list and inverter limits.

Capacity class and typical use

Battery class	Typical use	Customer profile
5 kWh	Router, lights, fans, TV and selected evening loads	Small home or short backup requirement
10 kWh	Critical-load backup plus evening solar self-consumption	Typical villa or family home with selected circuits
15 kWh	Longer backup, larger critical-load panel or higher evening use	Large home, frequent outages or future expansion
Above 15 kWh	Multi-day backup, EV or larger motor loads	Requires a detailed load, inverter and installation plan

Use the exact model, document and supply route for the final quotation.

What changes the right size

- Average critical load and the appliances running together.
- Backup hours and whether the battery is reserved for outages.
- PV size, daytime self-consumption and charging window.
- Inverter output, battery current, phase and future expansion.

Quick calculation

A larger nominal battery does not solve an undersized inverter or an incompatible BMS. Size energy and power together.

First-pass energy Required usable kWh = average critical load in kW x backup hours. Add an operating reserve and account for inverter losses.

Need a product match? CVC can help match product models, technical parameters and supply routes to the project requirement.

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Prepared as a concise sourcing reference. Confirm exact model, certificate scope, compatibility and warranty responsibility for the final quotation.