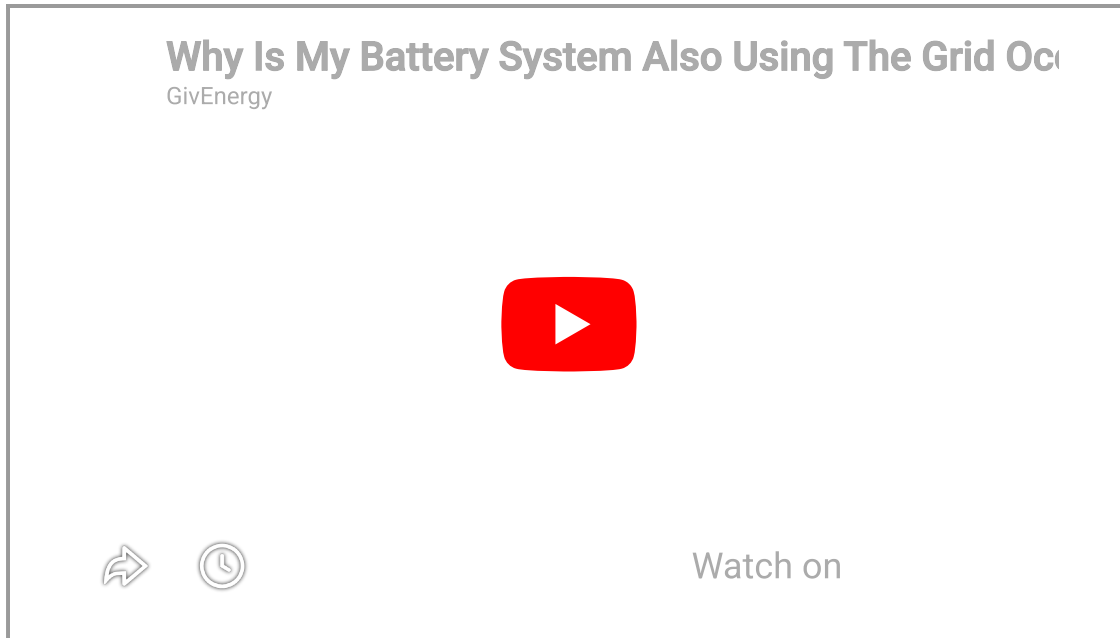


Why Is My GivEnergy System Also Using The Grid Occasionally?



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Purpose

This guide helps you diagnose and reduce brief grid “blips” when your battery should be powering the home. Short bursts of grid import/export are normal in grid-tied systems, but you can verify they’re expected and minimize them.

What “Grid Blips” Are

- **Normal behaviour in grid-tied systems:** tiny lag as the battery/inverter ramps up or down to match sudden changes in household load. The grid fills the gap briefly.
- Typically very low energy over a day (often pennies on standard tariffs).
- You may also see tiny export spikes when load drops and the battery winds down.

Symptoms You Might See

- Short red spikes of “Grid Import” during kettle/oven/iron use or when devices cycle.
- Occasional small “Export” blips after a large load turns off.
- The app/portal graph shows sharp peaks, even though the actual event lasts a second or two.

Step-By-Step Troubleshooting

1. Confirm It’s Normal Behaviour

- Reproduce with a predictable load** (e.g., 3 kW kettle):
 - Observe house load rise (e.g., from ~500 W to ~3,500–4,000 W).
 - Note a brief grid import spike; battery output then ramps to match.
- Check daily totals:**
 - Review 24-hour energy imported/exported.

- If blips sum to $< \sim 0.5$ kWh/day and correlate with sudden load changes, this is expected.

c. Verify sampling:

- The portal samples roughly every 0.5 s and displays 5-minute segments; short events can look visually larger on filled-area graphs.

2. Rule Out Configuration Issues

a. Operating mode:

- Ensure “Priority House Load” / normal self-consumption mode is enabled.
- Ensure schedules (charge/discharge windows) aren’t forcing grid use during those times.

b. EV charger settings:

- If an EV is connected, confirm charger settings (e.g., “Prevent Battery From Discharging to EV”) and charge current aren’t causing grid priority.

c. Export limits:

- Check any export limit or DNO constraint settings; aggressive limits can change how the inverter reacts to sudden drops.

3. Check System Capability Limits

a. Inverter output ceiling:

- Know your inverter’s max AC power (e.g., ~ 3.6 kW on some models). If load exceeds this, the grid will supplement by design.
- Test by turning on multiple high-draw appliances; note whether grid steps in when total exceeds inverter capacity.

b. Battery current/quantity:

- Single smaller battery stacks can limit peak power. Adding packs increases available discharge power (subject to inverter limits).

4. Improve Response Time and Reduce Blips

a. Firmware update: Update inverter/battery firmware via the GivEnergy app/portal; newer firmware can shorten ramp time, reducing blips.

b. Stagger large loads: Avoid simultaneous starts (e.g., don’t run kettle and oven preheat together).

- c. **Prefer gentler appliances:** Induction hob with a 1 kW kettle plate draws less peak power than a 3 kW electric kettle.
- d. **Optimize background load:** Investigate devices that cycle hard (e.g., heat pumps, tumble dryers). Eco modes can soften ramps.

5. Investigate Apparent Idle Discrepancies

- a. **Compare “House Load” vs. “Inverter Output” overnight:** Minor differences (tens of watts) can reflect inverter overhead, metering points, or sampling resolution.
- b. **Cross-check meters:** Smart meter and GivEnergy portal measure at different points; expect small, consistent offsets.
- c. **If you see > ~50–80 W unexplained overnight:**
 - Verify all loads truly off (standby devices add up).
 - Reboot inverter (safe restart) and confirm current firmware.
 - If persistent and large, contact support with logs/screenshots.

6. Differentiate Normal Blips from Faults

Normal:

- Brief spikes tied to sudden load changes.
- Total daily impact small; battery quickly matches load.

Potential issue:

- Prolonged grid import without large load changes.
- Frequent import when SOC is high and mode is self-consumption.
- Large sustained mismatch between house load and inverter output (hundreds of watts).

Actions:

- Review schedules/modes; update firmware; check inverter/battery status; note error codes.
- If unresolved, collect timestamps, screenshots, and event details for support.

7. Off-Grid vs. Grid-Tied Expectations

- Grid-tied “grid neutral” means occasional watts of grid input are expected as the system reacts.
- Zero grid usage requires truly off-grid operation; in that state, no dips from the grid occur, but total available power is limited by inverter/battery alone.

Quick Checks & Fixes (Cheat Sheet)

- See spikes when big loads start/stop? **Expected.** Reduce via firmware update + staggering loads.
- Spikes when exceeding inverter max output? **Expected.** Grid supplements by design.
- Graph looks alarming for a 1–2 s event? It’s a visualisation artefact of 5-minute segments.
- Daily import creeping up without clear cause? Review schedules, EV charging, and firmware; audit standby loads.

When to Contact Support

- Blips exceed ~0.5–1.0 kWh/day without obvious high-draw events.
- Persistent overnight import > ~80–100 W with verified minimal loads.
- Inverter fails to ramp to match moderate loads well below its rated output.
- Error codes, repeated reboots, or communication faults in the app/portal.

Documentation to Provide

- Date/time and appliance causing the event.
- Screenshots: house load, battery output, grid import/export, SOC.
- Firmware versions and system configuration (inverter model, battery count).
- Any EV charging settings/behaviour during events.

Need further help? Contact support@givenergy.co.uk

