The Solar Lifecycle Health Check

10 things worth checking before small issues become expensive ones

Most solar systems don't fail at installation. They quietly underperform months or years later, usually because nobody's watching the right things.

This checklist covers the most common failure points that show up **after** handover, not during it.

Physical System Checks

1. Panel soiling and shading

Dust, bird droppings, and debris build up slowly. An output drop can go unnoticed for months if nobody's tracking generation against expected yield.

2. Loose or degraded connections

Vibration, thermal cycling, and weather exposure loosen connections over time. Left unchecked, this leads to hot spots and, eventually, component failure.

3. Mounting and structural integrity

Corrosion, degraded roof penetration sealant, and loosening clamps all develop gradually. A proper inspection checks more than just "does it look okay."

4. Firmware currency

Inverters and batteries (if you have them) both run-on firmware that needs updating. It's an easy thing to skip and an easy thing to forget.

Performance Monitoring

5. Actual vs. predicted generation

Every system has a performance benchmark based on expected output for the site and weather conditions. Is actual generation being tracked against it regularly, or just "eyeballed" now and then?

6. Fault visibility

When something goes wrong, does anyone know quickly? Or does an issue sit quietly for weeks before someone notices the numbers look off?

Operational & Contractual Checks

7. Maintenance schedule adherence

Is the maintenance plan actually being followed, or did it quietly lapse after the first year?

8. Warranty status

Warranties have conditions. Missed maintenance windows can affect claims down the line - worth knowing before there's a problem, not after.

9. Changes in site operations

Has the site's energy usage changed since installation? New equipment, extended hours, or process changes can shift the load profile the system was originally designed around.

10. Who's responsible for what

Not everything on site automatically falls under a maintenance contract. It's worth knowing exactly where responsibility sits before assuming something is covered.

The pattern worth remembering

Most underperformance isn't caused by one big failure. It's a handful of small things, left unchecked, that add up over years.

A system is a 20-year asset. Treat lifecycle care as part of the plan, not a response to a problem.

Want a walkthrough of how this checklist applies to your site? Get in touch.

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