RATING METHOD

# How we rate solar panels

Independent ratings for Australian homes. No brand can pay for a score.

A panel's job is to keep producing for 25 years or more on a hot Australian roof. So we weigh what the maker guarantees about output and defects, and how the panel copes with heat, above peak wattage.

**41** series on the Clean Energy Council approved list, covering **1,234** approved models. **22** home series have enough published data to rank.

## What makes up the score

| CRITERION | WEIGHT | WHY IT MATTERS | THE RULE |
|---|---|---|---|
| **Output guaranteed at year 25**<br>On the list: 84.8% to 92.0%, typically 89.4% | 25% | What the panel promises to still produce after 25 Australian summers. It compounds every year. | Worked out from the datasheet's first-year and annual degradation: 84% scores 0, 92% scores 10. |
| **Product warranty**<br>On the list: 12 yrs to 30 yrs, typically 25 yrs | 25% | Covers defects in the panel itself. Twelve years is the floor; the best give 25 or more. | Years of product warranty: 10 scores 0, 30 scores 10. |
| **Heat performance**<br>On the list: -0.35%/°C to -0.24%/°C, typically -0.28%/°C | 20% | Panels lose output as they heat up, and roof panels often pass 65°C in summer. | Temperature coefficient of Pmax: -0.38%/°C scores 0, -0.24%/°C scores 10. |
| **Efficiency**<br>On the list: 21.5% to 25.0%, typically 23.7% | 20% | More watts from each square metre, which matters most on small or broken-up roofs. | Highest module efficiency in the range: 20.5% scores 0, 25% scores 10. |

| CRITERION | WEIGHT | WHY IT MATTERS | THE RULE |
|---|---|---|---|
| **Performance warranty length**<br>On the list: 25 yrs to 30 yrs, typically 30 yrs | 10% | How long the output guarantee runs. | Years: 25 scores 0, 30 scores 10. |

## How we read the documents

**Output at year 25**
Few datasheets print it directly. We calculate it from the first-year and annual degradation the warranty promises: 100% minus first-year loss minus 24 years of annual loss.

**Efficiency**
We use the highest module efficiency printed for the series. Where a datasheet leaves it out, we check it against the panel's area and wattage but don't score the calculated figure.

**Product warranty**
The standard term printed on the datasheet. Extended terms that need registration or a certified installer are noted but not scored.

**Series and versions**
All-black, dual-glass and larger-format versions of a series are listed separately, each with its own score. The series is rated on its best home-size version.

## Before anything is scored

- Currently on the Clean Energy Council approved modules list
- Manufacturer datasheet on file for the series

## Not in the score

- Price, which changes weekly and depends on your installer
- Owner star ratings, which rarely reflect long-term performance
- Hail and wind ratings, which aren't stated consistently across datasheets yet

## A worked example

LONGi Solar Hi-MO X10 (LR7-54HJD-xxxM), exactly as the site scores it. Points are score × weight.

| CRITERION | PUBLISHED VALUE | SCORE | WEIGHT | POINTS |
|---|---|---|---|---|
| Output guaranteed at year 25 | 90.6% | 8.2 | 25% | 2.06 |
| Product warranty | 30 yrs | 10.0 | 25% | 2.50 |
| Heat performance | -0.24%/°C | 10.0 | 20% | 2.00 |
| Efficiency | 25.0% | 10.0 | 20% | 2.00 |
| Performance warranty length | 30 yrs | 10.0 | 10% | 1.00 |
| **EnergyUpgrade Score** | | | | **9.6** |

## How brands are rated

A datasheet shows what a product promises, not how a brand behaves. Brand ratings add independent evidence, with the same rules for every brand.

| PART | WEIGHT | THE RULE |
|---|---|---|
| **Product scores** | 30% | Average datasheet score of the brand's two best home series in the category, the ones an installer would actually quote. Older ranges still on the approved list don't drag a brand down. |
| **Owner reviews** | 15% | What owners say across the brand's products in this category: SolarQuotes owner reviews for panels, inverters and batteries, and ProductReview.com.au plus SolarQuotes for heat pumps. Reviews are averaged by count, and every brand is pulled towards 4.0 stars as if it had 30 more reviews at that level, so a handful of perfect reviews can't beat thousands of good ones. 3.0 stars or lower scores 0, 5.0 scores 10. Listings for a range the brand no longer sells are shown but not counted, and a listing about the company in general counts half. |
| **Track record** | 20% | Panels: Kiwa PVEL Top Performer status, 2 points for each of the 2024, 2025 and 2026 scorecards plus up to 4 for total editions (10 or more scores 4). Inverters and batteries: up to 7 points for years selling in Australia (8 or more scores 7) and 3 for a stock-exchange listing. Heat pumps, which should last 10 to 15 years: up to 7 points for years trading in Australia (20 or more scores 7) and 3 for a listing. ACCC recalls of that kind of product take points off: 3 for one covering a range we list, 2 for another, doubled when the brand offers no remedy. A brand in liquidation scores 0. |
| **Installer and market standing** | 25% | Average of two independent results, each using the better of this year's result and last year's (last year's counts 80%). The SolarQuotes Installers' Choice vote: 1st scores 10, 2nd 8, 3rd 7, 4th or 5th 6. SunWiz awards from Clean Energy Regulator installation data: No. 1 for homes scores 10, No. 1 in another segment or 2nd–3rd 8, top 5 or fastest growing 6. For panels, BloombergNEF Tier 1 status scores 6 when there's no SunWiz award. For heat pumps, which have no installation-data award, the second result is popularity from the number of owner reviews: 10 reviews scores 2, 100 scores 5, 1,000 scores 8. |
| **Australian support** | 10% | Published Australian office 4 points, local support phone 3, local service email 2, more than one office 1. |

## Score bands

| | |
|---|---|
| **Excellent** | 8.5 and above |
| **Very good** | 7.5 to 8.4 |
| **Good** | 6.5 to 7.4 |
| **Fair** | Below 6.5 |

## Data confidence

**High**
Australian datasheet, verified against the approved list, states at least 85% of what we weigh, and every scored value appears in the PDF.

**Medium**
A global edition of the datasheet, a small gap in the data, or a value we couldn't find printed in the sheet we hold.

**Low**
The datasheet doesn't clearly match every model in the series, or leaves out more than a third of what we weigh. Low-confidence series can't be a pick.

## Questions

**Why not just rank by wattage?**
Wattage mostly reflects panel size. Two panels of the same size and technology produce almost the same; the warranty, heat loss and degradation are what separate them over 25 years.

**Why are commercial panels not ranked?**
Panels taller than 2 metres are built for commercial roofs and ground mounts. They're listed so you can check them, but ranked separately from home panels.

**Does brand reputation affect a panel's score?**
No. A series score is datasheet only. Brand ratings add owner reviews, independent testing, installer votes and support on top, and are shown separately.



