

## THE SUNPOWER DIFFERENCE

# DEEPER LOOK

## LONGEVITY AND DURABILITY

SunPower was founded in 1985 by Dr Richard Swanson, after development of a robust longlife energy source requirement for the US Army's GPS satellite program.

SunPower's Maxeon technology was groundbreaking and completely different from traditional conventional panel technology. This difference still exists today.

In space - whether it be on satellites, the moon or Mars - you can't simply change over the solar panels if they fail. For this reason Maxeon is still the only technology used 'off-planet.'

SunPower has 'engineered out' conventional panels' major flaws of cracking and corrosion (see Graphs 1 and 2). These flaws account for 86% of why such panels fail. The cracking and corrosion of conventional panels can happen in many ways:

X During transport

- 🗙 While being installed
- X Due to wind loads on roofs once installed
- $\mathbf{X}$  Via expansion and contraction with outdoor temperature changes.

These two SunPower patented solar technologies were purposely designed to avoid these two key flaws.

V Sunpower Maxeon V SunPower Performance Series

#### **PRODUCT WARRANTY DIFFERENCE**

Most solar panel brands make claims of how good they are and how long they last. However, the real confidence the manufacturer has with their product is best represented by what their product warranty and escape clauses cover.

Graphs 3 and 4 summarise these (next page). All conventional panel manufacturers fail to cover all the costs associated with replacing faulty panels. The range of product warranty loopholes deployed by most conventional manufacturers is disturbing.

SunPower stands out from the rest:

- 1. Market leading product warranty length of 40-years
- 2. Market leading coverage freight, parts, labour and disposal
- 3. No product warranty escape clauses
- 4. No slavery in supply chain SEDEX listed independent audit results
- 5. No toxic materials used (lead, chlorine, florine)

(SEDEX is a leading global reference source for independent audits of responsible and ethical sourcing).



### TOP 20 SOLAR PANELS GRAPH 3 **Product Warranty Coverage**

Based on brands best selling model\*



SUNPOWER<sup>™</sup> NUMBER 1 Efficient Panel<sup>1</sup>

- Lowest Degradation<sup>2</sup>
- Durability <sup>3</sup>
- Longevity 4
- Lowest product warranty returns <sup>5</sup>
- Combined Product & Performance Warranty 6
- Most patents for solar panels: 1400+ 7
- Panels first introduced to market: 1985
- Backed by 10th largest global company <sup>8</sup>
  - Sustainability 9, 10, 11, 12, 13
- Social Justice 14, 15, 16, 17

3. "Fraunhofer PV Durability In PVTech Power, 2015	nitiative for	Solar Module	es: Part 3."
4. SunPower Module 40-Year paper. 2013. Useful life is 99 of more than 70% of rated power	ut of 100 pa		
5. Only 1 in 20,000 SunPower AUG 2016 - comparison of all manufacturers annual report	publicly lis		0
6. Energy Buster Australian m	arket revie	w 2020	
7. Maxeon is a leader in solar ir and two best-in-class solar pa			
8. SunPower majority owned erate Total Energy	by the Frer	nch oil & gas	conglom-
9. Silicon Valley Toxic Coalition	n 2015 to 20	)17	
10. Declare - full transparency still only solar panel manufac	1.2.5.5. M. (1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	9	

1. Green, M. A., et. al. Solar Cell Efficiency Tables (version 48),

2. NREL and Black & Veatch independent degradation study

11. NSF - no net landfill from manufacturing plant construction and operation (first and still only solar panel manufacturer to be accredited with).

12. Cradle to Grave - first solar panel manufacturer to be certified.

13. Winner of PV magazine 2019 inaugural sustainability award

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14. Global Human Rights Policy

NOTES:

Progress in Photovoltaics, 2016

15. Code Of Business Conduct and Ethics

16. United Nations Sustainability Goals (SDG)

17. Maxeon - Sustainability Report 2020

\* 2023 survey conducted by Energy Buster



## THE SUNPOWER DIFFERENCE

# A LITTLE EXTRA GOES A LONG WAY GRAPH 5

Over lifetime cheaper panels cost considerably more than leading quality panels <sup>1,2</sup>



1. Illustrative guide 2. Based on product warranty 3. EFFECTIVE LIFE = 70% of panels still generating at least 70% compared to when first installed 4. Wohlgemuth, J. "Reliability of PV Systems," Proceedings of SPIE