

<https://greentumble.com/how-long-do-solar-panels-last/>

What is the life expectancy of a solar panel?

Compared with other **appliances**¹, solar panels actually have a long **life expectancy**². Most panels come with **warranties**³ assuring 80 percent system performance or higher for up to 25 years. This does not mean the solar panels need to be replaced after this period; even after the warranty period, the majority of panels continue to produce electricity, **albeit**⁴ with less efficiency. Still, as time passes (and solar panels age), we get real-life proofs of a much longer average **lifespan**⁵ due to solar panels' outstanding **durability**⁶.

One of the oldest solar panel installations can be found in Germany on the building of the University of Oldenburg. To the surprise of researchers, their “experimental” solar array installed on the roof in 1976 is still producing energy with a minimum **variation**⁷ of the original **output**⁸. Similar evidence of reliable performance is documented on the Kyocera array from 1984 in Stockholm.

Such examples have appeared more and more frequently in recent years. And many solar energy **proponents**⁹ claim that solar panels can perform for over 40 years! However, it should be noted that the **longevity**¹⁰ of your solar panel is affected by many factors, including weather patterns or the quality of the material.

Definitions:

¹ a device or piece of equipment designed to perform a specific task

² the average period that a person may expect to live

³ a written agreement in which a company selling something promises to repair it if it breaks within a particular period of time

⁴ although/though

⁵ the average length of time that someone will live or that something will continue to work

⁶ the ability to withstand wear, pressure, or damage

⁷ a change or slight difference in condition, amount, or level, typically within certain limits

⁸ the amount of goods or work produced by a person, machine, factory etc.

⁹ a person who advocates a theory, proposal, or course of action

¹⁰ the amount of time that someone or something lives

Sample sentences:

1. Household appliances, such as dishwashers or refrigerators, should be tested for energy efficiency.
2. Life expectancy, a widely-used indicator of overall development of a country, has increased over the last ten years in most countries.
3. If your battery is replaced, the new battery will have a warranty of 12 months, without effect on the initial warranty period.
4. Farm workers in the feudal system were paid some, albeit very little, money to do work.

5. If the input material is poor, then the recycled product is likely to be of a similar standard, with a short lifespan.
6. Durability of a product is determined by its ability to last a long time without considerable deterioration.
7. There is little variation between countries in regard to stillbirths and infant mortality.
8. Total output is defined as quantity of goods or services produced by a factory or company.
9. The proponents of creative advertising argue that the more innovative the advertisement is, the more effective it will be.
10. In the last century longevity has increased substantially in many underdeveloped countries largely due to improved sanitation.

Vocabulary Exercise:

appliance life expectancy warranty albeit

1. An energy efficient _____ uses less electricity to achieve the same level of performance to conventional ones.
2. During the period when the epidemic was at its height, mortality has increased and average _____ has decreased dramatically.
3. A handbag _____ will typically guarantee 2-3 years without wear or any other sort of deterioration.
4. Currently, the learners at our school can understand Chinese and they can also write it, _____ with great difficulty.

durability variation output proponent

5. This product provides increased _____ against insects that can normally damage similar products made of cotton.
6. In Chinese, it seems that not much _____ exists among native speakers; in Britain, on the other hand, there are many different ways of speaking from one region to another.
7. The artificial intelligence industry, which is still growing, already exceeds the economic _____ of most industries in the USA.
8. Mark Twain was a(n) _____ of realism because in his short stories and novels he often used the dialect of the region he was born in.

Reading Comprehension:

1. According to paragraph 1, which of the following is true?
 - a) Solar panels do not last as long as other appliances
 - b) Some solar panels have in fact worked a lot longer than initially estimated
 - c) Solar panels have already replaced most other appliances
 - d) The performance of solar panels remains stable for 25 years

2. By saying “To the surprise of researchers”, what does the author suggest the researchers were surprised at?
 - a) That the level of efficiency of their solar array has remained consistent
 - b) That their solar panels are regarded as the oldest panels
 - c) That their expectations were far from being met by the panels
 - d) That their panel installations’ energy output has varied significantly over time

3. Why does the author mention “weather patterns”?
 - a) To suggest that solar panels produce more energy in favorable weather
 - b) To suggest that solar panels may last shorter or longer according to the weather
 - c) To imply that weather patterns have changed over the last 40 years
 - d) To imply that solar panels are robust against bad weather

Sentence Completion:

A

1. By turning off and unplugging appliances and electronics when not in use,
2. The estimated lifespan of tidal energy plants is about 75-100 years,
3. Low price materials are unlikely to last
4. The main source of Earth’s heat is the Sun,
5. Micro-cracks in solar cells, which are not visible to the naked eye,
6. Proponents of nuclear energy would argue that despite the potential future shortages,

B

- a. so even small variations in solar output can have an impact on the climate.
- b. it is still worth investing in it today.
- c. because they are being manufactured to supply an immediate demand rather than being tested for durability.
- d. affect the output of the panel instantly by blocking incoming sunlight.
- e. we get rid of the “phantom” energy that results from the standby power.
- f. which is much longer than nuclear power plants.