Pros and Cons of Renewable Energy: Solar Energy

Factsheet 07

Facts and Figures

PROs

Free and Gratis: Solar energy is an infinite and free resource, provided by the sun

Clean: Solar energy is emission-, noise- and odour-free

Versatile Use: Solar energy is not only used directly for heating and hot water, but also for the production of electricity

High Durability: Solar systems are robust, low-maintenance and long-lasting

Independence: Solar energy means independence from fossil fuels and fluctuations in electricity prices

Resource-poor Countries: Solar energy means the possibility of producing one's own electricity, especially for resource-poor countries.

Small Scales: Solar energy can also be used on a small scale: mobile solar systems, balcony systems, solar roof tiles, solar lamps and ovens for domestic use, also in poorer countries

Future Technology: Solar energy is constantly being researched further, with constant further development, on a large and small scale

Energy Transition: the use of solar energy reduces CO_2 emissions and contributes to the energy transition

New Jobs: Solar energy creates jobs, in Europe especially in assembly and maintenance

CONs

High Costs: high investment costs for rooftop systems, large-scale solar systems and storage

Dependence on Daylight: Solar systems only produce electricity during daylight hours

Suitability: Solar systems are not suitable for all roofs

Recycling: Solar systems and storage tanks are not (yet) completely recyclable

Need for Storage: Solar energy does not allow for a constant or demand-oriented energy supply without additional storage due to the weather-, day- and season-dependent solar radiation

Storage Possibility: Solar energy can only be stored for a limited period of time

Land Requirements: Due to its low energy density, the use of solar energy requires a relatively large amount of land and can compete with the agricultural use of land

Impact on Landscape: Disturbance of the landscape by large-scale solar installations and high-voltage power lines

Bureaucratic Constraints: Installation of solar energy requires (at least in Germany) bureaucratic effort such as approval, tax declaration, feed-in tariff, etc, Different requirements may vary by country.

Sources:
https://senec.com/de/magazin/solarenergie-vorteile-und-nachteile
https://de.wikipedia.org/wiki/Sonnenenergie

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