

A stylized sun with a yellow and orange gradient is partially visible in the top right corner. To its left are several light blue, fluffy clouds of varying sizes. The background is a solid blue color with faint, light blue geometric patterns.

Solar Power in the EU

What is solar energy?

- Sustainable and renewable
- Requires little maintenance
- Silent producer of energy
- Continuous development of technology



HOW SOLAR WORKS

1 Solar panels convert the sun's energy into electricity.

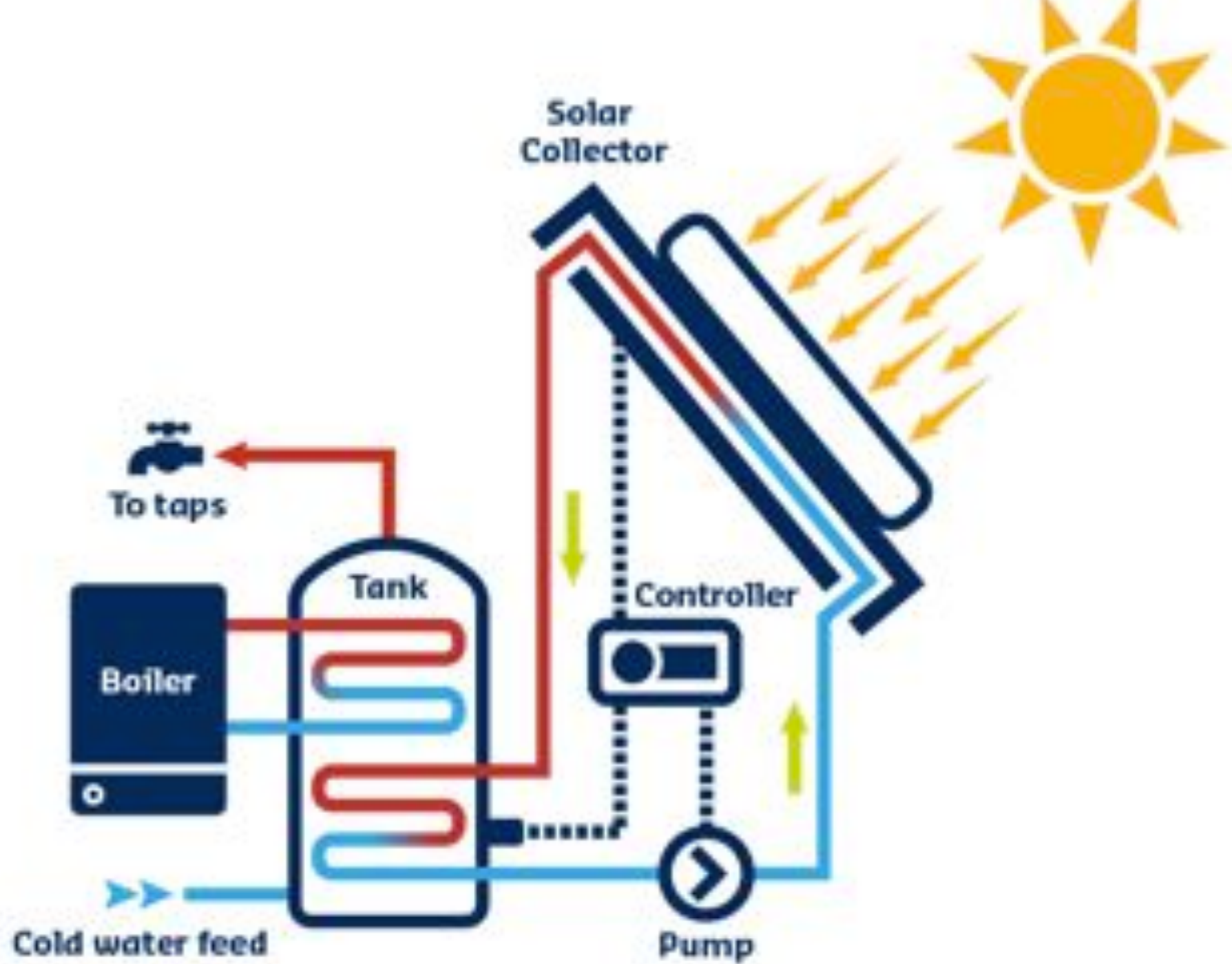
2 A control device changes this electricity, enabling it to power electrical items.

3 The electricity then passes through a breaker box to outlets in the building.

4 Items such as a refrigerator and lamp can plug into the outlets for power.



**Green
Mountain
Energy**



Solar Power in Europe

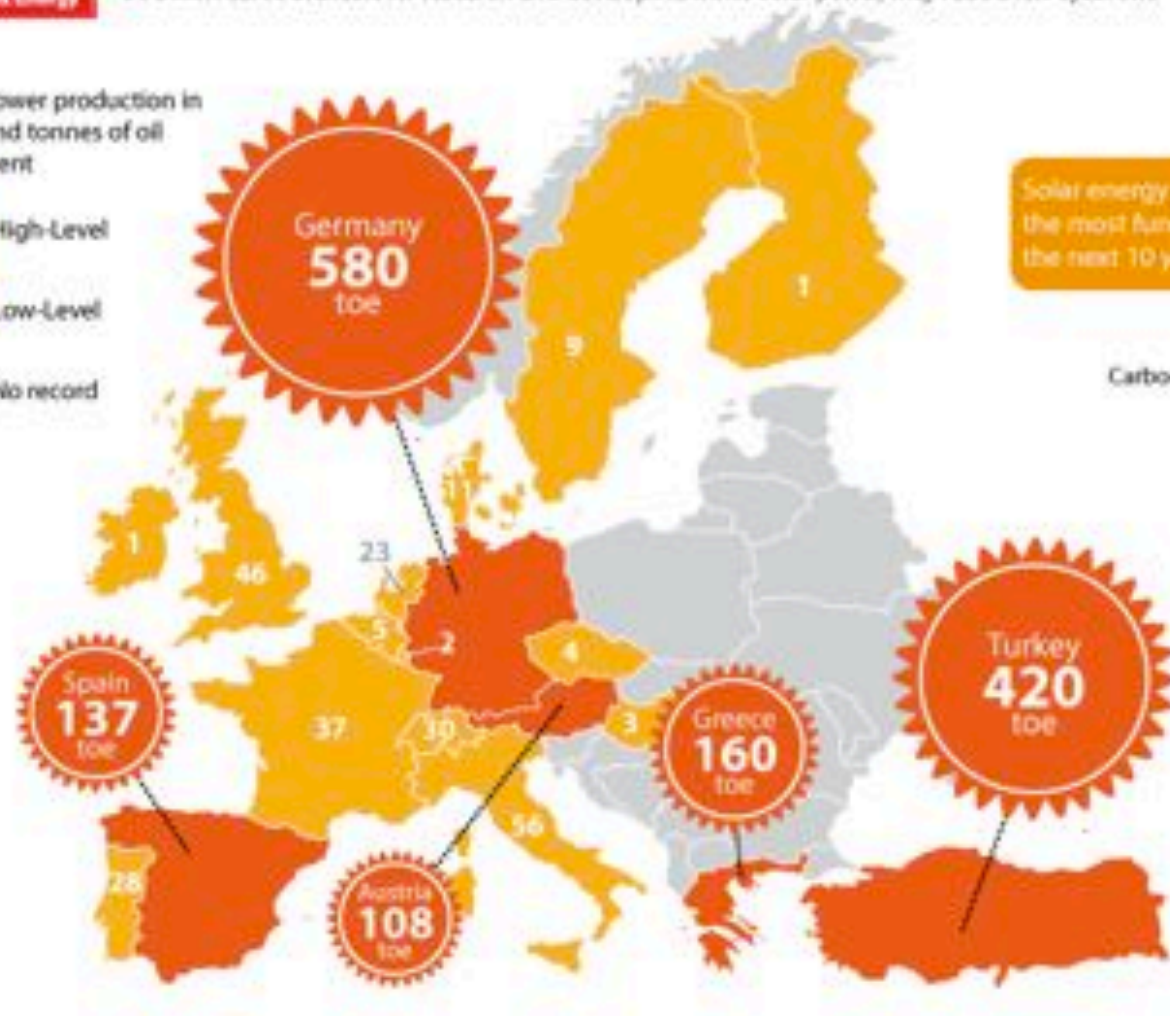
The European Commission's latest plan to reduce carbon emissions by pumping a huge slice of the 50 billion euros available for research and development into solar power, may raise a few eyebrows

Funding a Low-Carbon Future



Solar power production in thousand tonnes of oil equivalent

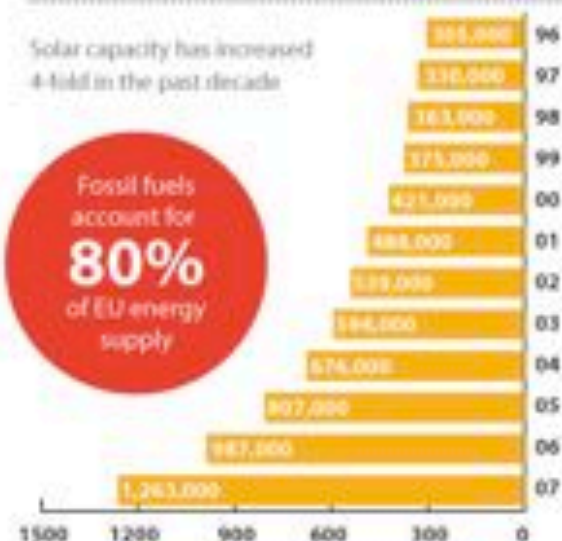
- High-Level
- Low-Level
- No record



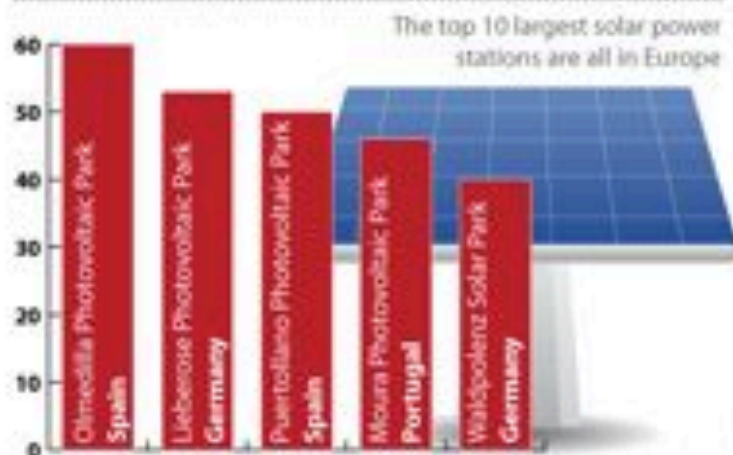
Total Solar Energy Production, EU 27 (toe)

Solar capacity has increased 4-fold in the past decade

Fossil fuels account for **80%** of EU energy supply



World's Largest Photovoltaic Power Stations (Peak Power, MW)



European Commission's Strategic Energy Technology Plan, Goals to be met by 2020



15%

of EU electricity will be generated by solar energy



20%

of EU electricity will be generated by wind energy



14%

of the EU energy mix will be sustainable bio-energy

Enough solar energy falls on the earth's surface in twenty minutes to meet our needs for a year.



Africa – EU Energy Partnership (AEEP)

- For cooperation on energy issues, particularly energy security and energy access
- For addressing rapidly changing geopolitical, economic and ecological reality with a shared vision and common approach
- For boosting Africa's efforts to increase investment in the energy sector and increase access to energy services



DESERTEC EUMENA

- 20% of power demand in Europe can be obtained by connecting African deserts to European cities
- Build a large number of concentrated solar power plants in MENA countries, and transmit electricity to Europe by means of direct-current cables
- Potential to generate renewable electricity for up to 15–16 hours per day

DESERTEC-EUMENA



Concentrating Solar Power



Hydro



Photovoltaics




Biomass



Wind



Geothermal

 **DESERTEC**
FOUNDATION

CSP collector areas for electricity



World 2005



EU-25 2005

MENA 2005



TRANS-CSP Mix EUMENA 2050





What can the EU do?

- Manufacture solar panels in the EU
 - More than 90% of Chinese production has been exported and 80% has gone to the EU
 - Invest in Greece, Spain and Poland
 - Raise import tariffs or block imports altogether
 - Impose tax incentives



Sources

- <http://www.greenoughsolarfarm.com.au/solar-energy/what-solar-energy>
- <http://one-europe.info/infographics/infographic-solar-power-in-europe>
- http://ec.europa.eu/development/center/repository/africa_ue_energy_partnership_fiche03_en.pdf
- <http://www.voxeu.org/article/rethinking-african-solar-power-europe>
- <http://www.prosun.org/en/about/fact-sheet.html>