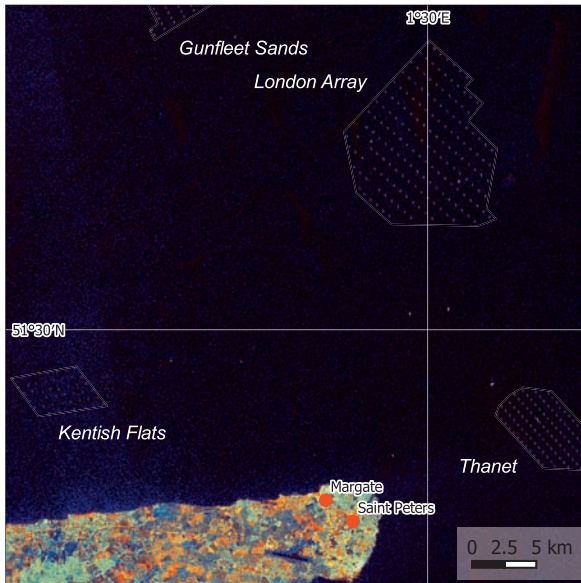




6. Radar image of windforms in the Thames estuary. Data: Sentinel-1, 2024-03-02.

### Harvesting wind energy over the sea

The Thames Estuary, located in southeastern England, has become a prominent site for the installation of offshore wind farms. These wind farms exploit the strong and consistent wind currents present in the estuary.

Their proximity to densely populated areas like London ensures efficient distribution of generated electricity, minimizing transmission losses. Secondly, the offshore location reduces visual and noise pollution compared to onshore wind farms. Offshore wind farms contribute to the renewable energy targets, helping to reduce carbon emissions and combat climate change. The development of wind farms in the Thames Estuary also poses challenges, including potential impacts on marine ecosystems and wildlife habitats.



9. The region south of the German city of Leipzig has seen intensive open pit lignite mining, which has shaped the landscape. Parts of the former mining areas have been recultivated and transformed into recreational zones. Sentinel-2, 2017-05-27.

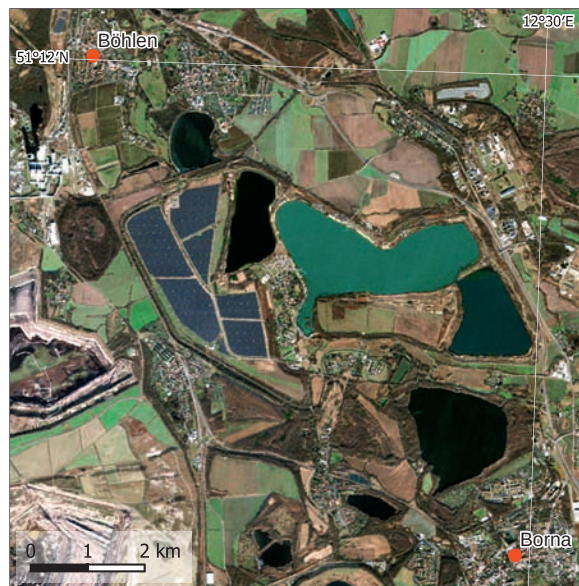


7. Overview satellite image of the Thames estuary with its offshore windfarms. Data: Sentinel-2, 2023-07-07.

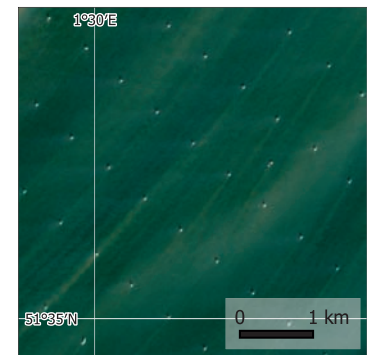
### From lignite mining to solar energy production

Situated in the German state of Saxony, the solar farm near Böhlen (Solarpark Böhlen) uses solar radiation to generate clean and sustainable electricity. As the largest of its kind in Germany, the solar power plant comprises photovoltaic (PV) panels that convert sunlight directly into electrical energy. The installation covers approximately 100 hectares of an abandoned open-pit lignite mine, hosting over 300,000 photovoltaic panels. With a total installed capacity exceeding 100 megawatts (MW), this facility is capable of generating enough clean electricity to power over 30,000 homes.

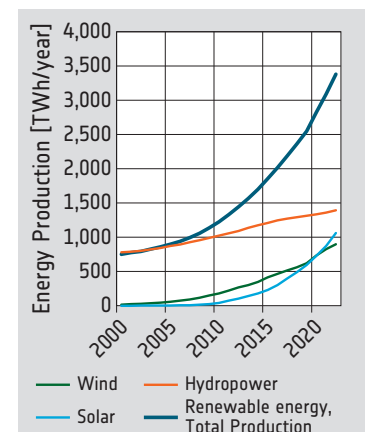
The installation of the solar power plant near Böhlen aligns with Germany's ambitious *Energiewende* (energy transition) goals, aiming to shift away from fossil fuels towards renewable sources.



10. A part of the area of a former lignite mine now hosts a solar power plant (Solarpark Böhlen), others parts are used as recreational areas. Data: Sentinel-2, 2024-01-28.



8. Detail of the Sentinel-2 image of the London Array windfarm. The tidal currents stir up sediments.



11. The global production of electric energy from renewable sources, especially from wind and solar energy, is growing quickly.