Marine renewable energies
Huge potentials as yet largely untapped

Reference points

Offshore wind turbine
Estimated potential in 2020:
France: 6 000 MW, i.e. 1 200 offshore wind turbines
United Kingdom: 32 000 MW, i.e. 6 400 offshore wind turbines
Wave power generation
France and the United Kingdom account for 80% of the resource potential in Europe.
Estimated potential: 5 to 8 GW in total in the two countries combined.

A few definitions

Ocean Thermal Energy (OTE): uses the temperature difference between surface water and deep water (warm seas).

Wave power: uses the power of ocean swell and waves (experimental stage).

Osmotic energy: uses the excess pressure generated by the displacement of a mass of fresh water into a mass of salt water (experimental stage).

Wave power generation

France and the United Kingdom account for 80% of the resource potential in Europe.
Estimated potential: 5 to 8 GW in total in the two countries combined.

Wave power potential in the English Channel

The English coastal waters along the Channel currently accommodate, or will accommodate in the years ahead, 13 offshore wind farms, four of which are already operating, one under construction and seven at the drawing board stage. Ultimately, expected generation should reach around 11 699 MW.

The situation is different on the French side of the Channel. After the initial call for proposals, the designation of four offshore wind farm installation zones should make it possible to generate around 2 250 MW. By 2020, France hopes to produce around 6 000 MW and the UK 32 000 MW. However, the installation of such infrastructures is not without local resistance, particularly in terms of social acceptability, and the projects are sometimes held up by seafarers and coastal residents alike.

The Channel's potential is such that it seems impossible to ignore in the near and longer term this energy windfall. The cohabitation of these new developments harmoniously alongside other longer-standing activities within a maritime space already under great pressure in terms of use, will remain a major challenge for decades to come.