

RENEWABLE ENERGIES

KEY INFO IN

10
POINTS



1

▶ #3 PRODUCER IN EUROPE

In 2015, France was the third largest producer of renewable energies in Europe, with 21.4 million tonnes of oil equivalent, preceded by Germany (38.8 million) and Italy (23.5 million), but ahead of Sweden (18.8 million) and Spain (16.8 million). (Eurostat)

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▶ 15% RENEWABLE ENERGY

Renewable energies make up 15% of overall energy consumption in France, with a goal to increase the share of renewables to 23% by 2020. These include wind power (onshore/offshore), marine energy, solar (photovoltaic, thermal and thermodynamic), biomass/firewood, geothermal and hydroelectricity. (French Renewable Energy Association SER, 2017)

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▶ A WEALTH OF RESOURCES

France has Europe's second largest wind potential and is ranked fifth for hours of sunshine; it also has the most hydropower generators and the fourth most extensive wooded areas. France has the world's second largest maritime exclusive economic zone, and has ample geothermal resources. Ile de France (Paris region) has more geothermal installations than any other region in Europe, with around 40 active geothermal doublets in the Dogger aquifer. (SER; French government figures DRIEE, 2016)

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▶ SOLAR-POWERED FRANCE

France is among the world's top 10 countries for solar power capacity (REN21, 2017). Focused on research, innovation and training, the INES is France's leading solar energy research center, and is one of the largest in Europe, with research teams from CEA and Université Savoie Mont Blanc.

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▶ FLOATING WIND TURBINES MADE IN FRANCE

Ideol has developed the Floatgen project with six partners. By the end of 2017, it will have installed a floating wind turbine generator off the coast of Le Croisic – the first offshore turbine to be installed off the French coast. Nenuphar has designed a wind turbine with two counter-rotating rotors; its vertical axis allows it to catch the wind naturally, from any direction. Other offshore wind power development projects are also underway.

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▶ MARINE ENERGY: MAJOR POTENTIAL

Supported by the France Energies Marines institute, the renewable marine energy sector offers excellent development potential. In the tidal power sector, the aim of the 'Normandie Hydro' project is to set up the seven tidal turbines developed by OpenHydro, a subsidiary of Naval Group (formerly DCNS), off the coast of Goury in 2018. Sabella D10, the first industrial grid-connected tidal turbine, will be installed off the isle of Ushant in early 2018.



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▶ EXPORTING FRENCH EXPERTISE

Ciel & Terre are specialists in floating solar power station design. The company generates all its revenues abroad, mainly through subsidiaries (Japan, United States) and joint ventures (China, Taiwan, Brazil, United Kingdom).

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▶ A SOLID ECOSYSTEM

The French renewable energy sector is led by committed stakeholders, such as the French Renewable Energy Association (SER), France Énergie Éolienne, the INES and the French Environment and Energy Management Agency ADEME, along with a large network of dynamic innovation clusters.

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▶ FRANCE ATTRACTS FOREIGN FIRMS

As a gateway to Africa, France attracts numerous foreign players in the renewable energy sector. These include GE (General Electric, United States), Enercon (Germany) and Boralex (Canada), who all specialize in wind turbine manufacturing.

10

▶ LOOKING AHEAD

In December 2017, two years after COP21, Paris will host another international climate summit, which will be a chance to assess progress and secure the funding needed to achieve the targets set out in the Paris Agreement. France's commitment to fighting climate change is well established.



For further information, please visit:
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#3 PRODUCER OF RENEWABLE ENERGIES IN EUROPE



(EUROSTAT)

-22.5 Mt

CO₂EQ FALL IN EMISSIONS
DUE TO RECYCLING



(FEDEREC ; ADEME, 2017)



15%

**OF RENEWABLE ENERGIES
IN OVERALL ENERGY CONSUMPTION
IN FRANCE**

(SER, 2016)



2nd

**LARGEST WIND ENERGY POTENTIAL
IN EUROPE**

(SER ; FRENCH GOVERNMENT FIGURES (DRIEE), 2016)