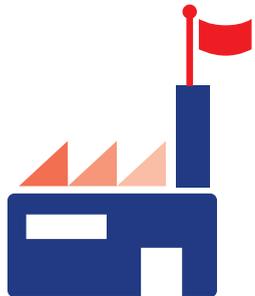


3RD
LARGEST
RENEWABLE ENERGY
PRODUCER IN EUROPE

(SCIMAGO)

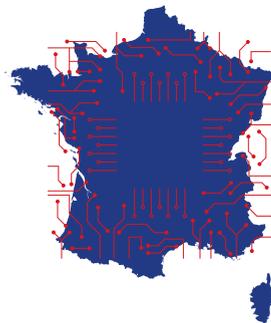
ACCESS TO A MARKET OF
67
MILLION CONSUMERS
AND A GATEWAY TO EMEA MARKETS

(INSEE)



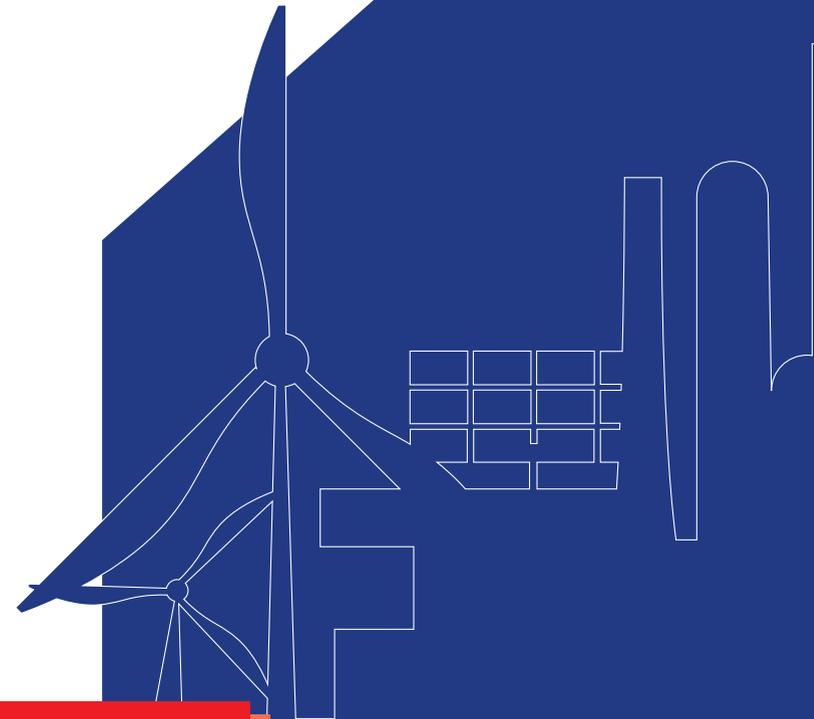
#1
HOST COUNTRY FOR
FOREIGN INVESTMENT
PROJECTS

(EY)



SMART GRIDS SECTOR:
€3 BILLION
IN REVENUES,
HALF OF WHICH IS IN
EXPORTS

(THINK SMARTGRIDS)



KEY INFO IN

10
POINTS

ENERGY
TRANSITION

HIGH-TECH INDUSTRIES

APRIL 2019

BUSINESS FRANCE

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1 #3 PRODUCER IN EUROPE

In 2017, France was Europe's third largest producer of renewable energies (25.9 million tonnes of oil equivalent), after Germany and Italy. More specifically, it is the leading producer of tidal energy, and the second largest producer of hydroelectric power, geothermal energy and ambient heat (Eurostat, 2019). Total electricity production amounted to 548.6 TWh, of which 20.3% came from renewable sources. (RTE, 2019)

2 ABUNDANT RESOURCES

France has Europe's second largest wind potential, fifth longest hours of sunshine and fourth most extensive woods, as well as the world's second largest maritime exclusive economic zone. Moreover, France has many geothermal resources; Ile de France (Paris region) is home to the highest density of geothermal doublets in the world, with around 50 sites. More than 47,000 people in France were employed in renewable energies in 2017, with revenues of €15.7 billion. (SER; DRIEE; ADEME, 2019)

3 SMART GRID INVESTMENT

The smartgrids sector is responsible for more than 15,000 direct jobs in France, with revenues of €3 billion, of which 50% is in exports (Think Smartgrids). Among the projects financed by investments for the future, there is Next (Auvergne-Rhône-Alpes region), specializing in network dimensioning optimization, Smart Occitania, which is experimenting with new distribution networks adapted to rural areas.

4 ACTIVE CLUSTERS

In 2018, the nine regional competitiveness clusters dedicated to the energy transition and digital sectors came together to form Smart Energy French Clusters. They have 2,000 members, including 1,300 SMEs, and account for €8 billion in investments. Similarly, the Think Smartgrids association seeks to unify the sector and promote its expertise internationally.

5 FOREIGN INVESTMENT IN FRANCE

In 2018, German company Knauf invested €110 million in a stone wool production facility in Illange (Grand Est region). Meanwhile, Japanese company Sumitomo is working with ENGIE and the Portuguese operator EDPR to develop offshore wind turbine projects in Normandy and Pays de la Loire.

6 EXPORTING FRENCH EXPERTISE

In September 2018, EDF Renewable Energy was awarded wind projects totaling 276 MW in the state of Bahia in Brazil. In early 2019, Engie announced the commercial start-up of a 100 MW thermodynamic solar power plant in Kathu, South Africa. The latter is equipped with parabolic tray technology and a molten salt storage system.

7 HOMES GOING DIGITAL

Parisian startup Deepki has developed software that develops energy efficiency plans based on its customers' data and enables them to save energy. In France, the smart grids sector is home to a range of talented companies. These include SMOME, which manufactures passive buildings with wooden frames; Smart Cast, which designs shutter panels; and Stiral, whose innovative heat exchangers limit the quantities of refrigerant liquids in heat pumps.

8 A GLOBAL FIRST

The first thermodynamic power station in France, with a capacity of 9 MW, was commissioned at the end of 2018 in the Occitanie region. This technological showcase of French expertise is based on Fresnel mirror technology, which follows the course of the sun and concentrates its rays. Importantly, it is equipped with nine tanks to store steam and extend the plant's operations four hours after sunset.

9 €20 BILLION FOR THE ECOLOGICAL TRANSITION

In 2017, the French government announced that it will be investing €57 billion between 2018 and 2022, with €20 billion to be spent on the ecological transition. The government aims to further reduce France's carbon footprint by introducing thermal renovation for buildings, developing more renewable energies, and creating a sustainable transport system.

10 WORLD'S #3 GREEN BOND ISSUER

'Green bonds' help companies and public entities finance their environmental projects. In 2017, France was the world's second country to start issuing sovereign green bonds, worth €7 billion. This amount has since been increased to €14.8 billion. In 2018, France was the world's third largest issuer of green bonds, with French bank Crédit Agricole-CIB ranked the leading global green bond arranger. (Climate Bonds)