



# FRANCE

France , officially the French Republic, is a country whose metropolitan territory is located in Western Europe and that also comprises various overseas islands and territories located in other continents. Metropolitan France extends from the Mediterranean Sea to the English Channel and the North Sea, and from the Rhine to the Atlantic Ocean.

France has been one of the world's foremost powers since the latter half of the 17th century. The name "France" comes from Latin Francia, which literally means "land of the Franks" or "Frankland". Among many possibilities of the derivation of the word, connection being that only the Franks, as the conquering class, had the status of freemen. In its journey from monarchy to democracy, France is enriched in culture, architecture, literature. In the 18th and 19th centuries, France built one of the largest colonial empires of the time, stretching across West Africa and Southeast Asia, prominently influencing the cultures and politics of the regions. France is one of the founding members of the European Union, and has the largest land area of all members. France is also a founding member of the United Nations.

This is the country where people live life to the fullest, where one can find mysterious smile of Mona Lisa in Louvre Museum, experience the magnitude of Eiffel Tower. France is the fashion house of many top end brands and gourmet food. And of course, this is the country which is the storehouse of exquisite wines in the world and designer perfumes.

## Geography

**Area:** 551,670 sq. km. (220,668 sq. mi.); largest west European Country

**Climate:** Temperate.

**Nationality:** French.

**Population (January 1, 2008 est.):** 63,753,000 (including overseas territories), 61,875,000 (metropolitan).

**Annual growth rate (2007 est.) :** 1.9%.

**Ethnic groups :** Celtic and Latin with Teutonic, Slavic, North African, Sub-Saharan African, Indochinese, and Basque minorities.

**Religion:** Roman Catholic 85% (est.), Muslim 10% (est.), Protestant 2%, Jewish 1%.

## Ambassador's Message



**HE Jérôme Bonnafont**

I am pleased that IEEMA devotes a special feature to France in this edition of their publication, focussing on the French electrical industry and Indo-French economic and commercial relations.

In recent years, trade relations between India and France have become stronger than ever before. There is indeed, considerable potential for bilateral trade, investment and services between our countries and France is eager to encourage cooperation with Indian companies, especially Small, Medium and Micro Enterprises. That is why both our countries decided in January 2008, during the State Visit of the President of the French Republic to India, to work towards achieving the ambitious target of 12 billion Euros in bilateral trade by 2012 as compared with 5 billion Euros in 2007. There are many areas for cooperation, but it would be interesting to stress on some areas that now have greater potential such as large-scale nuclear cooperation with India in the civilian sector, for the generation of power.

Power is a subject of enormous strategic importance for India, its economic growth and development. The two primary challenges facing India are access to electricity on a sustainable basis and also be part of the worldwide fight against climate change. France and India emphasized the importance of the effort aimed at moderating carbon intensity while maintaining economic growth. New and advanced technologies will allow improved energy efficiency in the T&D sector, in energy consumption, and will permit the generation of

cleaner electricity with lower carbon emissions. In order to meet these challenges, France and India have decided to create an Indo-French working group on the environment, dealing mainly with clean technology transfers. This working group comprising of representatives of the two States as well as those from civil society (companies, NGOs), will identify cooperation action for swift implementation, in areas: energy efficiency, energy-saving, renewable energy, civilian nuclear energy, etc.

In 1970s, France decided to develop an ambitious nuclear program, and today 78% of our electricity is produced through nuclear power plants which are free from carbon emissions. France supports the three key objectives that have been defined by the European Council in March 2007: reduction of GHG emissions by at least 20% by 2020 - or by 30% if international negotiations on a comprehensive global agreement for the period after 2012 should meet with success; increase in the proportion of renewable energy sources within the energy consumption of the European Union to 20% by 2020; improvement of energy efficiency by 20% by 2020.

French companies like Alstom for power generation, Areva T&D for Transmission & Distribution, Schneider Electric, Leroy Somer, Legrand, HPL-Socomec for energy efficiency and LV equipment are already bringing state-of-the-art and world-class technologies to India and they have significantly increased their presence in recent years. These successes should foster the cooperation between France and India.

I would like to congratulate IEEMA for playing an indispensable role in promoting the Indian electrical and electronics industry. I am convinced that with the Trade Commission of the Embassy, IEEMA will actively contribute to the reinforcement of the exchanges and investments in the field of energy between our two countries.

**Language:** French.

**Government:** Type: Republic.

**Economy GDP (2006):** \$2.252 trillion.

**Avg.annual growth rate 2007:** 1.8%, compared with 2.25% in 2006

Per capita GDP at PPP (2006): \$33,800.

**Agriculture Products:** grains (wheat, barley, corn);

wines and spirits; dairy products; sugar beets; oilseeds; meat and poultry; fruits and vegetables.

**Industry:** Types--aircraft, electronics, transportation, textiles, clothing, Food processing, chemicals, machinery, steel.

**Trade (est.) :** Exports (first 11 months of 2007)--\$503.3 billion (f.o.b.): automobiles, aircraft and

aircraft components, pharmaceuticals, automobile equipment, pharmaceuticals, automobile equipment, iron and steel products, refined petroleum products, cosmetics, organic chemicals, electronic components, wine and champagne.

**Imports (first 11 months of 2007)--\$551.2 billion (f.o.b.):** oil and natural gas, automobiles, aircraft and aircraft components, refined petroleum products, automobile equipment, pharmaceuticals, iron and steel products, and computers/computer-related products. Major trading partners--EU and U.S.

**Exchange rate:** U.S. \$1=0.7964 in 2006, and 0.7297 in 2007.

### Note on Economy

With a GDP of approximately \$2 trillion, France is the sixth-largest economy. It has substantial agricultural resources, a large industrial base, and a highly skilled work force. A dynamic services sector accounts for an increasingly large share of economic activity and is responsible for nearly all job creation in recent years. Real GDP increased 2.2% in 2006.

Government economic policy aims to promote investment and domestic growth in a stable fiscal and monetary environment. Creating jobs and reducing the high unemployment rate through recovery-supportive policy has been a top priority. The unemployment rate in metropolitan France slipped to 7.9% in the third quarter of 2007 from 8.1% in the second quarter of 2007 when the government took office, and from 8.9% in the third quarter of 2006. France joined 10 other European Union countries in adopting the euro as its currency in January 1999. Since then, monetary policy has been set by the European Central Bank in Frankfurt. On January 1, 2002, France, along with the other countries of the euro zone, dropped its national currency in favor of euro bills and coins.

Despite significant reform and privatization over the past 15 years, the government continues to control a large share of economic activity. Government spending, at 53.5% of GDP in 2006, is among the highest in the G-7. Regulation of labor and product markets is pervasive. The government continues to own shares in corporations in a range of sectors, including banking, energy production and distribution, automobiles, transportation, and telecommunications.



Legislation passed in 1998 shortened the legal work week from 39 to 35 hours for most employees effective January 1, 2000. Recent assessments of the impact of work week reduction on growth and jobs have generally concluded that the goal of job creation was not met. The former administration introduced increasing flexibility into the law. Under President Nicolas Sarkozy's impetus, overtime work is exempted from income taxes and payroll taxes as of October 1, 2007, a move to encourage work and to increase work time. The business community welcomed government efforts to change the 35-hour work week, but has complained that measures are difficult to implement.

France has been very successful in developing dynamic telecommunications, aerospace, and weapons sectors. With virtually no domestic oil production, France has relied heavily on the development of nuclear power, which now accounts for about 80% of the country's electricity production.

### Note on Trade

France is the second-largest trading nation in Western Europe (after Germany). France ran a record-setting \$48 billion deficit for the 12 months ending in November 2007. Total trade for 2006 amounted to \$1,010.7 billion, over 45% of GDP, 75.0% of which was with EU-24 countries.

### Indo-French Relations

#### (Economic and Commercial Ties)

Since 1991, economic and commercial linkages have assumed increasing importance in India's bilateral relations with France. Indo-French bilateral trade trebled between 1995 and 2005. Indian exports to France grew by about 147% over the same period.



The balance of trade has been in India 's favour since 1995, and for 2005 it was  $\text{₹}$  266 million. In 2006, total bilateral trade stood at US\$ 5.02 billion. This accounts for only 0.52 % of the global French trade.

French exports to India comprise mainly of aeronautical and space construction products, iron and steel products, electrical equipment and apparatus, measuring and process control equipment, organic chemical products, mechanical products, etc.

Indian exports to France consist of: A wide range of goods and services spread over a large base of Indian companies, especially from the small and medium sector. While traditional items such as garments and textiles constitute a major share of India's exports to France, a number of newly developed non-traditional items such as food products, organic chemicals, refined petroleum products, etc. are showing promising growth .

Foreign Direct Investment (FDI) : Approved from France from 1991 to March, 2006 is of the order of US\$ 1.76 billion out of which the actual inflow is of the order of US\$ 815 million. The number of technical and financial collaborations approved with France is 903. France is the ninth largest foreign investor in the period August 1991 to date. The sectors of key



French interest have been in fuel (Power and Oil refinery 16.89%), followed by chemicals (16.25%-other than fertilizers), cement and gypsum (14.37%), glass (10.08%) and food processing (6.98%).

## Trade & Investments

### (Indo French Relations)

The economic and commercial linkages are an important component of India 's bilateral relations with France. According to the French trade statistics, the India-France bilateral trade went up by around 194% between 1997 and 2006, with Indian exports to France growing by about 164% over the same period.

The statement provided below reflects the state of Indo-French trade over the last ten years:

Indo-French Trade (Figures in million Euros)				
Year	Indian exports to France	French exports to India	Total Trade	Balance of Trade for India
1997	942	764	1706	(+) 178
1998	1054	701	1755	(+) 353
1999	1112	901	2013	(+) 211
2000	1441	938	2379	(+) 503
2001	1497	1018	2515	(+) 477
2002	1471	1000	2471	(+) 471
2003	1484	1002	2486	(+) 480
2004	1684	1296	2980	(+) 388
2005	2109	1838	3947	(+) 271
2006	2493	2533	5026	(-) 40

From August, 1991 to March, 2007, Government has approved 27,426 foreign collaborations (technical and financial) proposals with a corresponding foreign direct investment of Rs 2,876.32 (US\$ 75.36) billion. Out of this the total number of approvals with France have been of the order of 915 (3.34% of the total approvals) with an equity participation of Rs 67.63 (US\$ 1.76) billion (2.35% of the total Investment), French companies rank 11<sup>th</sup> in the list of countries in terms of cumulative FDI approved from August 1991 to March 2007. Top sectors attracting FDI approvals (during August 1991 to March 2007) from France are Fuels (power & oil refinery) (17.14%), Chemicals (other then fertilizer) (16.07%), Cement and Gypsum Products (14.15%), Glass Industry (9.93%) and Food Processing Industry (6.87%).

The cumulative FDI inflows (net of ADRs/GDRs) during 1991-2007 (up to March) are US \$ 54.63



billion. France ranks 8 th with cumulative FDI inflows (net of ADRs/GDRs) at US \$ 0.90 billion (1.98%). Top sectors attracting FDI inflows (during January 2000 to March 2007) from France are Chemicals (other than fertilizers) (18.80%), Cement and Gypsum Products (15.82%), Services Sector (financial & non-financial) (9.41%), Fuels (power & oil refinery) (6.47%) & Electrical Equipments (including computer software & electronics) (5.34%).

India and France have a Bilateral Investment Protection Agreement (BIPA) since 2000 and Avoidance of Double Taxation since 1992.

An Indo-French Joint Committee for Economic and Technical Cooperation was set up in 1976 through an Agreement. Meetings are held at Ministerial level alternately in Delhi and Paris. Several Joint Working Groups at the officials level have been constituted under the Joint Committee through MOUs to deal with specific aspects of economic cooperation.

The 14 th Session of the Indo - French Joint Committee on Economic and Technical Cooperation was held on 31 st May, 2006 in Paris.

### Note on Electricity

#### Facts & Figures :-

Total Generation Capacity : 115.5 GW.

Nuclear Energy : 63.3 GW.

Thermal Energy : 25.4 GW

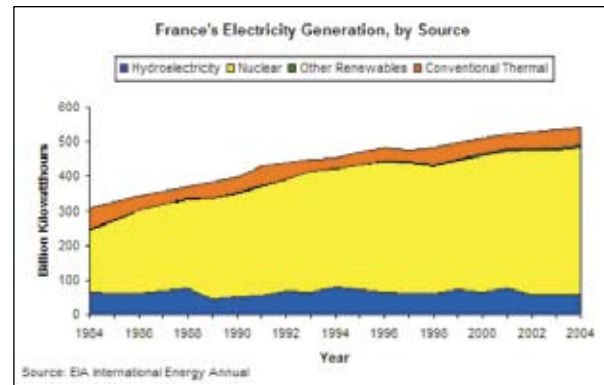
Hydro Energy : 25.3 GW

Wind Energy : 1.4 GW

France has the second-largest electricity sector in the EU, behind Germany. In 2004, France produced 540.6 billion kilowatthours (Bkwh) of electricity and consumed 440.6 Bkwh. The country depends

upon nuclear energy for 79 percent of its electricity generation. Electricite de France (EdF), owned by the French government, controls almost the entire market for electricity generation and distribution in the country. Gestionnaire du Reseau de Transport d'Electricite (RTE), a company nominally separate from but controlled by EdF, operates the national electricity grid.

France is the largest net exporter of electricity in the EU, sending 100 Bkwh to its neighbors in 2004. France's reliance on nuclear energy allows it to produce electricity at lower cost than other European countries.



### Sector Organization

As mentioned above, EdF has a monopoly on electricity generation and distribution in France. Facing criticism from the European Commission, France has begun to slowly privatize EdF and to open the electricity sector to other companies. Compagnie Nationale du Rhone (CNR) is the second-largest electricity utility in France, operating 19 hydroelectric plants on the Rhone River. Deruegulation has also allowed the entry of small distributors into the market.

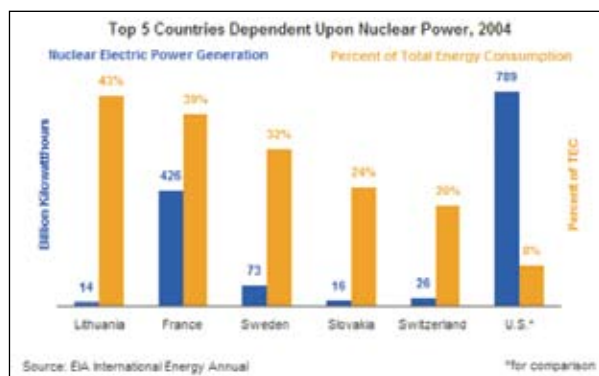


These distributors purchase wholesale electricity from EdF, then sell it to large industrial and commercial customers.

## Nuclear Power

France is the second-largest generator of nuclear energy, behind the United States. In the 1970s, the French government began promoting nuclear power to reduce its reliance on energy imports. In 2004, France's nuclear reactors generated 425.8 Bkwh of electricity, or 79 percent of the national total. This represents a dramatic change from 1973, when fossil fuels accounted for an estimated 65 percent of French gross power output. French nuclear power is efficient and low cost, and French electricity tariffs are therefore the lowest in Europe. Central planning is crucial to France's nuclear industry, as there are only a few different reactor designs and common industry methods, practices which contribute to nuclear's relatively low cost.

Government-owned Areva controls all aspects of the nuclear power sector in France, including the mining of nuclear fuels, construction and operation of reactors, and the disposal of nuclear waste and decommissioned plants.



## Future of Nuclear Power

France has plans to further expand its nuclear power industry. A report released by the French government in November 2003 called for a significant expansion of the industry, including the construction of a third-generation of nuclear reactors and the upgrading of existing plants.

France has partnered with Germany to develop the European Pressurized Reactor (EPR). The EPR is a third-generation reactor, designed to be safer, more efficient, and less susceptible to a terrorist attack. Each EPR reactor should produce around 1,600 megawatts (MW) of electricity, versus 900 MW

for most second-generation reactors. EdF announced in November 2004 that it would build the world's first EPR at a site near Flamaville; EdF plans to complete the project by 2012, at a cost of \$3.8 billion. In March 2007, France's nuclear safety agency approved plans for the facility.

France has taken a leading role in the development of the International Thermonuclear Experimental Reactor (ITER). ITER, a consortium of the European Union, the United States, Japan, Russia, China, and South Korea, seeks to build a working fusion reactor at a testing site in Cadarache, France by 2015.

## Nuclear power situation

	No. of Nuclear units connected to the grid	Nuclear electricity generation (net TWh)	Nuclear % of total electricity supply
France	59	428.7	78.1
OECD Europe	150	929.3	27.3
OECD TOTAL	346 (out of 437 worldwide)	2278.1	23.1

Source: Nuclear Energy Data 2007. The complete table for all OECD member countries is also available.

## Nuclear Power Plants: Status and operations

The share of nuclear power in French electricity supply has reached its technical and economic maximum, amounting to about 63 000 MWe. It consists of 59 units, 58 being pressurised water reactors (34 at 900 MWe, 20 at 1 300 MWe, and four in the 1 450's) that were constructed by the French manufacturer FRAMATOME, and the 230 MWe fast breeder reactor, Phoenix.

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