President Jacques Chirac announced plans to build a prototype fourth-generation nuclear reactor by 2020 as well as symbolic targets for cutting France's reliance on oil in the coming decades.

Chirac said that France, which is the world's second producer of atomic energy after the United States, needed to "stay ahead in nuclear energy".

In a New Year address to business leaders and unions, Chirac said he had "decided to immediately launch work by the French Atomic Energy Commission (CEA) on a prototype fourth-generation reactor, to go into service in 2020".

He said that France "will join forces with the industrial or international partners who wish to commit" to the project, aimed at developing safer, cleaner and less costly reactors to meet future energy needs.

Underscoring the need to adapt to climate change, Chirac also said that oil would be gradually phased out in favour of alternative fuels on the country's public transport networks.

National rail operator SNCF and the Paris metro company RATP "should not consume a drop of oil in 20 years' time," he said.

He also called for the use of biofuels to be multiplied by five within two years and for public transport operators to "set the example".

Chirac's speech came hard on the heels of a gas dispute between Russia and Ukraine, which briefly disrupted provision to Europe and left many countries questioning their reliance on Russian energy supplies.

In the field of nuclear energy, Chirac stressed that France was a key partner in ITER, an international experimental fusion reactor to be based in southern France, as well as in developing a third-generation EPR reactor.

"What is at stake (through the ITER project) is the ability to harness the energy of the sun by the end of the century," Chirac said.

But he said the seven-country International Thermonuclear Experimental Reactor (ITER) was an experimental, long-term project, and that France also needed to focus on meeting its medium-term energy needs.

"Until then, we need to take new initiatives," he said, by developing a fourth generation of reactors for use in the 2030s and 2040s.

Most reactors currently in service in the world are generally referred to as second-generation reactors.

The third-generation European Pressurized Water Reactor (EPR), being developed jointly by French nuclear group Areva and Germany's Siemens, is to replace the 58 reactors of France's 19 atomic power plants, starting in 2012.

France is one of 10 countries in the Generation IV International Forum, which was launched four years ago following a US initiative and is conducting research into several new models of nuclear reactor.

Business leaders in the French energy sector said they were mobilised to help develop the new reactors.

At Areva, which is the world's largest civilian nuclear-power group, chief executive Anne Lauvergeon said that Chirac's announcement "is absolutely in line with our own plans".

The chairman of the utilities group Suez, Gerard Mestrallet, said he was "glad to see France making the most of its assets".

"For Europe," he said, "nuclear energy is a response to the gas crisis", drawing a link with the Russia-Ukraine gas price dispute.

Pierre Gadonneix, the chairman of the energy giant Electricite de France, which generates a quarter of Europe's electricity, three quarters of it from nuclear power, also welcomed the news.

"France's nuclear programme has earned the respect and admiration of the United States and the entire world," he said.
Chirac also pledged to improve transparency through the creation of an independent nuclear safety agency and the adoption by parliament this year of a new law on the storage of radioactive waste.