

Russia to join international thermonuclear reactor project

The Tokamak was Russia's idea in the first place unfortunately it is still pure research.

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Russia's government decided to sign an agreement to join a multi-billion-euro international nuclear fusion reactor project, the cabinet press service said Friday.

The project to build an experimental fusion reactor – expected to produce clean and safe energy by 2016 for 20 years – in Caradache in southern France is worth at least \$12 billion.

The International Thermonuclear Experimental Reactor (ITER) project already involves the European Union, China, India, South Korea, the United States and Japan.

In a news release, the government's press service said that the project would be valuable experience for Russia.

"Russia's participation in the construction of the ITER reactor and then research will allow the country to obtain industrial technologies of generating thermonuclear fusion energy, gain unique experience in building and employing thermonuclear reactors, and train researchers and engineers for future thermonuclear plants," the news release said.

Russia will contribute to the project by producing and supplying technological equipment and investing about 10% of the reactor's cost, like all the other project participants.

The project is widely seen as both environmentally friendly and capable of producing unlimited amounts of electricity, which makes it highly significant in the conditions of growing energy consumption.

The idea of ITER began when the Soviet Union suggested that the four most advanced nuclear nations – the U.S.S.R., the U.S., Europe and Japan – create a "tokamak" reactor, a doughnut-shaped chamber to confine in a magnetic field incandescent plasma that no material can withstand. Thermonuclear fusion of hydrogen isotopes deuterium and tritium then proceeds in the plasma.