

China declares progress in fusion, says scientist

The next leader of the world cannot depend on ITER - it has to perform its own research.

Associated Press
June 3, 2006

Chinese scientists have completed construction of an experimental superconducting fusion reactor that will replicate the same energy generation process that fuels the sun, with tests to begin as early as July, state media reported yesterday. The Tokamak fusion device, built in Hefei, the capital of eastern China's Anhui province, is a smaller version of the International Thermonuclear Experimental Reactor to be built in France, which is not expected to be fully operational for a decade, the state-run newspaper China Daily reported.

Unlike conventional fission reactors, nuclear fusion produces no greenhouse gas emissions and only low levels of radioactive waste. Researchers hope it may eventually provide a cheaper, safer, cleaner and endless energy resource, reducing the world's dependence on fossil fuels and nuclear power.

China's reactor, known by the acronym EAST, for experimental advanced superconducting Tokamak, was built at the Institute of Plasma Physics, a research department of the Chinese Academy of Sciences, in Hefei.

Although about a dozen experimental Tokamak reactors are in operation worldwide, the technology is still under development. The newly built Chinese reactor is a further advancement on the design.

China has been eager to claim progress in the project, as well as other advanced technologies.

"Over the next 10 years, while ITER is being built, we can conduct preliminary research on EAST to facilitate the operation and exploitation of ITER in the future," the newspaper cited Minister of Science and Technology Xu Guanhua as saying.

A staffer at the Institute of Plasma Physics, contacted by phone, refused comment on the project. China is one of seven countries participating in the multinational project to build the US\$12.8 billion ITER in Cadarache, France. Construction is due to begin in 2007.

Xu said the reactor in Hefei would replicate the fusion power of the sun, forcing deuterium and tritium atoms together at a temperature of 100 million Celsius, with a fusion power of about 500 megawatts.

He said China would use its experience in the ITER program to nurture expertise for "more self reliant development."