

China to Expand Use of Nuclear Power by 40 new plants

The announcements from all over the world would double the number of existing plants

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China's reliance on nuclear energy is bound to grow, with new atomic power plants likely even in inland areas, industry experts said Tuesday, stressing Beijing's keenness to develop competitive technologies of its own.

Embarking on an aggressive expansion of nuclear power, China has announced plans to add 40 new nuclear generators by 2020, raising the share of electricity generated by atomic power to 6 percent of the total from the current 2 percent.

Part of Qinshan No. 2 Nuclear Power Plant, China's first self-designed and self-built national commercial nuclear power plant, is seen through a Chinese style decoration in Qinshan, about 125 kilometers (about 90 miles) southwest of Shanghai, China in this Friday, June 10, 2005. China has made ensuring stable energy supplies a top priority for economic planning, Ma Songde, vice minister of science and technology said Monday in an address to a conference on energy cooperation with the European Union. (AP Photo/Eugene Hoshiko, file) (Eugene Hoshiko - AP)

The aim is to reduce reliance on heavily polluting coal, which is used to generate two-thirds of China's electricity. Most of the nuclear facilities planned so far are expansions of existing facilities or new projects in eastern and southern coastal areas, where coal is relatively expensive.

But northern and inland provinces are also eager to develop nuclear power, Shen Wenquan, deputy chief of the science and technology committee of China National Nuclear Power Corp., told a conference in Shanghai.

"Nuclear power development is a must for China, especially in coastal areas," Shen said.

"In the hinterland, Sichuan has also proposed a project and we have rendered our full support to that," he added. "I think there will be a necessary transition of plants from the coasts to the inland areas of China."

Possible projects have been announced for Fujian, in the southeast, and Shandong, to the north of Shanghai. In the northeastern province of Liaoning, planners expect to build up to six nuclear generators, Shen said.

Work on an extension of the Qinshan nuclear power plant, near Shanghai, is due to begin next month, while construction of a new project at its Ling'ao nuclear plant, in southern China's Guangdong province, is scheduled to start by the end of this year, he said.

The country's newest nuclear power plant, Tianwan station north of Shanghai, started generating electricity in October and is due to begin commercial operations by the end of this year, with an eventual capacity of 60-70 billion kilowatt hours a year.

Meanwhile, the government has made development of new nuclear power technologies, including nuclear fusion, a key strategic priority, said experts speaking at the conference, which focused on European and Chinese energy cooperation.

So far, China has relied on imported technology for its nuclear plants. But the medium to long-term plan for 2015–2025 calls for development of China's own "third generation" nuclear power technology.

By 2020, China hopes to build a prototype fast-breeder reactor – a technology that produces plutonium that can be then used as fuel, reducing radioactive waste and alleviating dependence on imports of uranium.

Ultimately, though, China is placing its hopes in nuclear fusion, said Shen Rugang, vice president of China Guangdong Nuclear Power Co.

"Fusion will be the final way out for the future," Shen said.

Nuclear fusion, which replicates the sun's power source by colliding atoms at extremely high temperatures and pressure inside a reactor, is expected to one day generate endless, cheap energy without greenhouse gas emissions and with only low levels of radioactive waste.

China which is participating in joint fusion research with the U.S., European Union, Russia, South Korea, Japan and India, hopes to be one of the first users of fusion energy, said Li Jianjiang, an expert from the Institute of Plasma Physics at the Chinese Academy of Science.

"My dream is to witness within my lifetime a light bulb powered by fusion electricity," Li said.