

March 9, 2004

Choose Me, Japan and France Say as They Court Big Fusion Project

By NORIMITSU ONISHI

ROKKASHO, Japan — If the Japanese have their way, this village in northern Japan, an area known for its apples and sea cucumbers, will become home to a project that could give birth to the energy of the future.

The project, ITER, for International Thermonuclear Experimental Reactor, would try to emulate the sun's nuclear fusion to produce safe, clean and inexhaustible energy. The 30-year, \$12 billion research center would be the second largest international scientific project after the International Space Station.

Officials from six countries participating in the project are to meet in March to try to decide between Rokkasho and Cadarache, in southern France, even as talks have become increasingly tinged with politics.

After officials failed to decide between the two in a meeting in Washington in December, Spencer Abraham, the Bush administration's energy secretary, declared that the Japanese site was superior.

The statement angered the Europeans, leading the French prime minister, Jean-Pierre Raffarin, to threaten to withdraw from the project and go it alone if France was not selected. In the French news media, the dispute over the site is being viewed through the prism of the war in Iraq: American support for Japan's candidacy in return for Tokyo's backing in Iraq.

American and Japanese officials dismiss that view, but support for the two sites is split along the divisions over the war in Iraq: the United States, Japan and South Korea back Rokkasho.

Japan says the research center, which would be the first of its kind in Asia, would be a plus for the region. The Chinese are not impressed. They have nuclear power ambitions of their own, and they have expressed worries about a site in earthquake-prone Japan.

For decades, scientists have been researching nuclear fusion and predicting — repeatedly, skeptics point out — that it could become profitable in the next 30 years.

The ITER project stems from a 1985 research agreement between the United States and what was then the Soviet Union. Japan and Europe joined the project, followed by China and South Korea. The six participants would build the reactor over 10 years. It would then operate experimentally for 20 years, providing a basis for future reactors, which could begin generating commercial electricity around 2050.

"For the future of humankind, not only for Japan, securing a source of energy through scientific research should be an option," Toichi Sakata, a director-general in the Ministry of Education, Culture, Sports, Science and Technology, said in an interview in Tokyo. "How to use that option is something people 30 years from now, 100 years from now, will have to think about. But it's something we have to prepare for now."

Not everyone agrees. Masatoshi Koshihara, a Nobel Prize-winning physicist, has called on the Japanese government to drop its plans, warning of health and environmental hazards.

"Fusion has not been proven to be safe, and it is too costly," Dr. Koshihara said in an interview in Tokyo.

In nuclear fusion, atoms collide inside a reactor at extremely high temperature and pressure, releasing energy that can be harnessed to produce electricity. Unlike nuclear fission, the process now used in the nuclear industry, fusion reactors do not consume uranium or plutonium, but run on isotopes of hydrogen found in seawater.

The Japanese and French each say that they have done more advanced research in nuclear fusion, and that they have the better location for the international research program.

Cadarache, the French argue, is already the center for energy research in Europe. It is home to 3,500 researchers, including 400 specialists on fusion.

Japan argues that the Rokkasho site is next to a port, making it easy to deliver large parts for the reactor. Roads and bridges leading to Cadarache, about 60 miles from the nearest port, would have to be widened at great cost, they say. Rokkasho is already home to a uranium enrichment plant and a radioactive waste disposal center.

The surrounding province of Aomori is one of the most economically depressed in Japan, and officials there say the center would create 100,000 jobs over its 30-year lifespan. "This is a project that will completely transform Aomori," Shingo Mimura, the governor, said in an interview in Aomori City.

In Rokkasho, expectations were also high. In an interview, Mayor Kenji Furukawa said the village was already planning to open an international school and other facilities to accommodate the foreign researchers who would be based here. "We expect," he said, "that the project would also raise the cultural level of the village."