

SOUTH KOREA INVITES PARTNERS TO BUILD A FUSION DEMONSTRATION PLANT

Addressing the U.S. Department of Energy's Fusion Energy Sciences Advisory Committee meeting on March 7, Dr. G.S. Lee, the director and driving force of Korea's thermonuclear fusion program, invited international partners to join its project to design and build a plant that will demonstrate commercial-scale fusion energy production. Dr. Lee explained that even though the International Thermonuclear Experimental Reactor (ITER) will not be completed and running experiments until the end of the decade, during this decade of preparation of ITER start-up, the next step must be planned.

Korean law mandates that a series of fusion experiments culminate in an energy-producing technology. In 2036, Korea plans to have a demonstration reactor running, and has invited the ITER partners—the U.S., Europe, Russia, Japan, China, and India—to join a consortium to design and build it. To do it alone, Dr. Lee stated, "is impossible." It will require working with "people who are creative, diverse, and committed," he said.

Explaining the Korean fusion effort, Dr. Lee said their annual budget was \$300 million. He modestly described this effort as "not small," especially as compared to the GDPs of Korea and the U.S. American fusion scientists are looking at a FY12 budget request of around \$400 million, a decrease as compared to the FY10 budget, which is still in play as Congress has not passed a budget for this year.

The Korean fusion program does not just rely on government funding, however. Dr. Lee proudly pointed out that more than 100 Korean companies are participating, with the large ones spending their own money, to develop fusion as an energy technology. Many of these are the same companies that are the backbone of Korea's nuclear industry. Last year, Korea won its first tender to export nuclear power plants. It plans to be able to export fusion power plants, in the future.

--Marsha Freeman

An interview with Dr. Lee, "Fusion in Korea: Energy for the Next Generation," appears in the Winter 2009/2010 issue of *21st Century*.