vened late last year in France's Estates General (Senate). "The real ecological problem," he said, "is that there are more people living in extreme poverty in the world today (2.5 billion), than there were people in 1930 (2 billion). . . . To distract the attention of the public from this real problem, in excessively focusing their capacities for examination on hypothetical dangers . . . is a sure-fire deadly path. You are trading off hypothetical inconveniences for certain death. That is an aristocratic choice."

Parker also pointed out that there never could have been a crisis like the one in the Persian Gulf today, if the U.S. nuclear program had continued at the pace at which it began in the 1960s. European environmentalists who sincerely want a peaceful, protected planet should be out demonstrating with signs reading "Make Nuclear Energy, Not War."

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France is number one in nuclear

by Marjorie Mazel Hecht

Nuclear energy now provides France with 75% of its electricity, making the country number one among the world's nuclear nations. It is also number one in terms of its nuclear growth rate. During 1981, 1982, and early 1983, an average of six nuclear units were connected to the power grid per year—one every other month.

Although France is only about the size of Texas, its 55 nuclear plants, with a capacity of 53 gigawatts-electric, produced 306 terawatt-hours in 1989, second only to the United States (529 TWh) in terms of total nuclear terawatt-hours. (1 TWh equals 1 billion kilowatt-hours.)

As the world's leading nuclear nation, France is a special target of the anti-nuclear environmentalists, who over the last decade have crippled the West German nuclear program and shut down the Italian nuclear program. Their aim is to use terrorist attacks on nuclear plants to frighten the French population into believing that nuclear plants are not safe—and to frighten the nuclear industry into retreat at home and in the export market.

For the Greens, creating an anti-nuclear success in France is like capturing the crown jewel of the nuclear nations. Such a campaign, including terrorism, has taken on even more importance for the anti-nuclear groups since the Green Party in neighboring Germany suffered heavy electoral defeats, both East and West, Dec. 2.

How France took the lead

With no oil or gas resources, France embarked in 1973 on a crash program to go nuclear and gain energy independence. The success of this program means that France has the advantage of low-cost electricity generation and now *exports* 10% of its electricity to neighboring countries. France also exports nuclear technology. There are nine French-built nuclear plants abroad, and France has joined with the German firm Siemens/KWU to market nuclear technology internationally.

A high level of standardization is the key to the French success. The 18 plants that came on line in the early 1980s, for example, were identical and their major components were produced in assembly-line fashion by two companies: Framatome constructed the nuclear reactors and steam generators, while Alsthom-Atlantique built the conventional equipment. The regulatory process is also streamlined, so that once a particular standardized design is approved, subsequent reactors of the same design do not have to repeat the approval process.

The result is that France can construct a nuclear plant in just six years (and in some cases as little as 55 months), far less than half the time it takes the United States to put a nuclear plant on line.

France's Atomic Energy Commission (CEA), created by Charles de Gaulle in 1945, sought from the beginning to complete the nuclear fuel cycle, developing the nation's capability for isotope separation and uranium enrichment, fuel reprocessing, waste disposal, and of course breeding nuclear fuel in the fast breeder.

The French commercial-size Superphénix breeder highlights the difference between de Gaulle's program and that of the United States. The 1,200 megawatt Superphénix came on line in the mid-1980s and cost just over $1 billion. The United States pioneered in breeder reactor development, putting an experimental breeder on line in 1951. Lacking the sense of national purpose that President de Gaulle instilled in the French program in 1945, the United States spent four decades and more than $4 billion, but allowed the breeder program to be killed politically.

Because de Gaulle organized the French population from the top down to support the nuclear program as a national mission and the key to energy independence and fiscal soundness, the anti-nuclear movement was never able to gain a firm foothold in France. Even today, much of the movement is orchestrated from outside the country by anti-science, zero-growth groups familiar to Americans—the Natural Resources Defense Council, Friends of the Earth, Greenpeace, and the German Green Party.