

## The Glory of France

It's fitting that France was chosen last week as the site for an experimental nuclear fusion reactor being built by an international consortium. The French have been a glowing example (no pun intended) of the benefits of nuclear power for decades.

No country gets a larger share of its total electricity from nuclear power than France at 78%. Perhaps more amazing, France consumes less than 4% of the world's energy but produces about a sixth of its nuclear power. Because the groundwork for this nuclear proficiency was laid in decades past, France deserves to be at the center of the attempt to take the next big step forward, fusion.

The goal of the International Thermonuclear Experimental Reactor—a \$10 billion joint project by the European Union, U.S., Russia, China, Japan and South Korea—is to develop the first sustainable nuclear fusion process. The reactor will try to reproduce the reactions that occur in the sun, in which two hydrogen atoms are forced together to produce one helium atom and a tiny amount of energy. Replicated on a large enough scale, and harnessed properly, nuclear fusion could create vast amounts of energy with little waste by-product.

Unfortunately, none of this will happen in time to address the current global energy crunch. Optimistic estimates are that the first commercially viable fusion reactor is at least four decades away, assuming that the goal is attainable at all. For now, the buzz over the French reactor makes this as good a time as any to ask again why good old-fashioned nuclear fission remains a relatively small energy source for large energy users. The U.S. and Britain get only 20% of their electricity from nuclear plants.

Most puzzling is that much of the opposition to nuclear power comes from the left—which, in the U.S. at least, often takes its cue from France—and in particular environmentalists. How the greens can on the one hand rail about fossil fuels' contribution to "global warming" and on the other criticize nuclear reactors that don't emit carbon dioxide is a mystery.

Absent the political risks and excessive regulatory burdens typical of the U.S., the French have found nuclear power to be cheaper than coal. Per kilowatt-hour it is less than one-third the cost of gas and oil, according to figures compiled by Energy

Velocity and EUCG Inc. As the French have so aptly proven, nuclear power plants can be safe as well as productive.

China, taking a pragmatic approach at a time when its appetite for energy is driving up oil prices, is building two new nuclear plants. The country hopes to double the share of electricity supplied by nuclear power over the next two decades. That would still be only about 4%. But by 2060 China hopes to meet about one-third of its energy needs through nuclear power, an executive with China National Nuclear Corp. told an industry conference in Shanghai this weekend.

In the U.S., no new nuclear power plant has been built since the 1970s. But a Washington-based trade group, the Nuclear Energy Institute, expects that by the end of this decade at least one company will receive a new license to build and operate a nuclear plant, spokesman Mitch Singer says. In Germany, one of the many potential benefits of a Christian Democrat victory in September's snap elections (as the polls suggest) would be a promised reversal of the ruling Social Democrats' decision to close the country's 19 nuclear plants by 2021. Some 30% of Germany's energy is from nuclear power.

"Sudden climate change"—the current redefinition of the "global warming threat"—will come up at this week's G-8 summit in Scotland. Instead of browbeating President Bush for not signing the Kyoto Protocol, industrial nation leaders could do more for economic growth and the environment by vowing to follow France's example and remove the regulatory barriers to further investment in nuclear power. Unfortunately, President Jacques Chirac will be the leading champion of the costly and scientifically unsupportable Kyoto industrial emission rules, smug in the knowledge that France is already enjoying cheap and clean nuclear energy that doesn't emit greenhouse gases.

And we don't mean  
food or wine.