

# Fund ITER Now

## IT IS A NATIONAL SCANDAL HOW

America deals with energy research. Certainly not like a leader of the energy world.

You do not have to spend much time with Dan Arvizu, the director of the Department of Energy's National Renewable Energy Laboratory in Colorado before he starts simulating the ups and downs of a rollercoaster with his hands to convey levels of federal support for energy research since the 1970s.

A recent example is DOE's retreat on the FutureGen research effort meant to come up with the technologies that would convert our massive coal inventory into a source of pristine energy. DOE said it was shocked – shocked – by cost-overruns and had no choice but to cut the program.

Chances are you are not aware of another sorry example of collapsing federal support for needed energy research. I refer to ITER, which means "the way" in Latin. I recently travelled to the south of France to get my second briefing on the unprecedented international effort to develop fusion power. Fusion may be one of the most important energy sources for civilization by mid-century. Fusion reactors will be relatively easy to fuel and will throw off lots of energy by replicating the workings of the sun. Compared to today's nuclear power plants,

fusion reactors would create lesser amounts of waste that will be radioactive a significantly shorter period of time.

The United States is joined by Russia, China, India, Japan, South Korea and the European Union in the ITER effort that is expected to last three decades. The deal was signed in the Elysee Palace in Paris on a crisp November morning in 2006. It was hailed by then French President Jacques Chirac as "exceptional for its scientific ambition."

In the fields of Cadarache, about 40 miles northeast of Marseille, giant earthmovers recently prepared



View from the Cadarache, France countryside showing the ground being prepared for the ITER fusion project.

PHOTO BY MARTIN ROSENBERG

the ground. In nearby offices, scientists are designing and ordering components for the fusion reactor. They also worry about the project's political standing in the United States.

Congress last year authorized just \$10.6 million in funding for ITER for the current fiscal year. The U.S. obligation was \$160 million. The world superpower is \$150 million in "arrears," a DOE spokesman said. For the fiscal year starting in October, the United States is obligated to contribute \$214.5 million. All told, our country's share of the project's construction phase between 2008 and 2014 is \$1.12 billion in funding and in-kind contributions of components.

ExxonMobil last year posted the highest profits of any corporation ever – \$40.6 billion or \$1,287 a second. Surely the people of the United States – and their political

representatives in Washington – can dig deep and find the equivalent of the profits contributed to one large oil company in just 46.5 hours – less than two days – to fund our country's share of ITER in 2009.

Michael Loughlin, who works at ITER on nuclear shielding analysis and coordination, said that the unprecedented energy challenges ahead will require political leaders to lead. "We have to have the best scientists here," he said. "We need the best politicians as well to provide us with the resources to do our job."

The payoff of fusion will be clear. "When we get it to work it will change life on earth," Loughlin said.

It is time for Congress to meet our ITER obligations.

*Martin Rosenberg*

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