

Report From Germany by Rainer Apel

An Urgent Need for Engineers

If Germany were to commission even one nuclear power plant, it would have to hire foreign engineers to build it.

Twenty years of green anti-technology propaganda have ravaged the industrial base of Germany, wiping out the skilled engineering workforce that is vital to a modern economy. Will today's young adults, ages 18 to 25, reverse the no-future prospects handed to them by their parents' generation?

Radical ecologism has spread throughout Europe, but has taken its worst toll, it seems, in Germany. Natural sciences, mechanical engineering, and technological optimism have become "exotic" topics. The grandchildren of the green Baby Boomers and Tweeners still mostly believe that the only technology that is "in" are computers, MP3 players, and cellphones, whereas nuclear power and physics are "out."

The German association of engineers, VDI, recently had a shocking experience. Contacting 113 schools in the southern Hesse region for a contest, under the theme "I like technology," the VDI received positive responses from only seven schools. Only 30 students submitted their experiments or technical demonstrations to the competition.

Even those young Germans who revolt against the technophobia of their parents, may find themselves thinking twice about enrolling in science or engineering at the university, because many branches of industry, especially the nuclear power and chemical industry sectors, have been driven out of business in Germany by the green movement, leaving slim job prospects in these fields. Young Germans who want to become engineers

will find it difficult even to find a university at which to enroll. This past semester, for example, 436 youngsters applied to the technical University of Darmstadt, but only 80 were accepted, because of a lack of professors and funding.

Yet nationwide, the VDI points to an acute shortage of 18,000 engineers, of which 16,000 are machine-building engineers whom industry, mostly small and medium-sized *Mittelstand* firms, urgently require. The VDI is now thinking of launching campaigns at schools to get more youngsters interested in technology, and has begun sending around "science trucks" to stir up excitement. But the situation will not improve significantly without much more vigorous action than that, on a national level. The political elites are mostly Baby Boomers and Tweeners, with a background in the service sector and environmentalism. The fact that Chancellor Angela Merkel is a trained physicist, is an anomaly. Helga Zepp-LaRouche, national chairwoman of the LaRouche movement's BüSo party, has written an open letter, urging Merkel to bring her talents as a physicist to bear in transforming the economic and political landscape of Germany.

The worst devastation which the ecologists have caused, is in the nuclear power sector. Already in 1995, Prof. Kurt Kugeler, a close collaborator of Prof. Rudolf Schulten, the inventor of the high-temperature-reactor technology at the Nuclear Research Center in Jülich, warned that within ten years, radical ecologism would

force Germany to begin hiring nuclear engineers from abroad, just to keep its existing nuclear power plants going. That is where we are today: There is an acute deficit of 1,700 nuclear engineers required just to operate the 17 power plants that remain, until the scheduled final shutdown of Germany's nuclear power sector by the year 2021.

The exit from nuclear technology accelerated after Kugeler's warning, when the "red-green" government of the Social Democrats and the Greens took power in Germany in 1998. In 2000, that government and the power industry signed an agreement for the final exit from nuclear power technology after another 20 years. Accordingly, all government funding from 2000 on for nuclear physics in the universities was reassigned to the training of "experts" in the phasing-out of the technology! Had there not been some private industry funding at some universities, it would not have been possible for any young German to be trained as a nuclear engineer, an expert in the construction of power plants. There are some now, but 1,700 fewer than are needed, even for current needs.

But the world needs massive investment in high-technology infrastructure-building, including maglev, high-speed rail, and nuclear power. Were there any concrete plan in Germany to build just one new nuclear power plant, more than those 1,700 engineers would be needed. A leader at the German Physical Society once told this author that if Germany wanted to build just one new nuclear power plant, it would have to hire engineers from France or South Africa. There at least, in South African exile, the type of reactor designed by Germany's Professor Schulten has survived the ecologist witchhunt in Germany, and is thriving in the technology of the Pebble Bed Modular Reactor (PBMR).