

Taking politics out of nuclear energy

The controversy in the US over the issues surrounding the use of nuclear power has already resulted in a noticeable slowdown in the growth of nuclear energy in this country. Although we had originally planned that nuclear plants would be providing the nation with 25% of its energy needs by 1985, the latest figures indicate that less than 80% of that amount will actually be in service (see Atomic Industrial Forum's *Nuclear Power Facts and Figures 1976*). The two paramount concerns—adequate assurances of the safety of the various components of the nuclear fuel cycle (including waste disposal) and satisfactory safeguards against the misuse of plutonium—are certainly legitimate grounds for slowing down the full-scale commercial use of nuclear power. However, they are not legitimate reasons for slowing down R&D and demonstration programs for nuclear power. Unfortunately the politicization of nuclear-power issues in the recent election campaign is resulting in just such a cutback.

Thus out of the campaign rhetoric about proliferation has come a *de facto* three-year moratorium on efforts to demonstrate the commercial use of recycled plutonium fuel in present-day US reactors. Few seriously believe that plutonium fuel prepared for US reactors will find its way into wrong hands. In fact, when there is an opportunity to consider the proliferation problem in a more objective atmosphere, this problem may fade considerably in significance. Studies by John Lamarsh (Polytechnic Institute of New York) for the Library of Congress indicate that there are much easier, more direct ways to obtain clandestine nuclear weapons for a total cost of the order of \$50 million compared to \$500 million for a nuclear power plant.

Another casualty of the campaign may be a go-ahead on the construction of the liquid-metal fast-breeder reactor at Oak Ridge, a key demonstration plant in our fast-breeder program.

Such actions will only further delay the time when we will be able to gather the data we need to carry out a conclusive evaluation of the risk-benefit of nuclear power systems in the US. The result may well be that this goal will be accomplished first by another country, and the leading contender for this honor is France. With her back to the wall at this point energywise, France is firmly committed to build 40 nuclear plants of the same design over the next seven years that will provide at least 60% of French energy needs by 1985. This is about equal to the nuclear capacity now operating in the US.

The experience with this French nuclear grid

during the 1980's could well resolve the uncertainties that now stand in the way of large-scale use of nuclear energy on a worldwide basis.

We cannot be certain that this will happen, but we must keep US nuclear technology *au courant*, so that if and when acceptable solutions materialize we will (1) be in a position to accelerate US reactor construction to rescue our domestic energy situation and (2) compete in the world market as a supplier of nuclear power-plant equipment. In fact, it is a good bet that, regardless of what happens in the US, there will eventually be a substantial worldwide reliance on nuclear energy.

If we allow the development of US nuclear technology to lag behind, it will be France who becomes the leading supplier of a major nuclear power market at some future time rather than the US. The US (government and industry) has already invested billions in the development of nuclear technology and, in terms of the balance-of-payment problem alone, can ill afford to relinquish leadership in the world nuclear market. It is important that we not allow politics to interfere with our continuing efforts to learn more about nuclear-energy technology and to demonstrate our knowledge to the rest of the world.

Harold L. Davis