

Nuclear plants for export

Soviets mass produce power plants

Stopping in Moscow on the way to the Tokyo economic summit of Western leaders in June, West German Chancellor Helmut Schmidt and Italian Premier Giulio Andreotti were each briefed by the Premier of the Soviet Union on the nuclear energy programs of the U.S.S.R. and its allies. Mr. Kosygin took the opportunity to outline several dramatic energy cooperation offers that the Soviets have put forward to the West Europeans.

Just days earlier, the Soviet Minister of Energy and Electrification Neporozhnyi enthusiastically reported to a California audience on a Soviet first: a mass-production plant for nuclear reactors. He confidently predicted "no role" for solar energy in the Soviet economy. By the turn of the century, Neporozhnyi forecast, 30 percent of Soviet electric power will be generated by atomic reactors.

And in the July 4 *Washington Star*, President of the U.S.S.R. Academy of Sciences A.P. Aleksandrov—who would be right to suspect that his recent interviews about nuclear power in Moscow, Prague and Paris publications have gone unnoticed in the United States—said that the alternative to nuclear power development is war. "We must ... build nuclear power reactors in all parts of the world, otherwise wars will one day be fought over the remnants of oil and gas deposits. And there will be wars ... between the capitalist countries, because the Soviet Union will have concentrated on the production of nuclear power and be ahead of everybody else," predicted Aleksandrov, a nuclear physicist.

Referring to the deceleration of nuclear energy development in the United States, Aleksandrov offered a Soviet perception of American self-interest: "All people with common sense should realize that by the end of the century the United States will be compelled to create new great nuclear production facilities, possibly nuclear fusion plants, otherwise she will find herself desperately short of energy. There is no other way to preserve the modern way of scientific development."

Nuclear strategy

Aleksandrov's remarks and the renewed Soviet nuclear cooperation offers embody strategic realities of the utmost importance at a time when the politics of supposedly scarce resources is inextricably tied to the threat of war, stemming from conflicts in the developing sector and NATO/U.S. military intervention into Third World countries which is a stated policy option of the Carter administration.

These realities include:

- * that the most advanced scientific and political circles in the Soviet Union, exemplified by Central Committee member Aleksandrov, consider the development of nuclear power a route to erasing the causes of war;

- * that the Soviet perspective for nuclear development incorporates the Third World, unlike the military-weighted nuclear ideas of such forces as the Margaret Thatcher government in London;

- * That the U.S.S.R. is unshakably committed to atomic power development with or without Western input and collaboration;

- * that the procooperation forces in the Soviet Union take the current world preoccupation with energy questions as a cue to push through major East-West energy initiatives.

In this report, the outstanding Soviet proposals to Western Europe and the United States will be summarized and the accompanying articles will report on the Soviet bloc nuclear program that lies behind them.

Efficiency and new capacity

In his three-hour discussion with Chancellor Schmidt in Moscow, Kosygin reportedly said that he would like to see an pan-European energy conference, proposed several years ago by Soviet President Brezhnev, convened before the end of this year. The West German Chancellor also found the Soviets interested in attend-

ing an international conference on energy. The Soviets would come to such a conference with two types of proposals: one for creating new power capacity, and the other for increasing the efficiency of existing systems.

According to West Germany's *Der Spiegel* magazine, Kosygin revived a long-standing Soviet proposal to interface the electric power grids in Eastern and Western Europe with new links. This would make it possible for controllers to shift load across a wide geographical area, taking advantage of the varying peak usage periods in different time zones. Soviet specialists have estimated that power equivalent to the consumption of the nation of France could be economized without any increase in generating capacity.

From the moment such new links are installed, every megawatt of new capacity in the East or West would potentially benefit both part of Europe. Kosygin emphasized that potential in discussions with Premier Andreotti on the projected Italo-Soviet joint work on a nuclear power plant in Czechoslovakia, adding that with the input of still more Italian technology, Italy could receive power from two new plants in the Soviet Ukraine as well.

Energy and Electrification Minister Neporozhnii elaborated the electric power interface scheme in a June 27 press conference, suggesting the West Germany become a nexus for East-West energy flows. In particular, a 750 kilovolt line could run from the U.S.S.R. to the Federal Republic of Germany, passing through Poland and the German Democratic Republic. This line and a subsequent one to be put up from the U.S.S.R. across Scandinavia were also the center of attention at the June 11-15 Warsaw meeting of the Union of Electricity Producers and Distributors (Unipede), attended by power specialists from East and West.

The 750 kilovolt line, in fact, will be built regardless

of whether East-West energy integration advances. It will be run from the new 4,000 MW nuclear power station at Khmel'nitskii (one of the two Ukrainian installations Andreotti heard about) at least as far as Poland. Like most of the Soviet energy proposals, this one easily follows from the ambitious nuclear energy expansion effort under way in Eastern Europe.

Fusion

The picture of what Moscow energy planners would put on an international conference agenda would be incomplete without thermonuclear fusion power. Scientists like Aleksandrov and Academy Vice President E.P. Velikhov, author of the Soviet proposal for an international experimental "Tokamak" fusion reactor, insist that sights be set on industrial fusion power as the main goal of a successful nuclear program (including fast breeder technology and the fission-fusion hybrid along the way).

Aleksandrov told the French Communist Party newspaper *L'Humanite* on June 19 that "We can envisage in the next century, the construction of great (fusion) plants for industrial use. ... Fusion research is organized on the basis of an international program. These problems interest the whole of humanity and it would be absurd to do it in isolation."

Velikhov, whose Tokamak idea was presented to the United Nations by Foreign Minister Gromyko in 1978 as a centerpiece of the U.S.S.R.'s disarmament and development package, recently told Fusion Energy Foundation representatives in New York City that "cooperation should take place in the most advanced scientific fields. The importance of the proposal I made last year for building an international engineering Tokamak experiment is not just for fusion. It is for all mankind."

—Rachael Douglas