OTA Predicts Growing Soviet Energy Trade

Congressional study recommends that America drop its opposition to the Siberian pipeline, cooperate with Europe

While the Reagan Administration struggles to define its policy on high technology trade with the Soviet Union, the congressional Office of Technology Assessment (OTA) has taken a long look at the question and decided that the new policy, whatever it may be, will not have much impact on Soviet energy development.

The OTA found that the Soviet oil and gas industries are the only ones that rely to any significant degree on foreign imports. And the OTA concludes, in a 397-page report released on 17 November,* that the Soviets will continue to develop their oil and gas fields at a fairly steady pace, with Japanese and European assistance, regardless of what the United States does.

Although the OTA suggests that a coordinated trade boycott among all the industrialized nations might delay the development of large gas fields in Siberia, whose output is critical to Soviet economic plans for the 1980's, there is no evidence that such a boycott would succeed if attempted. The effort to cut off sales of high technology goods to the Soviets after the invasion of Afghanistan in 1979, the OTA claims, penalized chiefly American exporters. It did not discourage French, German, or Japanese companies, which actually increased their sales to the U.S.S.R. during 1980.

U.S. firms clearly have something like a monopoly control of a few specialized types of petroleum-related technology. But the OTA report concludes that these goods—such as high-capacity submersible pumps and computerized seismic data collection systems—are not essential to the Soviets' development plans. Soviet managers may adapt by using inferior substitutes or simply go without. The pace of development may slacken, but will not halt because of a U.S. boycott. The one item supplied by the West which is essential and unavailable from domestic Soviet factories—56-inch steel pipe—is not even manufactured in the United States. It is being made by steel forgers in West Germany, Japan, Italy, and France, in factories which would otherwise be starving for business.

Although the OTA makes no explicit recommendations for U.S. policy on energy trade, the one option described most favorably is called "the commercial perspective." Barring a breakdown in relations of the kind that would obviously occur after a Soviet invasion of Poland, the OTA says, a relaxation of trade restrictions seems to make the most sense. "Given the relatively limited opportunities for the United States alone to significantly influence Soviet energy availability in the present decade, and given the difficulty which would certainly arise in attempting to persuade America's allies to curtail their own energy relations with the U.S.S.R., U.S. policy makers might well chose not to expend political 'chips' . . . by making Soviet energy development an area of contention." It would be more profitable the OTA suggests, to concentrate America's suasive powers on a program to reduce the risks of European reliance on Soviet oil and gas.

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The United States could aid Europe in building stockpiles, opening new sources of supply, and installing dual burning capability in furnaces so that Europeans would be able to substitute oil for gas in the event of a supply cutoff.

The Reagan Administration has not yet formed a coherent position on the prickly issues involving Soviet trade. Although Administration spokesmen describe Soviet behavior in the harshest terms, the President himself decided in April to lift the embargo on sales of American grain to the U.S.S.R., imposed in 1980 after the Soviets invaded Afghanistan. In justification, Commerce Department officials say that the grain was available from other sources and that the embargo punished American farmers, not Soviet generals.

The President has upheld the Carter Administration's ban on sales of certain industrial items—particularly oil industry technology—imposed initially in July 1978 to protest the mistreatment of Soviet dissidents. At the same time the Commerce Department has been ordered to speed up the granting of export licenses to firms wishing to ship products to the U.S.S.R. As department officials explain it, petroleum hardware may be exported; technology may not. The distinction is not always clear, but the terms are meant to distinguish industrial goods from the machinery and expertise that would permit the Soviets to produce the goods themselves. The Commerce Department boasts that since January, the backlog in unprocessed export licenses has dropped from 2000 to 200.

The Administration is still divided on what should be done about oil and gas technology, which is of greatest interest to the Soviets. U.S.–Soviet trade in this area, if permitted, could grow significantly in the 1980's. At the moment, each proposed sale is reviewed individually. If the proposal does not amount to a transfer of technology, and if hardware of the same general description is available from other countries, a license is usually granted. The OTA notes that the Soviets have also been cautious about ordering goods from the United States, for, like Americans, they do not want to become overly dependent on a potentially hostile supplier. According to the OTA, the United States exported less than 10 percent of the \$3.4-billion worth of energy-related goods shipped to the U.S.S.R. in 1979.

Officials in several government departments say the President has on his desk an option paper on trade policy, the latest of several such documents drafted by the bureaucracy. In the words of one State Department aide, "We've given him papers before, but they always come back the same: none of the boxes are

*"Technology and Soviet Energy Availability," U.S. Congress, Office of Technology Assessment, project director Ronnie Goldberg.

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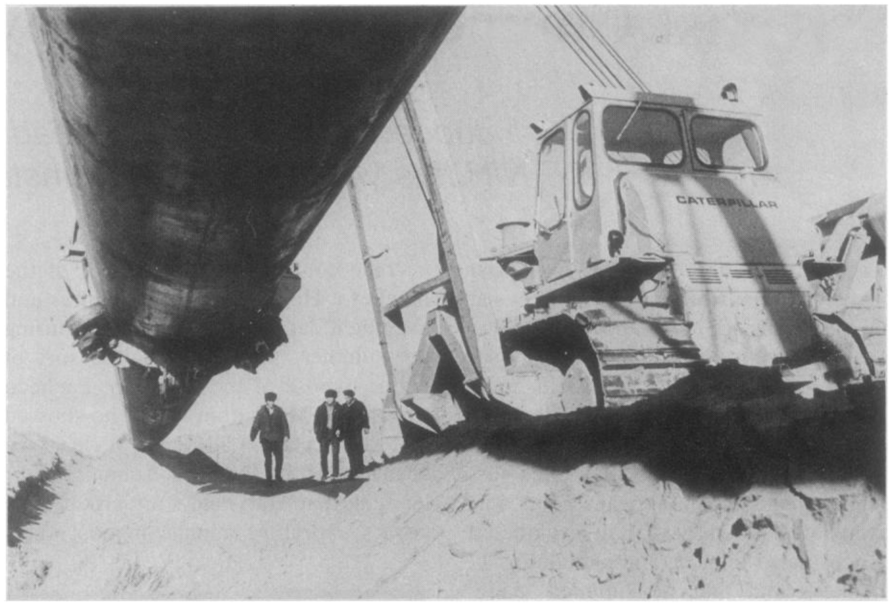
checked." Defense officials, led by Assistant Secretary Richard Perle, are pressing for a more restrictive policy while others in State are asking the Administration to permit U.S. firms to expand business with the Soviets. The President has not chosen sides, and aides cannot predict when he will. Under Secretary of Commerce Lionel Olmer told the Senate Foreign Relations Committee on 14 October that within 2 or 3 weeks the Administration would have some guidelines for export controls. No policy has been decided on yet, and a staff aide at the National Security Council says, "I've given up predicting when it will happen."

One of the Administration's greatest concerns, voiced by both Olmer and Perle, is that the Soviets will develop their energy resources rapidly and accumulate a large cash surplus from exports. This income, it is argued, could be used to purchase critical supplies from the West, compensating for the failures of the Soviet economy. One National Security Council (NSC) staff member argues that the more foreign income the Soviet Union has, the greater its freedom to indulge in global intrigue. He said, for example, that Soviet support for the Cuban economy depends in part on the amount of surplus foreign currency available. The NSC official added that the White House is undertaking a general review of the risks and benefits of engaging in economic war with the Soviet Union, and he hoped that a comprehensive policy would be announced "soon," meaning sometime before the spring.

After reviewing the most recent data on Soviet oil and gas, the OTA reached a couple of important conclusions. First, the Soviets will find it difficult to maintain oil production at a steady level during the late 1980's, but they probably will not find it as difficult as the American Central Intelligence Agency has predicted. The OTA report finds it unlikely that the Soviets will have to buy oil on the international market to make up for failures of domestic production. (That is what the CIA predicted in 1977 and reiterated in a slightly modified form this year.) In fact, the OTA found that the CIA's forecast for Soviet oil production was the lowest of nine credible estimates recently made by Western experts. The CIA may have leaned too heavily on the assumption that Soviet waterflooding techniques were destroying oil reservoirs.

The OTA concludes that although American technology has been and could continue to be very helpful to the Soviets, it is not essential. For example, the OTA reports that the Soviets have done quite well for 3 years without replacing some valuable American pumps purchased between 1974 and 1978 and considered to be without equal in efficiency and durability. The pumps were thought to have been responsible for increasing oil output by 1 million barrels a day. Because the United States refused to allow the manufacturer to train the Soviets in repairing the machinery, and because all the pumps would require repairs by now, the OTA assumes that they have been junked or duplicated domestically. In any case, no drop in oil production has been noticed. It is unlikely that the Soviet Union will encounter an oil supply crisis, the OTA concludes, but neither will the Soviets be able to increase production dramatically.



Tass from Sovfoto

The Shatlyk-Khiva pipeline, 1975

Japanese firms now compete with Caterpillar in offering pipelayers like these.

Second, the OTA believes that the Soviets will be able to increase natural gas output, perhaps boosting it by as much as 40 percent from 1980 to 1985. This will be possible only if other nations are willing to export the steel pipe, compressors, and flow-control equipment that Soviet factories cannot produce in sufficient quantities. While U.S. firms may control some of the more sophisticated varieties of oil technology, many nations can produce the less specialized equipment required to tap the huge and relatively unexploited Soviet gas fields. There is a large incentive, too. As the OTA says, the Soviet Union is the Saudi Arabia of natural gas, holding proved reserves equivalent to well over 200 billion barrels of oil.

Several western European nations have essentially agreed to finance the construction of new Soviet gas lines to Siberia in return for long-term gas supply contracts (*Science*, 27 November, p. 1004). Although the Reagan Administration is trying to stop the deal, OTA says it must be regarded as a *fait accompli*. The OTA report notes that if the project proceeds as planned, it will bring about a quantum leap in European-Soviet interdependence: "The value of the equipment needed for the pipeline is double the value of all the exports of the industrial West to the U.S.S.R. in the year 1979," the report says.

Europe may cut its dependence on OPEC but will increase dependence on the Soviet Union. Many observers estimate, for example, that West German use of Soviet gas will grow from 16 to around 30 percent, although some say the figure will rise to 40 percent by the end of the century. It is difficult to judge how this will affect overall energy reliance on the Soviet Union, for it is likely that Soviet oil exports will decline.

The central question, according to the OTA, is not whether the Soviet gas deal can be stopped. That appears unlikely, given the Europeans' interest in selling steel and finding non-OPEC energy suppliers. Furthermore, the OTA claims, there is no attractive substitute for Soviet gas in this decade. The important question is, "Whether the Western nations can act to limit the risks involved" in trading with the Soviets. It will be much easier to cooperate on reducing risks, the OTA says, if the United States realistically confronts the fact that European-Soviet energy trade will flourish in the 1980's.—ELIOT MARSHALL