National Intelligence Estimate

[redacted]

Soviet Energy Prospects Into the 1990s

Key Judgments

THIS ESTIMATE IS ISSUED BY THE DIRECTOR OF CENTRAL INTELLIGENCE.

THE NATIONAL FOREIGN INTELLIGENCE BOARD CONCURS.

The following intelligence organizations participated in the preparation of the Estimate:

The Central Intelligence Agency, the Defense Intelligence Agency, the National Security Agency, and the intelligence organizations of the Departments of State, the Treasury, and Energy.

Also Participating:

The Assistant Chief of Staff for Intelligence, Department of the Army

The Director of Naval Intelligence, Department of the Navy

The Assistant Chief of Staff, Intelligence, Department of the Air Force

KEY JUDGMENTS

Soviet energy developments are likely to affect US and Western interests in two principal ways. First, with the largest energy reserves in the world, the USSR in the long term has the potential to become a major source of energy, especially natural gas, for the West. This would mean a large boost to Moscow's hard currency earnings and a basis for expanded Soviet influence in Western Europe. Second, in the 1980s the rising cost of energy development is diverting investment resources that are badly needed elsewhere in the Soviet economy. This is making the choices among consumption, investment, and defense substantially more difficult. Soviet efforts to minimize these difficulties could result in energy production levels too low even to maintain the present level of total energy exports over the remainder of the decade while meeting domestic energy requirements.

The USSR is in transition from reliance on cheap energy to the use of expensive energy. Unlike the West, which has already completed much of its adjustment, however, the USSR will feel the major impact of this transition in the 1980s. Because of the inertia of Soviet planning and the overwhelming emphasis given to meeting production targets, the USSR has not yet made any significant progress in holding down the demand for energy through conservation. Energy consumption has grown faster than GNP, and is likely to grow at a rate close to that of GNP in the 1980s unless Moscow is willing to push energy conservation even at the expense of other economic objectives.

Consequently, Moscow must increase investment in energy production very rapidly if it is to meet domestic energy requirements and avoid a decline in hard currency earnings. In 1981-85, energy investments are increasing by about 60 percent over those of 1976-80, mainly because of a near doubling in oil investment and a two-thirds increase in investment in gas development and pipelines; in spite of rapidly rising investment, the rate of growth of energy output is declining. Energy is now taking over 20 percent of total investment, up sharply from about 15 percent in 1976-80. The resulting large claim on investment resources at a time when the growth of total investment has slowed is making it difficult for other sectors to get their new programs funded and has become a major factor depressing the growth of the Soviet economy. Investment in heavy industry is increasing slowly; efforts are being made to rebuild the transportation sector after decades of

neglect; agriculture is holding its own in investment allocations and, together with energy, is taking 40 percent of the total; investment in consumer-oriented sectors—housing, light industry, and services—is probably falling in absolute terms.

The investment burden will probably continue to mount during the second half of the decade unless the growth of energy consumption, especially of oil, can be slowed, thereby permitting domestic and export needs to be met with a slower growth of energy production. A continuing squeeze on investment in other economic sectors might jeopardize objectives for raising living standards or possibly even military production. Consequently, energy policy is likely to be a contentious issue in preparing the next five-year plan; specifically, political opposition to costly production-oriented energy policies is likely to build.

A Soviet policy shift involving increased reliance on energy conservation and interfuel substitution to assure adequate energy supplies, while reducing the investment burden, would involve risks of misjudging the volume of energy savings that the Soviet economic system could generate. In such an event, energy supplies would become insufficient to cover demand, resulting in worsening domestic energy shortages and a sharp decline in energy exports until policies were corrected.

We do not yet have any clear indications of Soviet policy concerning energy investment, production, and consumption during 1986-90. Some critical policy decisions probably have not yet been made. In this uncertain situation, judgments differ about which energy policy mix is likely to be adopted, and on how much difficulty the USSR is likely to experience in achieving an acceptable balance among its main energy objectives. Some analysts, including those in DIA, believe that Moscow will correctly assess both demand trends and the technical requirements for energy production, and consequently will produce as much oil as is necessary to meet domestic and export needs. They believe that, if progress in energy conservation and interfuel substitution proves to be slow and Moscow considers it necessary to maintain oil exports, the Soviets would keep oil production fairly constant. They realize that the burden of energy investment may continue to increase, but believe that the increase will not be large. Moreover, Moscow may believe that the economic benefits from incremental energy investments—especially the resulting hard currency sales—are such, on balance, as to enhance the overall productivity of the economy. Other analysts, including those in CIA/DDI, believe that rapidly rising investment costs and worsening operating conditions are likely to lead to a gradual fall in oil production after 1985. They also be-

lieve that the Soviet leadership will, as in the past, overestimate the possibilities for energy conservation and interfuel substitution. Consequently, shortfalls in oil supply could develop that would disrupt the domestic economy and squeeze exports. Because opportunities to reduce oil deliveries to Eastern Europe and to increase gas sales are limited in the 1980s, these analysts project a decline in hard currency earnings from energy exports if oil and gas prices are unchanged.

The cost of producing Soviet oil, historically low by world standards, is rising rapidly and is likely to continue to increase. Productivity of new wells in West Siberia is declining as exploitation shifts from the highly productive giant and supergiant fields, which have peaked or soon will peak, to smaller, less productive fields. Secondary and enhanced recovery methods are increasingly being applied to mature fields, especially in the older producing regions, in order to slow the declines in production rates.

The Soviets plan only a small increase in oil output through 1985 and, because of an intensive investment effort in West Siberia, they will probably reach the plan goal of 12.6 million barrels per day or come close to doing so. Oil reserves are sufficient to sustain production at this rate for the remainder of the decade. However, with the cost of oil extraction likely to continue increasing rapidly, with gas-for-oil substitution, especially in industry and electric power, offsetting rising oil demand in transportation and agriculture and possibly permitting oil consumption to level off in the latter part of the decade, and with gas exports rising rapidly, Moscow may accept a decline in oil production in the latter part of the decade.

Natural gas is, in the long term, the USSR's cheapest energy source. On completion of the current massive program to build five long-distance pipelines from the remote West Siberian gasfields to supply the consuming regions in the USSR and one to supply Eastern and Western Europe, the Soviets will be able to further expand gas production at moderate and fairly constant cost. By the late 1980s, gas production will probably approach that of oil (in terms of caloric value), unless limited by domestic and foreign demand.

Coal production is unlikely to increase appreciably until the USSR can develop or acquire technologies that would make the transportation of coal from areas east of the Urals or the long-distance transmission of electric power economically justified. Such technologies are unlikely to be available until the 1990s. Although the Soviet nuclear power program continues to lag far behind plan, about half of the likely increase in electric power production in the 1980s will come from nuclear plants.

Energy exports in the balance of the 1980s will be affected by a complex mix of factors that neither we nor the Soviet Government can predict with any confidence, including energy prices in the West. Moscow's main concern with respect to energy exports will be to earn the hard currency necessary to buy needed imports from the West while continuing to supply at least the minimum needs of its client states. Gas exports probably will rise by two-thirds while total oil exports will probably decline.

Eastern Europe may not be able to rely on supplies of Soviet oil to the extent it has in the past. The tight hard currency position of the European countries prevents them from turning to the world market for large added supplies of oil. There is a potential in Eastern Europe for energy conservation and for some further substitution of Soviet gas for oil in industry, but progress will be slow. A further cut in Soviet oil deliveries to the near-stagnant economies of Eastern Europe would intensify the need for austerity measures and aggravate the danger of popular unrest there. Because it holds the trump card of coercive power, however, Moscow is likely to impose further cuts on the supply of oil to Eastern Europe if oil supplies would otherwise be inadequate to meet priority objectives of the regime.

Moscow will continue to stress energy exports for hard currency to buy technology needed for industrial modernization and for special applications in energy exploitation and defense production, and to acquire the agricultural products necessary to offset domestic shortfalls. Although oil exports will probably decline, the USSR will place a high priority on maintaining them at a substantial level because of their importance and flexibility as a source of hard currency. Moscow will be in a position to offer the West European countries all the gas they are willing to buy in the 1990s and can undercut the prices of any Western supplier while still earning a large profit. If and when the Siberia–to–Western Europe gas pipeline is used to capacity, Soviet gas exports to the West will double their present level. If Moscow lands contracts to supply even half of the West European gas-demand gap now foreseen for the 1990s, an additional pipeline the size of the one now under construction would be required, and dependence on Soviet gas could approach 50 percent of gas consumption for major West European countries, far in excess of the 30-percent share that we and some West European governments regard as a critical threshold for political risk.

Additional large Western purchases of Soviet gas would give the Soviets large economic gains. Increased Soviet gas production for export could substitute for exported oil at perhaps one-third of the

investment cost. Alternatively, if oil exports were held constant, increased gas sales would add greatly to Soviet hard currency earnings. Each new gas pipeline of the size of the line to Western Europe now under construction potentially permits additional gas sales worth nearly $5 billion annually at present prices, or about one-fifth of total current Soviet hard currency earnings. Such added hard currency earnings would enable Moscow to raise substantially imports of Western goods and technology that the Soviet economy badly needs.

The cost and speed of Soviet energy development will depend partly on the level of imports of Western energy equipment and technology. Although Soviet dependence on imports of Western pipe and compressors for gas pipelines should decline, dependence on imports of Western oil equipment will increase as production shifts to deeper and more complex onshore and offshore deposits. Most of the needed equipment is available from non-US Western sources.

The high cost of Soviet energy development has possible implications not only for Soviet economic growth but also for military programs. Although the military will probably retain its premier position in the resource competition, it cannot be fully insulated from the consequences of economic problems. Even if there is little direct competition for resources between energy and military industries, the growing cost of assuring adequate energy supplies could indirectly be a factor slowing military expansion if it slows the development of the heavy industrial base on which future military growth depends.

[redacted]