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Decisionmaking for Soviet Oil Policy

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A Research Paper

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A Research Paper

This paper was prepared by
Office of Soviet Analysis. Comments and queries are welcome and may be directed to the Chief, Policy Analysis Division, SOVA,

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Key Judgments

Information available as of 3 April 1984 was used in this report.

Current Soviet oil policy reflects the leadership's awareness of the present near stagnation of oil production and the uncertain outlook over the balance of the decade. The policy has three basic, interrelated objectives:

- Maintaining energy self-sufficiency.
- Providing the major share of hard currency earnings through exports to the West.
- Meeting the demand for politically important exports to Eastern Europe.

The first objective is clearly most important and takes precedence in oil policy decisions.

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To meet these goals, the leadership has developed a long-term strategy that relies on increased efficiency, substitution of fuels, and conservation to maintain—if not to increase—supply and hold down demand. Specifically, the Soviets intend to:

- Acquire and assimilate new, more productive equipment for the oil industry and more energy-efficient equipment for the balance of the economy. Although they will continue to rely on imports to meet some needs, sanctions by the United States have convinced Moscow of the need to diversify its sources of supply and develop its own technological capabilities.

- Improve performance throughout the oil industry by introducing new planning indicators and procedures, using new forms of labor organization, and reorganizing the energy production bureaucracy.

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- Use traditional methods of exhortation to further their goals.

It will be very difficult, if not impossible, however, for Soviet leaders to supply simultaneously the oil needed to meet all three objectives. Rapidly rising investment costs and worsening operating conditions are likely to lead to a gradual fall in oil production. Moreover, as in the past, the Soviet leadership is likely to overestimate the possibilities for energy conservation and interfuel substitution, while domestic demand for oil continues to rise. Consequently, shortfalls in oil supply could develop that would disrupt the domestic economy and squeeze exports.

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Moscow's ability to meet its objectives will be constrained by the inherent weaknesses in its planning and decisionmaking system:

- The Politburo and the Secretariat have limited technical expertise in energy matters, and unbiased advice on energy issues is a scarce commodity. This situation was not helped by the death or retirement over the past several years of several of the members most experienced in energy matters.

- Institutional conflicts exist between the ministries and the State Planning Committee (Gosplan) over the setting of plan targets. Furthermore, responsibility for implementing oil policy at the ministry level is diffused among organizations that often have conflicting goals and frequently fail to coordinate their efforts, leading to waste and inefficiency.

- The system of central planning limits the willingness of the leadership to use prices, wages, and profits to encourage more efficient energy production and use, and to improve the structure of rewards and incentives that discourages innovation and encourages a predisposition to mortgage the future in pursuit of short-term benefits.

- The decisionmaking process funnels mundane decisions to the top, diverting senior policymakers from long-term planning and often obscuring emerging problems.

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Soviet options are further constrained by such factors as competing investment demands from key nonenergy sectors, the extent to which the East European countries could absorb further cuts in oil imports, the vagaries of the world oil market, and the USSR's own fluctuating hard currency requirements.

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Faced with these constraints, the creativity and flexibility of Soviet decisionmakers will be strained as they try to manage the probable gap between oil supply and demand. They could try to cope with this problem by:

- Further centralizing oil policy decisionmaking at both the regional and national levels.
- Making significant shifts in the structure of investment both within and outside the energy sector.

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- Adopting more authoritarian measures to reduce domestic demand.
- Risking the political and economic effects of further reducing oil exports to Eastern Europe.
- Postponing some nonenergy import plans. 25X1

How effective these measures would be depends both on the size of any shortfall between oil supply and demand, and on how early and accurately the leadership perceives the problem. The historical record suggests that the Soviets will be slow to recognize major problems that will hinder attainment of their oil policy objectives. This tardiness could force them to react in the future as they did in 1977, when a sharp, last-minute decision to change oil policy was made by the Politburo to sustain growth in West Siberian oil production. The ability of top-level leaders to rapidly mobilize and reallocate resources in response to major problems is an important strength of the Soviet decisionmaking system. This type of policy action cannot be frequently repeated, however, because of the disruptive consequences it carries for the rest of the economy. 25X1

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Preface

This paper builds upon an earlier study

It differs from the earlier work in its more narrow focus on oil policy and the less attention given to identification of alternative strategies and their supporters, but provides more detailed discussion on the effectiveness of the decisionmaking process. These differences reflect not only the different conceptual base for the present paper, but also the changes that have occurred in the Soviet oil and energy situation during the past five years. Among the most important factors have been:

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- The ability of the Soviets to bear the rapidly increasing costs required to maintain and even increase the output of oil in the face of tightened US sanctions on oil equipment.
- The death or retirement of several top leaders with considerable experience in energy matters as well as changes in the bureaucratic structure and system of planning indicators and incentives for oil.
- The appearance of an authoritative, long-term energy program.

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Decisionmaking for Soviet Oil Policy

Introduction

The success of Soviet oil policy and the degree to which oil policy decisions are smoothly integrated into the broader political and economic environment depend in part on the effectiveness of the decisionmaking process itself. The importance of effective decisionmaking has increased as the share of oil in the Soviet energy balance and in Soviet hard currency earnings has grown. It became critical, however, in the late 1970s as the leadership faced the prospect of a decline in oil production, coupled with rapidly rising production costs, during a period of slow economic growth.

This paper examines the relationship between the Soviet decisionmaking process and oil policy. It examines the bureaucratic structure and operation of decisionmaking for oil policy and identifies the underlying objectives of oil policy that influence Soviet decisionmaking. It then analyzes the impact of the decisionmaking process on the implementation of Soviet oil policy for the 1980s and reviews constraints on the decisionmaking system and the likely responses of the decisionmaking process to looming problems in Soviet oil policy.

The Decisionmaking Apparatus

Responsibility for the formulation, approval, and implementation of Soviet oil policy is distributed among a wide range of organizations and individuals within the party-state bureaucracy (see figure and tables 1 and 2).[1] They are tied together in the decisionmaking process by a complex network that passes information on policies and plans up and down a formal administrative hierarchy, supplemented by a set of personal and political relationships. These relationships include the interlocking directorate of party and government officials, as well as the ties of officials to their former organizations and regions. For example, Boris Shcherbina, who was the head of the Ministry of Construction of Oil and Gas Industry Enterprises *(Minneftegazstroy)* from 1973 until 1983, was party first secretary in Tyumen' Oblast—a major center of oil production—for 12 years prior to his appointment. In addition, many decisionmakers at the highest levels are supported and influenced by personal advisers and outside specialists who have their own vested institutional and career interests that tend to bias the information they provide.

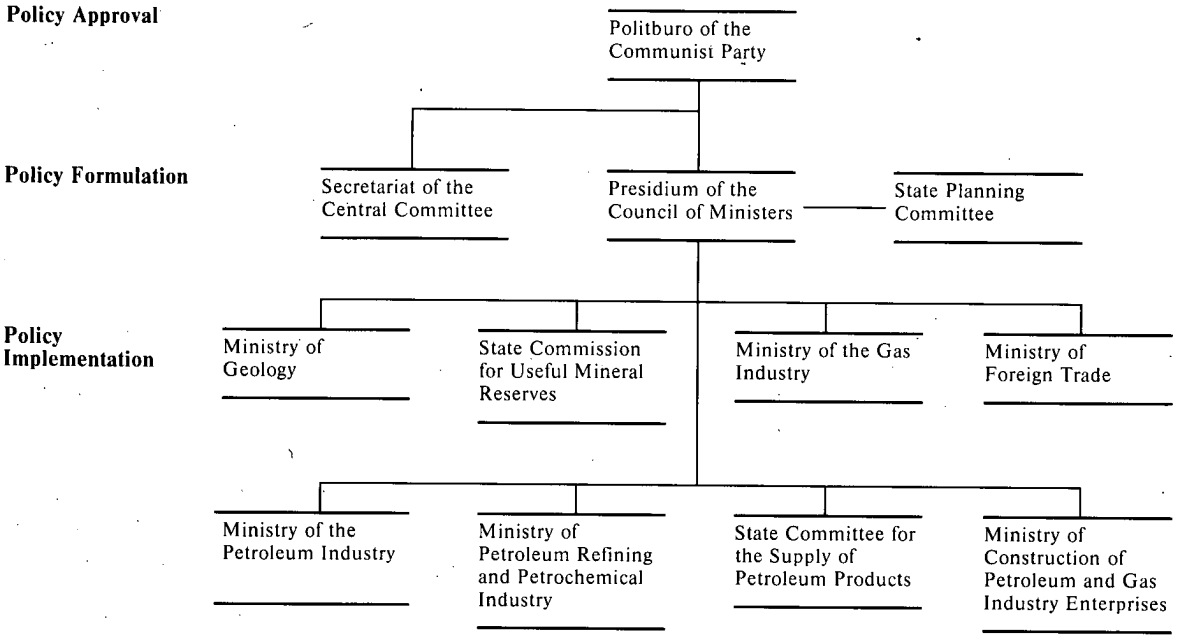
Policy Formulation

Although formal authority for the approval of oil policy rests with the Politburo, much of the formulation actually occurs in the Secretariat of the Central Committee, the Presidium of the Council of Ministers, and the State Planning Committee (Gosplan). These organizations monitor oil policy for the Politburo, providing it with a broad spectrum of information and serving as high-level forums for discussions and negotiations on alternate strategies. Like the Politburo, they have a national, integrative policy perspective. At this level, however, oil policy begins to take on a separate identity from energy policy as authoritative spokesmen for it appear.

The Council of Ministers and Gosplan, in particular, have ready access to a high degree of expertise on energy matters and are continually involved in the evaluation and adjustment of oil policy. Both organizations have advisory staffs, the Referentura of the Council of Ministers, and the State Experts' Commission of Gosplan, to which they can turn. In addition, each has access to an extensive network of research and design institutes, such as the Gosplan Institute of Complex Fuel-Energy Problems (VNIIKTEP) and the Oil Ministry's top institute, the All-Union Institute for Petroleum Production. Two other important

[1] Oil policy is defined broadly to encompass exploration, production, refining, distribution, and consumption of oil and oil products.

The Soviet Oil Policy Decisionmaking Hierarchy



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sources of information and advice are the State Committee for Science and Technology (GKNT) and the USSR Academy of Sciences.

The quality and objectivity of the advice received by top-level decisionmakers from all these sources is subject to much variation. For instance, the head of the Academy of Sciences, Anatoliy Aleksandrov, in his speeches and articles, has shown himself to be a staunch promoter of nuclear power and his advice on energy policy presumably reflects this propensity. In similar fashion, Guriy Marchuk, the head of the GKNT, has been a strong supporter of broad-based development in Siberia, and he is probably inclined to favor energy projects there over those in other regions. In addition, requests for information may frequently be contracted out, often to individuals working in institutes affiliated with interested ministries. The Referentura, in particular, apparently relies primarily on such outside consultants, whose views are probably colored by the interests of the organizations they serve.

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CPSU Secretariat. The Secretariat, supported particularly by the Heavy Industry and Power Department of the Central Committee headed by Vladimir Dolgikh, has responsibility for monitoring and coordinating oil policy for the party. Dolgikh's department used to be known as the Heavy Industry Department. The addition of the term "power" to the title, which was first noted in *Trud* in September 1983, probably reflects increased concern by top party leaders over the USSR's energy policy. Although specific policy options probably originate primarily in specialized government, scientific, and academic organizations,

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Table 1
Key Decisionmakers for Oil Policy Approval and Formulation

Level [a]	Name	Position
1	Konstantin Chernenko	General Secretary, CPSU
1	Nikolay Tikhonov	Politburo member; Chairman of the Council of Ministers
1	Geydar Aliyev	Politburo member; First Deputy Chairman of the Council of Ministers; former party boss of Azerbaijan
1	Mikhail Solomentsev	Candidate member Politburo; former Premier of Russian Republic
1-2	Vladimir Dolgikh	Candidate member Politburo; Party Secretary; head of Central Committee Heavy Industry and Power Department
1-2	Vitaliy Vorotnikov	Candidate member Politburo; Premier of Russian Republic
2	Veniamin Dymshits	Deputy Chairman of Council of Ministers; head of its Energy Commission and Interdepartmental Commission on Questions of Developing the West Siberian Oil and Gas Complex
2	Guriy Marchuk	Deputy Chairman of Council of Ministers; Chairman of the State Committee for Science and Technology; former head of Siberian Department of the Academy of Sciences
2	Nikolay Baybakov	Deputy Chairman Council of Ministers; Chairman State Planning Committee; former Oil Minister
2	Arkadiy Lalayants	Gosplan Deputy Chairman for Energy Affairs
2	Vladimir Filanovskiy-Zenkov	Chief of Gosplan Petroleum and Gas Industry Department

[a] 1 = approval; 2 = formulation.

the Secretariat has an important role to play in the decisionmaking process, because those options must be coordinated with the party apparatus before being presented for Politburo review.

the Secretariat also may become involved in resolving conflicts over resource allocation and plan fulfillment between Gosplan and the ministries.[2]

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Presidium of the Council of Ministers. Within the Presidium, an Energy Commission was set up no later than the mid-1970s to bring those members with a direct interest in energy problems into frequent consultation and to give direction to energy policy. The Commission probably is headed by Veniamin Dymshits, the Deputy Chairman of the Council of Ministers, who is primarily responsible for energy questions, and includes the ministers of the energy-production industries—oil, gas, coal, and electric power—and the energy-related machine-building and construction industries, as well as the chairmen of Gosplan and the GKNT.

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The Energy Commission likely serves as an arena for intensive negotiating over policy direction and allocation of resources and as the primary source of recommendations for energy policy for the Council of Ministers as a whole. In this process, its members are faced with the difficult and sometimes inherently contradictory task of balancing the vested interests of their own ministries against broader national political, economic, and social considerations.

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To supplement the efforts of the Energy Commission, an Interdepartmental Commission on Questions of Developing the West Siberian Oil and Gas Complex, also headed by Dymshits, was set up by the Council of Ministers in 1981 to deal more directly with the problems and needs of the USSR's principal energy-producing area. For example, according to the Soviet newspaper *Sotsialisticheskaya industriya*, in June 1983 it tasked several ministries to send representatives to West Siberia to oversee improvement in the construction of social infrastructure—schools, hospitals, housing—and reprimanded officials of the Ministry of Power and Electrification *(Minenergo)* for endangering the production goals of the Ministry of

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[2] Regional party organizations perform similar monitoring and oversight functions. For example, the Party First Secretary of Tyumen' Oblast, G. P. Bogomyakov, has been deeply involved in the development of the West Siberian oil and gas fields.

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Table 2
Ministry-Level Organizations With Primary Responsibility for Implementation of Oil Policy

Organization	Responsibility
Ministry of Geology	Locates new reserves to support future production.
Ministry of Petroleum Industry	Defines full extent of fields identified by the Ministry of Geology; proposes plans for field development including appropriate technology; and designs and maintains facilities and equipment for drilling extraction, initial processing, storage, and distribution of crude oil.
Ministry of Gas Industry	Responsible since 1978 for offshore exploration and production.
State Commission for Useful Mineral Reserves (GKZ)	Confirms reserve estimates of the Ministry of Geology and approves the field development and production plans of the Ministry of Petroleum Industry.
Ministry of Construction of Oil and Gas Industry Enterprises	Primary contractor for construction of oilfield facilities and infrastructure, installation of equipment during oilfield development, and laying of crude and product pipelines.
Ministry of Petroleum Refining and Petrochemical Industry	Responsible for primary and secondary processing of crude oil into various kinds of fuels, lubricants, and petrochemical feedstocks.
State Committee for the Supply of Petroleum Products	Plans and monitors the distribution, supply, and economical use of petroleum products.
Ministry of Foreign Trade	Negotiates and supervises annual, long-term, and spot market contracts for crude oil and petroleum products; arranges for the reexport of oil received as payment in kind; and is responsible for negotiations for the purchase of foreign technology and equipment, including turnkey plants.

Petroleum Industry (*Minnefteprom*) by failing to provide adequate and reliable supplies of electricity to the region. The effectiveness of such edicts beyond the short term, however, remains highly questionable, since they do not alter the long-term operational strategy of the ministries.

State Planning Committee. Gosplan, although formally subordinate to the Council of Ministers, exerts a powerful separate influence on the formulation of oil policy through its extensive involvement in setting plan targets and allocating resources. On the basis of guidance from higher authorities (the Politburo, Secretariat, and Presidium of the Council of Ministers), Gosplan establishes final plan targets through a process of negotiation with the responsible ministries. This process may require several iterations of Gosplan proposals and ministry counterproposals before agreement is reached, reflecting differing objectives. In the negotiation process, Gosplan attempts to set relatively higher production targets than the ministries, which try to establish relatively lower plan targets to ensure bonuses for plan overfulfillment. Overfulfillment of assigned targets has a direct effect on the size of bonuses received by ministry and enterprise managers. 25X1

disputes between Gosplan and a ministry are usually resolved in favor of the former. 25X1

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In 1981, Gosplan's role in oil policy was expanded with the formation of the Gosplan West Siberian Interdepartmental Commission, which parallels the Council of Ministers Commission created at the same time.[3] This commission is located in Tyumen', the first USSR Gosplan group to be located outside of Moscow. Its assigned function is to act as a local project manager for development of the critical oil and gas resources of the region by resolving conflicts and promoting cooperation across ministerial and regional boundaries. So far, however, 25X1

the Gosplan commission 25X1
has enjoyed only limited success. It must refer most issues back to Moscow for resolution and, thus, lacks 25X1
genuine authority to challenge the control of each ministry over its own activities in the region. 25X1

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Policy Approval: The Politburo

The Politburo, because of the breadth and complexity of its responsibilities for all national policy, considers oil policy most frequently within a larger context, such as energy or economic policy. Thus, the Politburo, at its weekly meeting on 8 April 1983, examined the draft of the new long-term Energy Program for the USSR in which oil policy figured prominently.

The tendency of the Soviet system to funnel decisions up the hierarchy, however, also requires the Politburo to spend time on more mundane, relatively minor aspects of oil policy. For example, only two weeks before the 8 April session, the Politburo reviewed the problem of improving the supply of fuel and lubricants for farm tractors. This practice is typical of the Soviet system and has the potential to overload, and thus weaken, the decisionmaking process. Moreover, the time required for one of these issues to make its way to the top of the hierarchy could cause an unnecessary, and perhaps even damaging, delay.

In actual practice, Politburo actions on both major and minor issues typically constitute largely pro forma ratification of policy decisions worked out at lower levels, rather than substantive intervention from the top. It probably is presented with a "position paper" that it can accept, reject, or remand for further work. The basic outline of the long-term energy program, for example, was apparently adopted in April 1983. The program was finally published in March 1984, 11 months after the Politburo approved it. In early August the program was not quite ready to go public, suggesting that it was remanded to Gosplan for further ironing out of contentious issues.

In some instances, however, for both economic and political reasons, the Politburo departs from this practice and intervenes directly to make changes in basic policy. For example, in late 1977 the Politburo ordered a sharp reallocation of investment resources to increase oil production in West Siberia when faced with an unexpected decline in the overall growth of oil production. Similarly, the quick response by the Soviets to shift enough resources to the Siberia–to–Western Europe natural gas pipeline to ensure its on-time completion following the expansion of US sanctions on 18 June 1982 almost certainly came directly at the initiative and direction of the Politburo. On 8 July 1982 *Pravda* reported that the CPSU Central Committee (CC) and the USSR Council of Ministers had given an official blessing to "patriotic initiatives" to overcome the effects of the embargo and that a "decision" had been taken on measures to ensure completion of the pipeline. This decision was made at least as much for political reasons as for economic ones—future export earnings—and in the face of at least some degree of disruption to the domestic economy.

In making its decisions on oil policy, the Politburo depends on those few members whose functional and regional responsibilities have required a considerable involvement in energy matters to take the lead in discussions. To its detriment, the Politburo has lost several of its most experienced members in energy policy issues the past few years with the death of former Chairman of the Council of Ministers Aleksey Kosygin in 1980 and the resignation of party secretary Andrey Kirilenko in 1982.[5]

Those current full members of the Politburo with the greatest responsibility for oil and energy policy include Nikolay Tikhonov, who replaced Kosygin in 1980 as Chairman of the Council of Ministers, and his first deputy chairman since November 1982, Geydar Aliyev. Aliyev was formerly the party boss of the Azerbaijan Republic, which has a long history of important activity in the oil industry.

[5] Brezhnev's death may also have been felt—he had begun taking a more active leadership role in oil and energy policy in the late 1970s. Although former General Secretary Andropov may have become involved in assessing requirements for energy-related foreign technology while head of the KGB, his knowledge of energy policy was probably limited largely to information obtained during Politburo discussions rather than from direct responsibility in the area.

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Three candidate Politburo members also have significant responsibilities or backgrounds in oil policy. Mikhail Solomentsev, who was appointed in June 1983 to head the party's Control Committee, was for 12 years the Premier of the Russian Republic (RSFSR), where the vast majority of the Soviet Union's oil reserves and most of its oil refining and petrochemical facilities are located. The newest candidate member, Vitaliy Vorotnikov, will also become involved in oil policy as the new Premier of the RSFSR. Vorotnikov's previous experience includes serving as the First Deputy Chairman of the republic's Council of Ministers, with responsibility for industry from 1975-79. Finally, Vladimir Dolgikh, who was elected a candidate member of the Politburo in May 1982, has been head of the CPSU Central Committee's Heavy Industry Department since at least 1976 and is often the senior party official present at meetings and conferences concerned with energy policy.

Newly elected Party General Secretary Konstantin Chernenko, who has spent his career largely in party administrative and propaganda activities, has never had direct responsibility for oil, energy, or even economic policy, although as a member of the Politburo he must have acquired familiarity with the issues. He is likely to rely heavily on Tikhonov, who nominated him for General Secretary and who is clearly a Brezhnev-era colleague, for advice on these matters.

Policy Implementation: The Ministry Level

Primary responsibility for implementing oil policy lies with several key ministries and other all-union bodies organized along functional lines. They are supported by and are dependent on various transportation, construction, supply, and machine-building ministries, most of which also serve many other clients. Although the general areas of responsibility are fairly well delineated, some overlap occurs. For instance, there has been a continuing problem defining who is responsible for exploratory drilling as well as balancing exploratory and development drilling, especially in West Siberia, between the Ministry of Geology and the Ministry of the Petroleum Industry *(Minnefteprom)*. Similarly, there is an inherent tension between the basic task of the Oil Ministry to maximize current production and that of the State Commission for Useful Mineral Reserves (GKZ), which is more concerned with maximizing long-term production even if short-term production is lessened. 25X1

Ministerial assessments and recommendations of technological and production capabilities, incorporating extensive practical and often proprietary knowledge, constitute significant inputs into the decisionmaking process. The policy perspective of the ministries, however, is typically narrow, meeting their own specific planned production goals, rather than attempting to improve energy resources across the board. This often leads to a lack of cooperation and coordination among them, despite their operational interdependence. The press is filled with examples of supplies, machinery, and equipment not delivered on time; supplies (including foreign equipment) lying unused and deteriorating in the harsh Siberian environment; poorly designed or constructed equipment breaking down; and chronic failure to provide adequate supporting infrastructure on time. Under these circumstances the failure of any one ministry to achieve plan targets or to fulfill contractual obligations echoes throughout the production and supply chain, forcing adjustments and encouraging the kinds of inefficiencies—stockpiling of resources, duplication of effort, and underestimation of plan targets—that are common throughout the Soviet economy. 25X1

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The Decisionmaking Process in Action

The Soviet decisionmaking process typically confirms, rather than alters, the basic direction of established policy. Considerable time is spent mechanically working through the sequence of annual planning cycles, during which the often conflicting parochial interests of the individual ministries must be balanced against the broader political and economic concerns of higher level policymaking bodies. In this environment, planning decisions tend to be cautious and incremental, and the achievement of short-term results that bolster

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political positions and enhance career opportunities often takes precedence over long-term planning. Much time is also spent at higher levels making decisions resolving organizational conflicts over resource allocation and areas of responsibility that could be made at lower levels. The decisionmaking process is hindered further by a system of planning indicators and rewards that penalize innovative behavior and risk taking especially at the ministry and plant levels. These characteristics reduce the ability of decisionmakers to "see the big picture" and to identify potentially serious problems and deal with them before they reach a crisis stage. This weakness was particularly evident in the evolution of Soviet oil policy in the 1970s.

Debate Over Oil Policy [6]

In the late 1950s, the USSR began rapidly increasing the share of oil and gas in energy production and consumption, while the share of coal declined (see table 3). Soviet enthusiasm for this strategy was spurred by the discovery of the Volga-Urals fields during this period, and it received a further boost in the late 1960s by the discovery of vast oil and gas deposits in West Siberia. By the end of this latter period, however, at least some Soviet scientists and officials were warning in articles that oil was not an inexhaustible resource. They stressed the need to reduce the use of petroleum as fuel for boilers, reserving its use instead to more highly refined and valuable products such as gasoline, aviation fuel, lubricants, and petrochemical feedstocks.

During the early 1970s, this concern led to an open debate, carried on at the highest levels, over the proper relationship of oil and other energy resources in the Soviet energy balance. The major issues concerned the size and availability of oil reserves, the best use for oil and gas—whether as fuel or chemical feedstocks—the speed with which nuclear power could be brought on line, and the best way to utilize Siberian coal resources.

Table 3
The Changing Soviet Fuel Balance

Share tons of standard fuel produced (percentage)

	Oil	Gas	Coal	Other [a]
1955	21.1	2.4	64.8	11.7
1960	30.5	7.9	53.9	7.7
1965	35.8	15.5	42.7	6.0
1970	41.1	19.1	35.4	4.4
1975	44.7	21.8	30.0	3.5
1980 (plan)	43.1	30.9	26.0	0
1980 (actual)	45.5	27.1	25.2	2.2
1981	44.9	28.4	24.3	2.2
1982	44.0	29.7	24.1	2.2

[a] Includes peat, shale, and firewood.

Source: *Narodnoe khozyaistvo, 1982,* Moscow, 1983, p. 181, except plan for 1980, which is derived from A. M. Nekrasov and M. G. Pervukhin, eds., *Energetika SSSR, v 1976-1980 godakh,* Moscow, 1977, p. 149.

As a result of this debate, the leadership decided in the mid-1970s to alter its energy policy. The new policy called for beginning a long-term shift to greater reliance on coal, hydroelectric power, and nuclear power while increasingly reserving both oil and natural gas for nonfuel uses. It also emphasized energy conservation as an important part of energy policy. This decision followed the approach advocated by former Premier Kosygin, with strong support from the then head of the GKNT, Vladimir Kirillin, and the President of the USSR Academy of Sciences, Anatoliy Aleksandrov. The new strategy was clearly manifested in the 1976-80 Five-Year Plan (FYP).

The proposed shift in energy balance, however, proved too ambitious. By the end of 1977, the Soviets' own data clearly showed that the planned targets for coal and oil would not be met, and the program for nuclear

power continued to lag far behind schedule.[7] The absolute increase in oil production in 1977, which was obtained primarily because the increase in production from West Siberia exceeded the amount of production lost from older producing regions, was the smallest since 1972; the corresponding relative increase of 5 percent was the smallest in three decades (see table 4). Soviet concern over this problem was openly manifested by a reduction in the publication of oil production data on the older regions and by conflicting data from several sources on West Siberian production. In December 1977, moreover, the Soviets, having failed to meet their 1977 oil production target by at least 4 million metric tons (mmt), reduced the 1978 goal by 5 mmt. This action was only a prelude of things to come. Following the dramatic slowdown in the absolute growth of oil production that took place in 1979, the Soviets lowered the target for oil production for 1980 by 24 mmt, from 630 to 606 mmt.

The decisionmaking process, with its tradition of setting overly optimistic plan targets and its focus on current plan fulfillment, had failed to alert the leadership to the severity of impending problems. Soviet planners, accustomed to large and relatively inexpensive increases in oil production, and not anticipating the sharp slowdown in economic growth that accompanied the planned reduction in investment, apparently greatly miscalculated the rate at which the change in the energy balance could take place.

Changing Oil Policy

Because of the failure to achieve the planned compositional change in energy supply, the Politburo was forced to depart from the normal incremental decisionmaking process and quickly reassess and alter its energy policy only two years after it had been announced. Brezhnev outlined the new policy at a December 1977 Central Committee Plenum.[8] Although the long-term goals remained the same, he indicated that achieving them would have to be

Table 4 *Million tons*
USSR: Oil Production [a]

	USSR		West Siberia		Other Areas	
	Total	Annual Increment	Total	Annual Increment	Total	Annual Increment
1970	353.0	24.6	31.4	10.1	321.6	14.5
1971	377.1	24.1	44.8	13.4	332.3	10.7
1972	400.4	23.3	62.7	17.9	337.7	5.4
1973	429.0	28.6	87.7	25.0	341.3	3.6
1974	458.9	29.9	116.4	28.7	342.5	1.2
1975	490.8	31.9	147.8	31.4	343.0	0.5
1976	519.7	28.9	181.7	33.9	338.0	−5.0
1977	545.8	26.1	218.3	36.6	327.5	−10.5
1978	571.5	25.7	254.4	36.1	317.1	−10.4
1979	585.6	14.1	283.0	28.6	302.6	−14.5
1980	603.2	17.6	312.6	29.6	290.6	−12.0
1981	608.8	5.6	334.3	21.7	274.5	−16.1
1982	612.6	3.8	352.9	18.6	259.7	−14.8
1983 [b]	616.3	3.7	369 [c]	16 [c]	247 [c]	−13 [c]
1984 plan	624	7.7	390	21	234	−13
1985 plan	630	6.0	399	9	231	−3

[a] Including gas condensate.
[b] Preliminary.
[c] Estimate. The 1983 plan for West Siberian output was 372 million tons. In his speech to the Supreme Soviet on 28 December 1983, Gosplan Chairman Baybakov stated that "oil workers of West Siberia reached in the current year a milestone of daily output of 1 million tons." *(Pravda,* 29 December 1983, p. 4.) In *Sovetskaya rossiya* of 23 December 1983, however, correspondent N. Batalov reported: "Yes, the oil workers were able to reach the 'million' milestone, but for now they did not succeed in holding the record level of daily output stable." *Pravda* reported on 19 January 1984 that "for the first time the oil output plan" in the Tyumen' area "was not fulfilled."

reviews of the Soviet energy situation during the latter part of the 1970s are contained in Leslie Dienes and Theodore Shabad, *The Soviet Energy System: Resource Use and Policies*, New York, John Wiley & Sons, 1979; the relevant chapters by Dienes and Arthur A. Meyerhoff in Robert G. Jensen, Theodore Shabad, and Arthur W. Wright, *Soviet Natural Resources in the World Economy*, Chicago: University of Chicago Press, 1983; and *Technology and Soviet Energy Availability*, Congress of the United States, Office of Technology Assessment, 1981.

[8] The actual text of Brezhnev's speech was never published. *Pravda* published only a report of the speech.

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delayed. The Politburo decided to return for the next 10 years to its previous strategy of depending heavily on the production of oil, which would increase slowly, and of natural gas, which would grow rapidly, for meeting energy needs.

The key element in this policy was West Siberia. The planned increase in total oil production could be achieved only if the increase in production from West Siberia more than offset the amount of production lost from older producing areas. The Politburo recognized that the investment planned for that region was insufficient to meet production targets and ordered a reallocation of investment resources to West Siberia. Drilling brigades from other areas soon began to arrive in West Siberia, and in May 1978 a campaign was unleashed with great fanfare assigning high priority for Tyumen' deliveries from plants all over the USSR. However, as was apparent from criticisms levied in June 1978 at a roundtable meeting of officials and planners on West Siberian development, there was concern that the amount reallocated was not adequate to support critically needed exploration, as well as development drilling and construction of infrastructure. In addition, there was controversy over whether to concentrate on the development of a larger number of smaller fields with all of the logistic problems that entailed, or to attempt to meet the increased production needs by increasing drilling and extraction above planned levels at the older, known West Siberian fields, notably the supergiant Samotlor. In typical Soviet fashion, the second alternative was chosen, which guaranteed the necessary rapid increase in production at a relatively lower cost, but only at the price of reducing the long-run total recoverable yield and producing a steeper rate of decline.

The decision to shift investment to West Siberia, coming in the middle of a five-year plan that also was witnessing a significant slowing of growth in the economy and in investment, meant that the availability of resources to other sectors and regions of the economy would be constrained. Within the energy sector, it probably contributed to the virtual leveling off of coal production in 1978 and the downturn that began a year later. More broadly, the shift in resources to West Siberia contributed to the further slowdown in the growth of GNP that has characterized the Soviet economy since the late 1970s. 25X1

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The decision demonstrated an important strength of the Soviet decisionmaking system. Because final authority is concentrated exclusively in the Politburo, it has the ability to rapidly mobilize and shift resources in response to pressing problems that require reevaluation and redirection of policy. 25X1

This approach, however, also has important weaknesses. In this "crisis" decisionmaking mode, the leadership does not have the luxury of weighing both the long- and short-term costs and benefits of such sharp changes in policy. Thus, decisions made in this fashion are likely to require major adjustments throughout the economy that are not easy to absorb. 25X1

Decisions of this magnitude cannot be made frequently without increasing the costs involved and reducing the capacity of the system for absorbing additional shocks if new problems arise. Frequent changes could easily lead to confusion and enormous waste as lower level managers and production units fail to master the tasks associated with one policy shift and to gain economies of scale before yet another set of directions and procedures must be instituted.

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The way the decision was made also contrasted markedly with the more typical style of consensual decisionmaking that characterized the Brezhnev era. The new policy did not appear to enjoy universal support, as debate over energy policy continued. In particular, Premier Kosygin several times in the succeeding months emphasized the need for a more balanced approach to the energy situation. Brezhnev 25X1

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responded to this lack of support through remarks to a Komsomol Congress in April 1978 in which he defended the need for the large investment in Tyumen' oil and gas. This irresolution probably occurred, in part, because the decision to shift resources to West Siberia was made too swiftly to allow for full coordination of views and, in part, because real disagreement and uncertainty about the policy remained.

It was not until two years later, in 1979, that the broad outlines of an energy policy for the 1980s finally began to emerge. this policy reflected general agreement among the leadership. In essence, with one major exception, the new energy policy represents a return to the long-term strategy that was adopted in the 1976-80 plan of reducing dependence on oil, while making the transition to increasing reliance on coal and nuclear power. The exception was the role of gas, which now would be increasingly relied upon as the transition fuel. Previously, gas had been reserved for nonfuel uses in a fashion similar to the policy for oil.

Oil Policy Objectives for the 1980s

Soviet leaders probably believe that the oil policy they have adopted will prevent the development of a production crisis such as they faced at the December 1977 plenum. After a period of uncertainty following the decisions of that plenum, the decisionmaking process has returned to its typical, incremental mode of operation, with relatively little attention given to identification of potential future problems.

Soviet oil policy for the 1980s is based on the leadership's awareness of the current leveling off of oil production and, probably, an anticipated decline in the near future.[10] The resulting policy apparently is designed to meet three basic, interrelated political and economic objectives during the transition to a period of lesser dependence on oil:

- Maintaining energy self-sufficiency.
- Providing the major share of hard currency earnings through exports to the West.
- Meeting the demand for politically important exports to Eastern Europe and other client states.

The first objective is clearly most important and takes precedence in oil policy decisions. In making allocation decisions for oil exports to meet the other two objectives, however, the leadership has some flexibility, depending on world market conditions and the political and economic situation at home and in Eastern Europe.

Energy Self-Sufficiency

Leadership commitment to the objective of energy self-sufficiency was clearly stated in Kosygin's comment to the 25th Party Congress in 1976 that the USSR "is the only major industrial state in the world that bases its economic development on its own fuel and power resources." This frequently repeated sentiment, which is incorporated into the first section of the Energy Program, fits well within the Soviet Union's tradition of autarkic development and is a source of popular pride and international propaganda.

External events, moreover, appear to have strengthened leadership commitment to this objective. The oil supply disruptions of the 1970s that plagued the United States and the West European countries probably heightened Soviet awareness of the dangers of becoming dependent on foreign sources of fuel and energy as reflected in Kosygin's comment noted above. This point was brought home more directly by the US efforts to apply economic sanctions following the imposition of martial law in Poland in December 1981. The sanctions included the expansion of the list of oil and gas equipment requiring validated export licenses and suspension of the issuance of such licenses.

The Soviets responded by describing the United States as an unreliable trading partner and proceeded to find new suppliers of oil and gas equipment whenever possible. Moreover, they have also attempted to

[10] The recently published Energy Program endorsed by the Politburo calls for "securing a stable, high level of oil output," and "an increase in liquid fuel" (including synthetic fuel), which is sufficiently vague to cover a range of future situations from a slight increase in oil production to a moderate decline.

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increase domestic capabilities in the manufacturing of this equipment. many people in the Soviet Government were beginning to see the sanctions as a blessing in disguise that forced the USSR to improve its own economy and develop its own production facilities.

On the other hand, the Soviets recognize the contribution US technology can make to the success of their oil policy. By mid-1983, Soviet foreign trade organizations were showing an increased willingness to explore options and enter into contracts with US suppliers for machinery and equipment. This was true especially if the items were unavailable from other sources. This shift, which occurred after the easing of sanctions and despite continued concern over future dependency, reflects a decision that had to be approved by the Politburo.

Similarly, the Soviet leadership was well aware of CIA predictions of an impending downturn of Soviet oil production.[11] The suggestion here is not that CIA predictions provided the leadership with new information and thus altered its decisionmaking process, although the predictions may have served to focus the leadership's attention more acutely on the problem. Rather, it is that the propaganda value alone of proving CIA wrong and overcoming US sanctions provided the Soviets with some additional incentives to maintain or increase production.

CIA predictions, however, also might have had an effect in strengthening the hand of those arguing for increased investment in West Siberia.

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Eastern Europe Versus Hard Currency Exports [12]

Because leadership commitment to the objective of energy self-sufficiency is deeply rooted, decisions about how to balance oil supply and demand will largely reflect pragmatic trade-offs between exports that meet the other two objectives of earning hard currency and ensuring control over Eastern Europe. On the one hand, oil exports for hard currency, primarily to European members of the Organization for Economic Cooperation and Development (OECD), have accounted for about half of Soviet hard currency earnings from commodity trade since the mid-1970s. On the other hand, oil exports to Eastern Europe help tie those countries more securely into political and economic integration with and dependence on the Soviet Union.

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The attitude of the leadership toward the relationship between exports to Eastern Europe and hard currency countries was exemplified in 1981 when it chose to ease a growing Soviet hard currency trade deficit by cutting oil deliveries to Eastern Europe for 1982 and diverting about 100,000 barrels per day to the international market. Moscow recognized that such cuts could risk increased political instability and worsen economic performance in Eastern Europe.[13] In this

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case the leadership apparently believed, however, that the short-term effects could be contained, in part, by making the cuts selectively rather than equally among the East European countries—Poland, for instance, was not affected by the cuts. [redacted] the East Europeans must reduce oil consumption in the long term in any event. The latter position was buttressed by Soviet displeasure over the reexport of Soviet oil by several East European countries. If the leadership is faced with a greatly tightened oil supply and demand situation later in the decade, it would be likely to respond in a similar fashion, even though the political risks might be greater. [redacted]

Oil Policy for the 1980s

To meet its objectives, the leadership has developed a strategy that relies on increased productivity, substitution of fuels, and conservation to maintain supply and hold down demand. These are to be achieved through modernization of plant and equipment and the application of a wide range of traditional bureaucratic measures. To the degree that these measures are successfully implemented, the leadership's flexibility in making decisions to meet its basic oil policy objectives will be increased. This strategy, however, must be implemented during a period when overall investment is growing at a historically low rate, and the geological and environmental conditions in the primary producing areas are making it more difficult and far more costly to maintain oil production at or near current levels. The impact of these factors will reduce the flexibility of Soviet decisionmakers to meet their oil policy objectives. [redacted]

To back up its oil policy, the leadership committed a large proportion of investment funds to energy generally and oil particularly.[14] The 1981-85 plan called for a 50-percent increase in investment in the energy sector compared with that of the previous five-year plan. Investment in oil production alone was planned to increase by over 60 percent, from 26 billion rubles during 1976-80 to 43 billion rubles during 1981-85. The latter figure represented almost one-third of the investment allocated to the energy sector, up from 30 percent in the previous plan period, and about one-third of the planned increment to investment in industry as a whole.[15] The pace of oil industry investment in the first two years of the 1981-85 plan indicates that oil may account for almost one-half of the increment in total industrial investment. [redacted]

Yet even these generous allocations by themselves will not be adequate to guarantee Soviet policy objectives during the 1980s. [redacted] from 1971 to 1981 the average cost of producing 1 ton of oil nearly tripled, from 35 to 100 rubles. The rate of increase in cost, moreover, is expected to accelerate during the current decade, as new production operations move into more difficult areas and the quality of deposits in the older producing areas declines further. Moscow is well aware that it cannot continue indefinitely to increase the share of investment going to oil production. At some point these costs must run into the limits imposed by a finite investment budget that must accommodate other priorities such as defense, machinery, and transportation, as well as other energy sectors. [redacted]

Efficiency gains, thus, are essential to the Soviet strategy and have already been factored into production goals. For instance, to meet 1985 oil production targets, the 1981-85 plan calls for a more than 50-percent improvement in efficiency of drilling operations. Similarly, the petrochemical industry plans to obtain a 28- to 35-percent rise in labor productivity, primarily through the introduction of new equipment. The need for more productive equipment was bluntly stated by two Gosplan officials writing in the October 1982 issue of the Gosplan journal. According to them, the capacity of the Soviet petroleum machine-building industry to produce needed equipment is much less than the amount of currently produced machinery that will be required during the decade. Therefore, to avoid a major and costly expansion of capacity, the gap between supply and demand for this critically

[15] Not included in these numbers are major investments in oil refining and the petrochemicals industry. [redacted]

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important equipment can be closed, they argued, only by producing new, technologically advanced and more productive equipment.

Modernization

As indicated above, the Soviets are counting on the widespread infusion of new, more productive and energy-efficient technologies—from industrial plants to home appliances—to help them implement their oil policy. To obtain the needed technology, they have pursued a dual approach. First, they have actively sought to import advanced technology from the West, including entire plants, as well as a wide array of individual items such as seismic equipment, pipes, and pipelayers. Second, the Soviets have sought to improve their own domestic production capabilities.

During the past few years, the Soviets appear to have shifted toward a greater emphasis on the second approach because of problems encountered in absorbing foreign technology, difficulties in obtaining access to Western state-of-the-art technology, and limits on the availability of hard currency. Technology transfer, moreover, is not a simple process, and results have often fallen short of leadership expectations.

Soviet hopes for increased productivity through modernization are jeopardized, however, because the Soviet system is not conducive to innovation. In particular, the USSR has traditionally had problems in developing practical applications for new technology. Those organizations responsible for implementing a policy stressing innovation often have little incentive for doing so. Technical institutes, for example, are responsible only for inventing and perfecting technologies but have no responsibility and receive no economic benefit for seeing them put into use. Individual operating enterprises, on the other hand, are rewarded primarily for meeting current production goals and are not anxious to risk the initial drop in production that often accompanies a decision to introduce new technologies. 25X1 25X1

Such disincentives to innovate and modernize received considerable attention in the press after Andropov became party leader, with the General Secretary himself calling for changes to correct these problems. A July 1983 joint Central Committee–Council of Ministers resolution that encourages modernization by decentralizing some investment decisions to the enterprise level represented a first, albeit limited, attempt under Andropov to deal with this problem. Moreover, none of the five ministries involved in the experiment is directly involved in oil policy implementation, so that any potential benefit from this experiment in the oil sector will be delayed. 25X1

Bureaucratic Measures

The Soviets are also relying on various kinds of traditional administrative and bureaucratic measures to implement their oil policy. These include changes in economic indicators and planning procedures, new types of labor organization, bureaucratic reorganization, and exhortative decrees and campaigns. 25X1 25X1

Oil Minister Mal'tsev, for example, in a December 1982 article, wrote that the ministry had considerably expanded the use of planning and incentive indicators based on the final result, that is, tons of oil produced. These indicators are expected to supplement and perhaps eventually replace such indicators as number of meters drilled, which encourage crews to drill many shallow, unproductive wells. Meanwhile, according to a 1982 article by one of its deputy ministers, the Ministry for Construction of Oil and Gas Industry Enterprises *(Minneftegazstroy)* has adopted a two-year planning cycle as a supplement to five-year and annual plans to better coordinate production of pipe (supply) and the start of pipeline construction (demand). These kinds of measures are designed to make 25X1

decisionmaking and implementation of oil policy more rational in economic terms, especially at lower levels of the hierarchy.

In a different approach to the same problem, when domestic prices for oil and gas were changed in 1982 for the first time in 15 years, they were designed, according to a 1981 article in *Ekonomicheskaya gazeta,* to more accurately reflect actual production costs and allegedly are to promote the substitution of gas for oil.[16] It is not clear, however, whether the new prices do promote substitution, given the limited ability of individual enterprise managers to initiate such actions without approval from central planners. The Soviet system also lacks a mechanism for continuously or even frequently adjusting prices; thus, the new prices will rapidly lose any relationship they might have had to real costs. More importantly, because of the emphasis on meeting quantitative targets regardless of cost and the virtual absence of a profit motive for enterprise managers, prices have a very weak influence on enterprise behavior.

The Soviets are trying to increase productivity and conservation of resources by decentralizing some decisionmaking through the use of brigade contracts. This relatively new approach to labor organization is designed to allow individual crews to negotiate a higher monetary return for their members in return for more rapid completion of a project. According to a 1982 article by Deputy Minister K. Smirnov, *Minneftegazstroy* planned to have 55 percent of its brigades working under such contracts by 1985 as compared with 36 percent in 1981.

The Soviet leadership has also tried the familiar tactic of reorganization to solve problems of bureaucratic inefficiency in management and decisionmaking.[17] For example, the State Committee for the Supply of Petroleum Products was upgraded from Union Republic to All-Union status in 1982. On the basis of a continuing stream of complaints in the press, this further centralization of authority does not seem to have done much to improve control over the distribution of these products. 25X1

Another example of this kind of bureaucratic maneuver, which has potentially far-reaching implications for the management of extraction of energy resources generally, was the creation in 1982 of the Gosplan commission on West Siberia referred to earlier. The Commission has as its specific goal the breaking down of bureaucratic barriers and the setting up of a single project manager for the development of the region. The lack of real authority given the Commission and its consequent relative lack of success, however, reflects the tensions and inefficiencies inherent in the Soviet bureaucratic decisionmaking environment. 25X1

Reorganizations to improve operating efficiency have also occurred at lower levels. *Minnefteprom*, for instance, restructured part of its operations in Tyumen' Oblast in May 1982. Ministry officials indicated their dissatisfaction with the performance of the old management by not selecting any of its officials for the new organization.

When all else fails, the leadership frequently resorts to exhortation, encouraging the ministries and the "masses" to work better in pursuit of important goals. For example, a November 1981 CC CPSU resolution, in typical Soviet fashion, praises *Minneftegazstroy* for its present construction efforts but then admonishes it for a variety of sins, including failure to retool and mechanize more rapidly and failure to improve the quality of pipeline construction.[18] The ineffectiveness

[16] The price paid to oil-extracting enterprises for oil was raised by a factor of 2.3 and set differentially to reflect different geological conditions. The price for gas was set approximately 20 percent below that of fuel oil.

[17] An article in the January 1983 edition of the journal *EKO* argued the case for combining the oil and gas ministries.

[18] A similiar admonitional decree was passed for the oil ministry in March 1981.

of such exhortations is indicated by the need for this decree only two years after a similar one was issued. The measures being taken to resolve these problems were outlined by the then head of the ministry, Boris Shcherbina, in a July 1982 article in the ministry's journal. A detailed analysis of the article in October 1982, however, argues forcefully that implementation of these needed measures will be only partial and slow at best. the ministry will resist changes that might improve its long-term capabilities, and it will continue to favor tried-and-true methods for meeting its short-term production targets.

The leadership has also been conducting an old-fashioned Soviet-style campaign for energy conservation, led by Gosplan Deputy Chairman Lalayants. Enterprises and individuals are constantly being reminded in the press of the need to conserve oil and are showered with reports on how much fuel was saved at this enterprise or by that driver. The campaign has not spared the defense sector, where, for example, the military publishing house *Voyenizdat* published a book in 1980 on fuel conservation, with special reference to military equipment.

The central authorities are also introducing new planning norms and requirements to encourage conservation. A December 1979 Gosplan resolution setting out the methodology for establishing rates of consumption of fuel and electric power had as its stated primary goal the establishment of "progressive standards" to conserve these resources, distribute them efficiently, and utilize them effectively. This resolution replaced a similiar one that had been on the books for more than a decade. A joint Central Committee–Council of Ministers resolution two years later focused on the same theme. One of its results was a set of regulations for monitoring and recording consumption of energy resources that were promulgated in May 1982. Six months later, at a Supreme Soviet session in November 1982, standing committees on energy were established to monitor the conservation efforts of ministries and enterprise managers.[19]

[19] The creation of these committees had been called for by Andropov at the plenum preceding the Supreme Soviet session.

Problems in the Search for Oil Substitutes: The Program To Develop Nuclear Energy

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Certainly one of the most telling examples of the bureaucratic inefficiencies that are endemic to the Soviet decisionmaking process can be seen in the program to develop nuclear energy, which is an important part of the effort to reduce oil consumption through substitution. Problems at Atommash, the plant designed for serial production of reactors, apparently had become so critical by mid-1983 that the Politburo interceded directly in the matter. Following discussion at a Politburo meeting on the problems, Dolgikh went to Volgodonsk, where the plant is located, and, in a speech on 19 July that was reported in Pravda, *strongly reprimanded project managers and local party officials. Two days later,* Pravda *reported the retirement of I. T. Novikov, a deputy chairman of the Council of Ministers and the chairman of the State Committee for Construction Affairs. Although this was reportedly done at Novikov's request, the timing and handling of the affair can hardly be coincidental. While it is far from certain that these actions will have long-term positive results, the fact that the Politburo had to become involved in straightening out problems at one of the USSR's top-priority energy projects is suggestive of the depth of the bureaucratic inefficiencies that must be overcome in the decisionmaking process, as well as the tendency of the decisionmaking system to push such problems to the top for resolution.*

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The difficulty the Soviets have in achieving desired changes in economic behavior by administrative fiat was clearly seen when the commissions met a year later in December 1983. According to *Izvestiya,* they found that ministries on the whole had overconsumed electricity to the tune of 2 billion kilowatt-hours. The Ministry of Power and Electrification alone had overconsumed the equivalent of 900,000 tons of oil. A substantial portion of this excess consumption must actually be oil, which in 1980 accounted for the

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generation of about 35 percent of electricity production. These figures only serve to confirm the remark in early 1983 by a deputy director of a major institute that the program for conservation is not going well and considerable confusion exists on how to make it more successful. The director saw the underlying problem as a wasteful attitude on the part of fuel users that cannot be overcome by current incentives.

Similarly, the Soviet penchant for changing economic indicators and planning procedures at seemingly random intervals stems from the fact that normative success indicators and centrally planned prices, which are seldom revised to reflect changing conditions, do not provide a sound basis for making economic decisions. The frequent bureaucratic reorganizations also are largely cosmetic and ineffective because of more fundamental, underlying problems—the lack of real decisionmaking authority away from the center and the continuing subservience of managers to centrally planned production goals. Thus, the very structure of the decisionmaking process and the delegation of responsibilities between and among its various levels often operate at cross-purposes to efforts to develop a policy that works effectively.

The Future Decisionmaking Environment

So long as oil supply and demand remain in rough balance, Soviet leaders will have some latitude in determining allocations to foreign and domestic consumers and meeting their oil policy objectives. Decisions in such a situation are likely to be incremental, in line with current policies and plans, and oriented toward making marginal improvements in organizational structure and operating procedures.

On the other hand, this conservative and myopic decisionmaking system is unlikely to provide early identification of problems that could lead to development of a significant gap between supply and demand. Thus, if the policy is not working, the Soviets will probably respond only at the last minute, with sharp shifts in policy, as they did at the December 1977 plenum when they reallocated investment to West Siberia, and again in 1981 when the decision was made to cut oil deliveries to Eastern Europe. Such decisions necessarily will involve greater participation by senior leaders at the Politburo and Council of Ministers level and will reflect political considerations as well as purely economic and managerial ones. 25X1

In the latter case particularly, the degree to which Soviet oil policy is successful will depend in part on the flexibility and creativity of decisionmakers. They will be constrained during the remainder of the decade by several factors—ideological boundaries, a less favorable geological situation, poorer economic prospects, and unfavorable changes in oil export options. In combination, those constraints will present Soviet decisionmakers with fewer options and, thus, a more difficult decisionmaking environment than that of the previous 10 years. 25X1

Ideological Constraints

The leadership's flexibility is limited by the ideological boundaries of the economic system and political concern for maintaining regime control and domestic tranquillity. These factors particularly constrain Soviet willingness to use prices, wages, and profits to encourage new, more economically rational forms of behavior that could lead to increased productivity, innovation, and conservation. 25X1

On the other hand, the leadership can be expected to try to induce the desired behavioral changes through the stepped-up use of administrative measures, such as further centralization of decisionmaking at both the regional and national levels. These measures, however, are unlikely to be accompanied by more than minor changes in the structure of economic incentives; thus, it is doubtful that they will result in significant improvement in the functioning of the economy. The Soviets also might resort to more coercive administrative measures, such as stricter enforcement of conservation and expanded use of rationing, in conjunction with a stepped-up discipline campaign to reduce demand and improve efficiency. Not only would such measures be highly unpopular and potentially disruptive in the short term, they would not be an effective substitute for the long-term changes in attitudes toward energy use that are needed. 25X1

Geological Constraints

The options of Soviet decisionmakers are also narrowed because meeting their oil policy objectives is highly dependent on raising the level of oil production in West Siberia. Without this increase, they cannot keep total production at or near its present level for the remainder of the decade. Unlike previous periods, the Soviets do not have new major oil regions that could be rapidly exploited. Thus, they have no real alternative to bearing the rapidly escalating costs associated with the declining size, quality, and accessibility of deposits that characterize West Siberian oil production.

Coping with a significant shortfall in planned West Siberian production, especially in the next few years, would probably require substantial direct Politburo involvement in the decisionmaking process, which itself would be a key indication that the Soviets were experiencing major problems. For example, in March 1984, in response to the failure of Tyumen' to meet its extraction targets for the first time, *Izvestiya* reported the dispatch of a high-level investigative group headed by Gosplan Chairman Baybakov to West Siberia.[20] Among the investigators were five USSR ministers, including Oil Minister Mal'tsev, Minister of Construction of Petroleum and Gas Industry Enterprises V. G. Chirskov, and Minister of Geology Ye. A. Kozlovskiy. Also involved were Tyumen' Party First Secretary G. P. Bogomyakov and his government counterpart, V. V. Nikitin, chairman of the Tyumen' Oblast Executive Committee. All of these individuals have ready access to top party and government leaders.

The investigators' findings of major disjunctions between the plans of the various ministries for the supply of equipment and development of infrastructure, and of the continuation of a "thriftless attitude" by oil industry workers that left millions of rubles' worth of pipe, equipment, and chemicals wasted, are indicative of the continuing problems the Soviets have in balancing plans against the objective inefficiencies of the Soviet economic system. A subsequent *Pravda* article of 3 April 1984 resoundingly criticized the oil ministry's efforts in West Siberia, accusing it of following "the method of scaled-down planning" of targets and of frequently reducing previously set targets, rather than accepting the challenges for increased efficiency and better planning and management posed by the need to raise output in the new, more difficult production conditions.

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Economic Constraints

Oil is only one of many important claimants for a finite investment pie that from a historical perspective is growing relatively slowly. Within the energy sector, natural gas, coal, and nuclear power all require major infusions of investment. Outside the energy sector, Andropov, like Brezhnev, singled out agriculture and the Food Program and also added transportation to the list for special attention. These sectors, along with defense, probably will remain major competitors for investment under Chernenko and serve as a constraint on oil policy choices.

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Faced with a significant shortfall in oil production, the Soviets would probably first choose to reallocate resources and investment within the oil sector toward West Siberia. Such a decision would have a much lower likelihood of success now than the similar one made in 1977 because of the geological constraints noted above. These geological constraints mean first that the investment required to produce more oil would be several times greater than in 1977. In addition, the Soviet Union's own technological capability to locate and extract oil from the deeper and geologically more complex regions of West Siberia is also relatively lower by comparison to the situation in 1977.

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Alternatively, the leadership might choose to shift investment within the energy sector, most likely to accelerate the use of natural gas, which is the easiest fuel to substitute for oil. They might also try to speed up the nuclear power program. If the squeeze on investment and shortfall in oil production becomes

[20] The severity of the problems in West Siberia were most acutely manifested by a five-month drop in total oil production of about 200,000 barrels per day from October 1983 to February 1984.

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very severe, especially toward the end of the decade, increasing conflict over resource allocation between energy and the other priority sectors may becomes evident. Such strains could test the leadership's commitment to the present economic and political priorities as the various claimants lobby the Politburo to preserve or increase their shares.

Export Constraints

The Soviet commitment to meeting Eastern Europe's oil needs has already proved to be less than solid. Although willing to provide their allies with other types of energy, especially gas and electricity, the Soviets apparently are prepared to test the limits to which they can force the East Europeans to bear the brunt of any imbalance in oil supply and demand by absorbing further cuts in Soviet oil exports.[21]

Nonetheless, there is undoubtedly a limit to the amount of oil that the Soviets can unilaterally withhold. Even a relatively small reduction in oil supplies could have a severe impact on the economies of the East European countries. With the exception of Romania, they have virtually no domestic oil resources to fall back on. Moreover, despite their modest improvement in growth rates in 1983 and improved trade balance the past two years, the East European countries have little prospect for purchasing substantial additional oil for domestic consumption for hard currency, either on the world oil market or from the Soviet Union. This limit acts as a constraint on Soviet decisionmakers.

In pursuing the objective of satisfying their own hard currency needs, the Soviets also can do little to affect either the world market price for oil or Western oil demand. Nor can they greatly affect these same factors with respect to gas, which they hope will replace oil as the major earner of foreign exchange later in the decade. If the price for oil remains low, they could try to increase the amount available for export to hard currency purchasers by cutting exports to Eastern Europe. The Soviets could also reexport oil obtained at discretionary prices as payment in kind for earlier deliveries of arms and equipment as was done in 1982 and 1983 in the case of Libya and, to a much lesser extent, Iran, Iraq, Saudi Arabia, and Syria, rather than by diverting oil from domestic users. The kinds of decisions required to expand this option would probably lead the Soviets to move more actively to improve economic and political ties with Middle East oil-producing countries.

The Soviets could also try to reduce their requirements for hard currency. For example, the current development of domestic manufacturing capabilities based on French technology for the production of deepwater drilling platforms should help moderate hard currency requirements for the oil industry. The Soviets also may try to ease the burden on oil as a source of hard currency by postponing or decreasing some imports until the anticipated earnings from exports of natural gas are available or in the hope that the market price of oil will begin to rise again, perhaps by 1985.

imports of oilfield equipment for selected projects that had been planned for 1984 were being postponed until 1985 to conserve hard currency. This option, however, is strongly affected by requirements for agricultural imports, as well as for state-of-the-art technology, especially for offshore exploration and production, for which they remain heavily dependent on the West. The Soviets also might increase efforts to encourage Western participation in oil and other energy development projects, such as with the Norwegians in the Barents Sea and the Japanese in the Sea of Okhotsk, preferably on a barter basis. Such a move probably would also provide them with better access to Western technology and financing.

In the long run, the question of whether the decisionmaking process supports or hinders Soviet efforts to achieve oil policy objectives will depend greatly on the timing of events. If conditions deteriorate rapidly and force the leadership to make a series of disruptive policy shifts, the Soviets may well be unable to meet their objectives. On the other hand, if the leadership has adequate time between problems for the system to adjust to new conditions, then the greatest strength of the decisionmaking process—the ability to mobilize resources—may prove decisive.

[21] Ironically, the Soviet Union may be doing the East Europeans a favor by compelling them to move more quickly to attempt implementation of the type of program of energy conservation and substitution of oil by other energy forms that the Soviets so far have had only limited success in implementing at home.

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