Trade and Investment Patterns in the Crude Petroleum and Natural Gas Sectors of the Energy-Producing States of the Former Soviet Union

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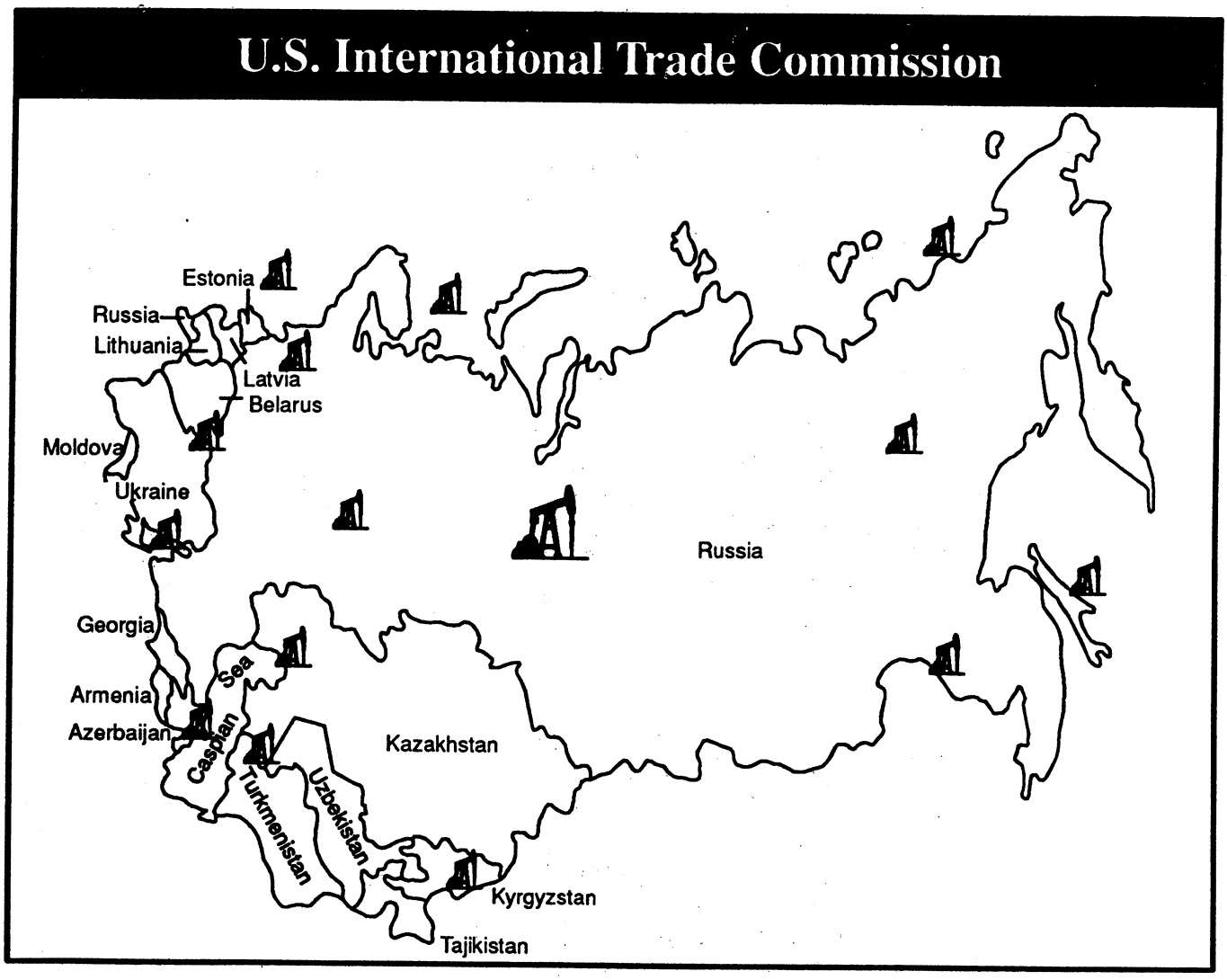

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NOTICE TO READERS:

This report contains information on laws, regulations, and prices in the newly independent states (NIS) that is pertinent to their crude petroleum and natural gas sectors. To the extent possible, this report contains the most up-to-date information available as of mid-June 1993. The reader should be aware, however, that the legislative environment in the NIS countries is very fluid; laws, regulations, and decrees change frequently.

PREFACE

On October 26, 1992, at the request of the Senate Committee on Finance, the U.S. International Trade Commission (Commission)[1], under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), instituted investigation No. 332-338, Trade and Investment Patterns in the Crude Petroleum and Natural Gas Sectors of the Energy-Producing States of the Former Soviet Union.

The Commission was specifically requested to address the following issues:

(1) Crude petroleum and natural gas reserves and production in the newly independent states (NIS) over a 5-10 year period;

(2) Crude petroleum and natural gas trade over a 5-10 year period, including principal markets for both the United States and the NIS;

(3) Impediments, if any, to increased crude petroleum and natural gas exploration and production in the NIS, such as U.S. export restrictions concerning technology and foreign investment in the NIS;

(4) The investment situation in the NIS, such as the role of joint ventures and equity-sharing, as well as petroleum-pricing policies that could affect the industry; and

(5) To the extent feasible, the future markets for increased NIS crude petroleum and natural gas production.

Notice of the investigation was posted at the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the *Federal Register* (57 FR 52615) of November 4, 1992.

The information and analysis provided in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under statutory authority covering the same or similar subject matter.

[1] Commissioner Carol T. Crawford recused herself from participation in this investigation.

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EXECUTIVE SUMMARY

The former Soviet Union (FSU) has been one of the world's leading producers of crude petroleum and natural gas for most of the post-World War II period. However, beginning in the late 1980s, and particularly in 1990, the Soviet Government, faced with huge budget deficits, began to scale back its industrial investment significantly. The FSU crude petroleum and natural gas sectors were particularly hard hit by the cutbacks.

The newly independent states (NIS) that emerged from the 1991 demise of the Soviet Union are struggling to transform their centrally planned economies into market economies. Revitalization of the NIS crude petroleum and natural gas sectors could be the catalyst of growth necessary to make those transformations successful.

Reserves/Production/Consumption

- In 1992, world energy reserves of crude petroleum were estimated at 997 billion barrels and natural gas reserves were estimated at 4,885 trillion cubic feet. The NIS accounted for about 6 percent of the global reserves of crude petroleum and 40 percent of total natural gas reserves.
- The major crude petroleum- and natural gas-producing NIS are the Russian Federation (Russia), Kazakhstan, Azerbaijan, Turkmenistan, and Uzbekistan. As an important source of crude petroleum and natural gas to world markets, particularly in Europe, Russia is of critical importance. Russia produced 91 percent of the NIS crude petroleum and 79 percent of the natural gas in 1991. The other energy-producing NIS countries hold tremendous potential for future world supplies.
- The NIS remain the world's largest producers of crude petroleum even though production has fallen from a high of 12 million barrels per day (BPD) during the late 1980s to 9.9 million BPD in 1991 and an estimated 8.4 million BPD in 1992. Natural gas production increased from about 18 trillion cubic feet in the early 1980s to 28.6 trillion cubic feet in 1991.
- FSU exports of crude petroleum peaked in 1988 at 2.8 million BPD but subsequently fell to 1.5 million BPD in 1992. Overall FSU exports of natural gas increased from 2.2 trillion cubic feet in 1982 to 3.5 trillion cubic feet in 1992, reaching a high of 3.9 trillion cubic feet in 1990.
- Consumption of crude petroleum in the NIS has declined since 1987, while increasing in the United States and other regions of the world. The NIS decline is attributable to a number of factors, including negative economic growth in the NIS, a progressive shift from artificially low prices to market-determined prices, and the substitution of natural gas for crude petroleum for industrial use.

Trade Patterns

- The FSU relied on an extensive system of pipelines to transport energy resources to refineries, export pipelines, and port terminals. Currently, more than 95 percent of FSU energy products is transported through major trunk pipelines.
- The search for hard currency shifted FSU exports from Eastern European countries within the Soviet bloc to markets in Western Europe. This shift continued after the country's

dissolution. Between 1991 and 1992, Russian deliveries of crude petroleum to other NIS countries dropped from 1.2 billion barrels to 557 million barrels.

NIS Restrictions on Investment

- Joint ventures (JVs) are the primary vehicle for investment in the NIS petroleum sector. In early 1993, 66 new JVs with charters specific to the crude petroleum sector were registered in Russia. Of these, 31 have progressed beyond preliminary exploration and development and have reached the point at which petroleum extraction has begun. There have been no production JVs specific to the NIS natural gas sector.

- The U.S. industry, the world's leader in crude petroleum and natural gas exploration and production technology, including the technologies used in the harsh climates and difficult terrain found in the NIS, could help meet NIS technology needs.

- The capital requirement to revitalize the petroleum and gas sectors is massive—Russia's crude petroleum sector alone needs an estimated initial investment of $25 billion and annual injections of $6-7 billion to regain its 1988-89 production levels by the year 2000. The NIS, facing critical economic problems, has limited internal financing capability.

- The investment climate for foreign investors is not consistent throughout the energy-producing NIS. For example, Kazakhstan and Azerbaijan have investment climates that appear more hospitable to foreign investors than the investment climate in Russia. In Russia, investors face great uncertainty. Major issues such as conflicting laws, burdensome regulations, onerous taxation, and jurisdictional struggles between local and central authorities remain unresolved and frustrate foreign investors.

- The major impediments to foreign investment in Russia's crude petroleum and natural gas sectors include the following:

  Legal framework.—Lack of a comprehensive legal and regulatory framework leaves investors confused as to the hierarchical order of rules. Despite efforts to implement clarifying legislation, the legal context remains ambiguous; new laws often overlap or contradict.

  Taxation.—An uncertain taxation system that taxes revenues instead of profits endangers the economic viability of existing and planned capital projects.

  Pricing.—The wide disparity between internal and external prices of crude petroleum and natural gas, together with the inconvertibility of the ruble, discourage domestic producers from improving their profitability or efficiency. Production is often diverted from the domestic market to obtain the higher prices available in the export market.

  Property rights.—Uncertain property rights lead to confusion about how to obtain rights to physical access to mineral resources.

  Export controls.—Strict and changing controls over export licenses and quotas of crude petroleum have been introduced in response to large numbers of illegal exports of petroleum. However, such controls also decrease the ability of foreign projects to export petroleum at world market prices, making investments in Russia less attractive.

- Viewing market reform as irreversible in the NIS, few companies cite political uncertainty in the NIS as an impediment to their investment decisions. Of more concern were the frequent and abrupt personnel changes among bureaucratic decision-makers.

U.S. Statutory Restrictions on Investment in the NIS Energy Sectors

- To help support the NIS in their efforts to develop market economies, the U.S. Government has suspended or repealed the majority of the statutory provisions that, directly or indirectly, impeded or restricted U.S. investments in the NIS.
- The primary legal impediments to the acquisition of secured financing for U.S.-based firms were repealed by joint resolution of Congress on April 1, 1992. The Byrd Amendment to the Trade Act of 1974 and the Stevenson Amendment to the Export-Import Bank Act of 1945 restricted the amount of capital the Eximbank could provide for operations in the FSU to an aggregate amount of $300 million. Currently, the levels of guaranteed financing from the Export-Import Bank, as well as the Overseas Private Investment Corporation, are being expanded in an effort to support increased involvement of U.S. firms in the NIS.
- Current export control legislation (National Security Controls Act) does not appear to constitute an impediment to U.S. private investment in the crude petroleum or natural gas industries of the NIS but, according to U.S. businessmen, there is potential for future restrictions.
- A new bilateral tax treaty between the United States and Russia, signed in June 1992, remains to be approved by the U.S. Senate. The absence of a bilateral tax agreement between the United States and the individual NIS countries creates a situation in which profits of U.S. investors are not protected by limits on double taxation. U.S. investors in JVs with Russian firms may be subject to a number of separate Russian taxes.
- Negotiations to implement bilateral investment treaties (BITs) to improve the investment climate in the NIS have been initiated and, in many cases, agreements have been reached and are in force. A BIT with Russia was signed in June 1992 and is awaiting approval from the U.S. Senate.

Project Financing in the NIS Energy Sectors

- Participation in energy projects in the NIS generally requires that the investor make a substantial financial commitment. Lack of adequate collateral in the NIS to cover the risks, together with uncertain economic and political environments, makes such commitments extremely risky. As a result, foreign participation in NIS energy projects is largely dependent upon the availability of adequate capital and project risk insurance to protect investors against a major financial loss.
- Financing decisions made by export credit agencies (such as the U.S. Eximbank and OPIC) are influenced by the policies set forth by the IMF and the World Bank. After pressure from U.S. and other G-7 Eximbanks, the World Bank has agreed to modify the "negative pledge" clause in its lending arrangements with Russia, on the basis that the clause could impede lending and therefore stall opportunities to help revive the Russian economy. The World Bank is working to develop a waiver procedure from its negative pledge clause.

Future Outlook

- Uncertainty over the pace of economic reforms in the NIS has resulted in varying projections for future NIS energy production. The outlook for production of crude petroleum is unclear, but the recent declining trend is expected to stabilize by year 2000. Production should increase thereafter to between 9 million and 13 million barrels per day in 2010.
- The outlook for production of natural gas in the NIS is promising given the huge reserve base. Production could increase to an annual rate of 40 trillion cubic feet by 2010, compared with 29 trillion cubic feet in 1991.

- Exports of crude petroleum and natural gas from the NIS will continue to be the most important source of foreign hard currency for these countries. The hard currency is needed to stabilize declining production levels of crude petroleum, to repay foreign debts and to purchase additional equipment and technology. In the short term, crude petroleum will provide the greatest opportunity for increased exportation because of the existence of more flexible delivery methods (both ports and pipelines) and the many potential new markets for shipments of NIS crude petroleum.

- The ability of the NIS to increase exports of natural gas is limited by the finite capacity of existing pipelines, transportation fees imposed by various states traversed by the pipelines, and the fact that natural gas is sold on long-term fixed supply contracts to a limited number of customers. However, in the long run, construction of new pipelines will ease the constraints on exports of natural gas.

- Since the dissolution of the Soviet Union, Russia continues to supply crude petroleum and natural gas to the other NIS, but at significantly lower levels. Supply contracts for 1993 indicate that Russia intends to further reduce exports of crude petroleum and natural gas to the other NIS while maintaining export levels to Western markets.

- In the short term, NIS crude petroleum and natural gas will likely continue to be exported principally to the three traditional markets—Western Europe, Eastern Europe, and the other NIS. Russia will continue to depend on the transportation networks that exist throughout the NIS, particularly Ukraine, the Baltics, and Belarus, to reach Western markets. Numerous new projects have been planned to improve the existing transportation network, as well as to create new pathways to potential markets, such as the United States.

- Other markets for NIS crude petroleum exports include Singapore (with its world-class refineries), Thailand, Hong Kong, and the Philippines, all of which are dependent on imported crude to feed their refineries. The refined products are, in turn, sold on the world market, primarily to Japan.

- The Organization of Petroleum Exporting Countries (OPEC) has considered offering membership in the cartel to the energy-producing NIS. The NIS recently formed a minicartel to ensure the viability of the region's crude petroleum and natural gas industries.

- A majority of NIS countries have formed an intergovernmental petroleum and gas council to develop and coordinate the region's energy industry. The agreement calls for cooperation in terms of extracting, transporting, processing, and utilizing crude petroleum and natural gas. OPEC has announced that it welcomes the creation of a NIS cartel and would cooperate with any efforts made toward maintaining an orderly international petroleum market.

CHAPTER 1
Introduction

The former Soviet Union (FSU) has been one of the world's leading producers of crude petroleum and natural gas for most of the post-World-War II period.[1] Exports of these commodities formed a significant part of the nation's foreign trade and provided important foreign exchange earnings. But faced with huge budget deficits, the Soviet Government drastically cut its industrial investment beginning in the late 1980s, and particularly in 1990. The cutbacks, while failing to resolve the budget problems, contributed to critical structural imbalances in fundamental sectors of the economy as financial resources necessary to maintain and upgrade industrial capacity and industrial and social infrastructure were not available.[2] The crude petroleum and natural gas sectors were particularly hard hit by the investment cutbacks.[3]

Escalating economic chaos and budget confusion accompanied the political events that led to the demise of the Soviet Union in December 1991. But even before the country's dissolution, crude petroleum production had declined precipitously, primarily because of inefficient recovery methods, outdated technology, and lack of investment in exploration and well rehabilitation. In spite of political upheaval, antiquated equipment, and declining production levels, Russia and the other energy producing countries of the newly independent states (NIS) still collectively remain one of the world's largest producers of crude petroleum.[4]

The successor states to the Soviet Union are currently struggling to move from centrally planned to market economies. As they do so, many observers suggest that revitalization of their crude petroleum and natural gas sectors could provide the necessary engine of growth for successful transformations. According to the European Bank for Reconstruction and Development (EBRD), without the impetus provided by these sectors, stagnation or further overall declines of the NIS economies appear inevitable.[5] However, the NIS have limited financial resources. Given the critical economic problems these countries face, the large injections of capital and technology into their crude petroleum and natural gas sectors that are needed to halt production declines must come from foreign sources.

U.S. and other international petroleum companies have expressed great interest in investing in the NIS' energy sectors. The United States is the world leader in crude petroleum and natural gas exploration and production technology, including types adapted to the harsh climates and difficult terrain found in the NIS. While the commitment of U.S. technology and capital could contribute significantly to the revitalization of the NIS' crude petroleum and natural gas sectors, relatively few U.S. investment projects in petroleum have progressed to the stage of actual production. There are no U.S. production projects in the NIS' natural gas sector.

The Senate Committee on Finance Request

In a September 22, 1992 letter, the U.S. Senate Committee on Finance requested that the U.S. International Trade Commission (Commission) provide a baseline analysis of current trade and investment patterns in the crude petroleum and natural gas sectors in the successor states to the Soviet Union, and report on current and future developments affecting the production, distribution, transportation, and storage of these commodities. (See appendix A.) The letter also asked the Commission to provide information on foreign investment restrictions in the NIS and U.S. impediments to investment or the exportation of technology and products to these countries. Finally, the Commission was asked to provide a future market analysis of increased crude petroleum and natural gas production in the NIS. The Commission instituted

[1] The FSU currently ranks seventh in the world in terms of reserves of crude petroleum and is the world's leader in reserves of natural gas. The FSU, primarily the Russian Federation (Russia), has historically been the world's largest single producer of crude petroleum, second only to the combined production of the Organization of Petroleum Exporting Countries (OPEC).

[2] Boris Rummer, "Fueling the Post-Soviet Economies: Oil and Gas," *Challenge*, Jul.-Aug. 1992, pp. 36-41.

[3] Other sectors that faced severe investment cutbacks were the metallurgy sector, construction, transportation, and electrical power-generating facilities. Ibid.

[4] Following the dissolution of the Soviet Union in December 1991, the former Republics formed the Commonwealth of Independent States (CIS), a voluntary community that Georgia and the Baltic nations of Estonia, Latvia, and Lithuania elected not to join. The term "newly independent states" as used in this report includes all of the successor states to the former Soviet Union (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan) and does not include the Baltic nations. For the purposes of this report, "NIS" refers to the region since the dissolution of the Soviet Union; "former Soviet Union" is used in a historical context and refers to that nation prior to its dissolution.

[5] EBRD, "Information Session: Oil and gas sector review," Feb. 12, 1993.

its investigation on October 26, 1992. (See appendix B.)

Focus and Methodology

This report focuses on the trade patterns and investment situation in Russia as the largest NIS producer of crude petroleum and natural gas. Russia accounted for 91 percent of the crude petroleum and 79 percent of the regional natural gas production in 1991. Russia also has the extensive transportation network and infrastructure necessary to support the exploration and production of these commodities. The remaining energy-producing countries in the NIS—Kazakhstan, Azerbaijan, Turkmenistan, and Uzbekistan—appear to have significant petroleum and natural gas deposits, and investor interest in these countries is increasing. The report provides information on these countries to the extent available.

Data and information contained in this report were obtained from a number of primary and secondary sources. Interviews were conducted with industry representatives and government officials in the United States, Europe, and Russia.[6] Additional information was obtained from a public hearing held at the Commission on January 28, 1993, and from written comments solicited through a *Federal Register* notice. Information was also obtained from officials of various U.S. Government agencies, including the U.S. Department of State, the U.S. Department of Commerce, the U.S. Department of Energy, the U.S. Department of the Treasury, the U.S. Export-Import Bank, and the Overseas Private Investment Corp. (OPIC). Staff also attended the Second Annual Russian Oil Conference on Foreign Investment Opportunities, held in London, February 11-12, 1993.

[6] For a complete list of U.S. and foreign government agencies and private companies contacted for this study, see app. C.

Organization of the Report

The report begins with a discussion of the levels of global crude petroleum and natural gas reserves, and the production and consumption of these commodities in the NIS and the United States (chapter 2). This chapter also examines the administrative structure and production methods of these industries in Russia, and analyzes crude petroleum and natural gas trade patterns during 1982-92 in the United States and the NIS. A presentation of trade data is included. Chapter 3 examines obstacles in the NIS that may impede U.S. and other foreign trade and investment in exploration and production. Factors discussed in this chapter include Russia's fiscal and legal systems, and export procedures. Chapter 4 looks at U.S. statutory regulations that currently affect or have the potential to affect investment decisions by U.S. companies in the crude petroleum and natural gas sectors in the NIS, including U.S. restrictions on technology transfers. The chapter also presents perspectives of U.S. firms investing, or interested in investing in the NIS. Chapter 5 examines the availability of financing and insurance guarantees for energy-producing projects in the NIS, including limitations on foreign investment through agencies such as the Export-Import Bank, OPIC, and other risk insurance organizations. Chapter 6 discusses estimates of future production of crude petroleum and natural gas as well as the likely markets for such production. The chapter also discusses the likelihood that energy-producing states of the NIS may participate in cartels.

CHAPTER 2
Industry Overview

The global crude petroleum and natural gas industries are characterized by a symbiotic relationship of sorts. Private, large multinational petroleum companies, headquartered principally in the West, have pioneered the technology and processes used worldwide to produce these commodities. These firms dominate global production of crude petroleum and natural gas and are also responsible for developing most of the world's reserves. Most of the world's large reserves, however, are controlled by government-owned petroleum companies that rely on the technology and equipment of private multinational firms to exploit their resources.

Reserves

In 1992, world energy reserves were estimated at 997 billion barrels of crude petroleum and 4,885 trillion cubic feet of natural gas,[1] with the newly independent states (NIS) accounting for about 6 percent of global reserves of crude petroleum and 40 percent of total natural gas reserves (table 2-1). In contrast, the members of the Organization of Petroleum Exporting Countries (OPEC)[2] together account for 77 percent of the world's reserves of crude petroleum and 40 percent of the world's reserves of natural gas; the United States accounts for about 2.5 percent and 3 percent respectively.

NIS reserves of crude petroleum and natural gas are primarily concentrated in Western Siberia and the Volga-Urals region, both within Russia. Smaller NIS reserves also exist in the countries of Kazakhstan, Turkmenistan, Azerbaijan, and Uzbekistan.

[1] Based on 1992 proven reserves and 1992 world consumption rates, global crude petroleum reserves are estimated to satisfy demand for another 40 years and natural gas reserves, another 60 years. These estimates do not take into account price, conservation measures, production rates, or other market factors and are provided only as a reference.

[2] OPEC was founded in 1960 by Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela; in 1975, Algeria, Ecuador, Gabon, Indonesia, Libya, Nigeria, Qatar, and the United Arab Emirates joined, bringing membership to 13 nations. In November 1992, Ecuador withdrew its membership in OPEC.

Table 2-1
Crude petroleum and natural gas: Proven world reserves, by selected producing countries, as of Jan. 1, 1993

Country	Crude petroleum	Natural gas
	Million barrels	*Billion cubic feet*
Algeria	9,200	128,000
Gabon	730	400
Indonesia	6,779	64,388
Iran	92,860	699,200
Iraq	100,000	109,500
Kuwait	94,000	52,400
Libya	22,800	46,200
Nigeria	17,890	120,000
Qatar	3,729	227,000
Saudi Arabia	257,842	182,600
United Arab Emirates	97,700	203,400
Venezuela	62,650	126,492
TOTAL OPEC	766,180	1,959,580
Canada	5,292	95,734
Mexico	51,298	70,900
Newly independent states[1]	57,000	1,942,300
Western Europe	15,829	191,770
United States	24,682	167,062
Other	76,761	458,016
TOTAL WORLD	997,042	4,885,362

[1] Russia accounts for approximately 95–98 percent of NIS totals.

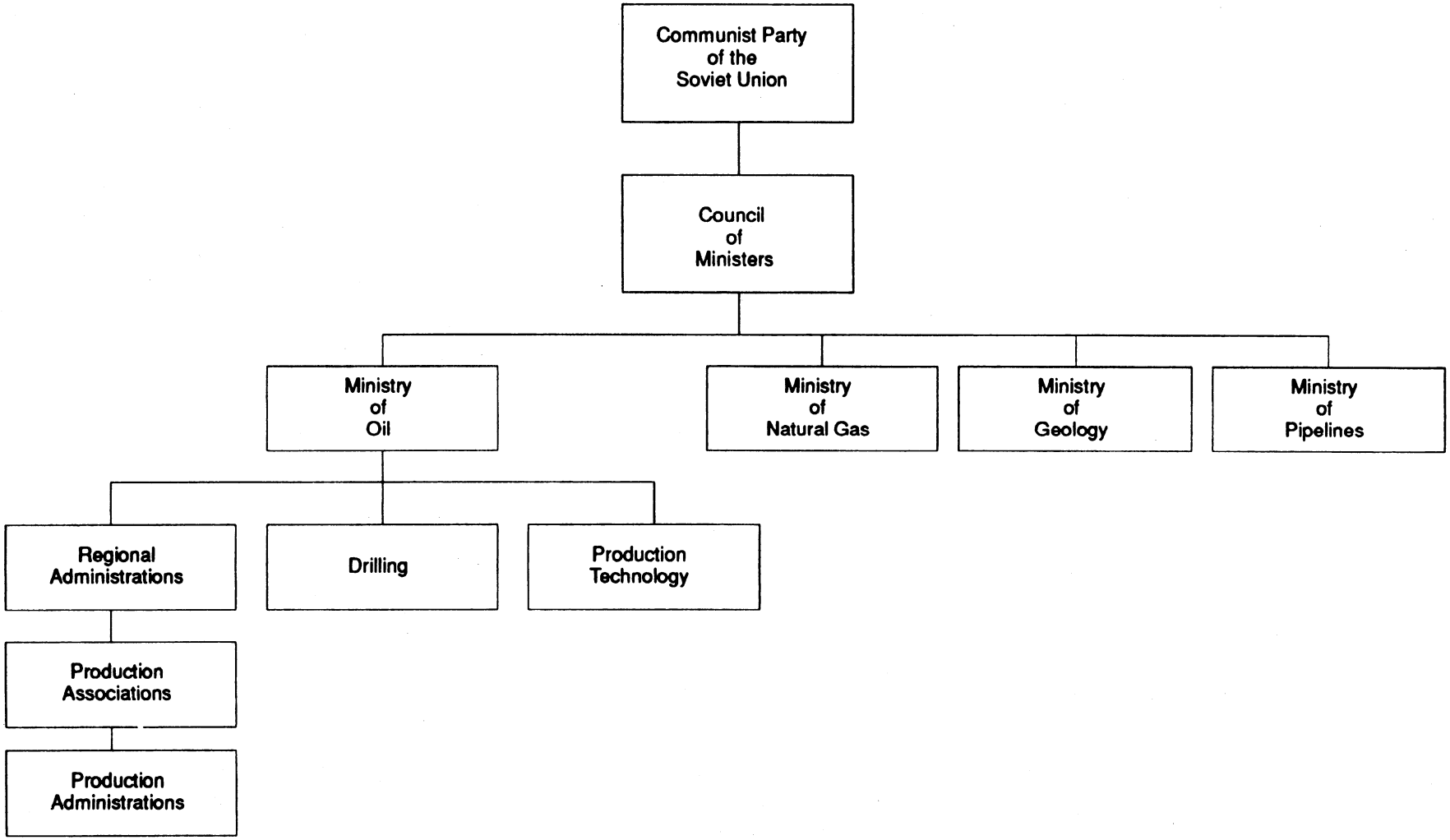
Source: "Worldwide Report," *Oil and Gas Journal*, Dec. 31, 1992.

The NIS Energy Industries

Industry Structure

When the Soviet Union nationalized its crude petroleum and natural gas fields during 1918-20, control of the industries was divided among a number of state ministries (figure 2-1). The ministries set prices, output and investment targets, and were rewarded at each stage of exploration, development, and production on the basis of quantity. For example, the Ministry of Geology and the enterprises under it

Figure 2-1
Structure of the FSU petroleum and natural gas industries



Source: Commonwealth of Independent States: Petroleum Industry Structure and Organization, and Canadian Energy Research Institute, *Oil in the Former Soviet Union.*

were compensated according to the volume of reserves discovered; drilling companies were paid for the number of wells drilled; and producing enterprises were rewarded on the basis of crude petroleum or natural gas produced. There was little direct contact between energy producers and consumers and state trading monopolies controlled domestic and foreign markets as directed by state plans.

Beginning in the late 1980s, a wave of reorganizations intended to rationalize the crude petroleum and natural gas sectors instead increased administrative difficulties. With the rapid decline of central authority in the Soviet Union during 1989-91, administrative structures further disintegrated and have not been effectively replaced in the independent states that emerged.[3] Although a number of NIS have created new, relatively streamlined bureaucracies to set energy policies and to oversee the activities of these sectors, the administrative structure of Russia (the region's largest energy producer) remains a piecemeal legacy of the former Soviet Union (FSU).[4] It is this segmented, overlapping, fluid nature of administrative control that frustrates foreign investors in Russian energy projects. While the Ministry of Ecology and Natural Resources exercises control over most exploration, the Ministry of Fuel and Energy oversees all other phases of development, production, transportation, refining and distribution, and has authority over a number of companies that manufacture petroleum and gas producing equipment. The functional agencies under the Ministry of Fuel and Energy are undergoing substantial transformation. Previously, these agencies bridged the Ministries' central organizations with operating enterprises. However, under provisions of a recent decree by the Russian Government, four vertically integrated entities have been established that are to mirror the organizational and functional capabilities of Western multinational energy firms (figure 2-2).[5] Although regulations are in place, implementation is just beginning; three of the companies—LUKoil, YUKOS and Surgutneftegaz—are joint stock companies, while Rosneft remains under state control.

About 32 Russian production associations (PAs) form the primary enterprise units under the Ministry of Fuel and Energy; as a rule, each energy-producing province (oblast) has one PA, although in the Tyumen region of Western Siberia, 11 PAs are grouped into 1. The PAs operate as vertically integrated enterprises that manage producing fields and capital equipment, including repairs and maintenance, have limited ownership of certain equipment, and may also enter into contracts with foreign partners. The PAs also have a broad range of social responsibilities, such as building hospitals and schools and are, in many cases, very important to the social and economic well-being of the regions in which they operate.[6] As of June 1993, at least 8 PAs have been absorbed into the joint-stock companies formed by Presidential Decree.[7]

In addition to these entities, there are also territorial committees within Russia's major producing regions such as Tyumen, Komi, and Tartarstan, that appear to serve a liaison function. The committees' precise role in communicating central policies to local producers and local interests to top level policy makers remains unclear.

Production

Petroleum.—The major crude petroleum and natural gas-producing states of the NIS are the Russian Federation (Russia), Kazakhstan, Azerbaijan, Turkmenistan, and Uzbekistan. Russia is by far the largest producer in the NIS, accounting for 91 percent of the area crude petroleum and 79 percent of the natural gas in 1991 (figure 2-3). It also has the most extensive transportation network and infrastructure, which are needed to support the exploration and production of these commodities. As a result, Russia is currently attracting a large share of the interest of foreign investors as compared with interest in other NIS.

Until about 1970, technology in the FSU petroleum industry was generally comparable to the United States, then social and political pressures began to obstruct efficient production. Internal demand for continuous increases in extraction of crude petroleum prevailed over technicians' early warnings of the inadvisability of producing crude petroleum at more than the maximum efficient rate.[8] One practice commonly used in the FSU was that of maximizing production by flooding fields with water to force out additional volumes of crude petroleum.[9] This practice,

[3] For information on the decline of central control in the former Soviet Union, see USITC, *Trade Between the United States and China, the Former Soviet Union, Central and Eastern Europe, and Other Selected Countries During January-March 1992*, USITC publication 2539, July 1992, pp. 7 and 11.

[4] "Commonwealth of Independent States: Petroleum Industry Structure and Organization," Sept. 1992.

[5] See ch. 3 for a discussion of privatization.

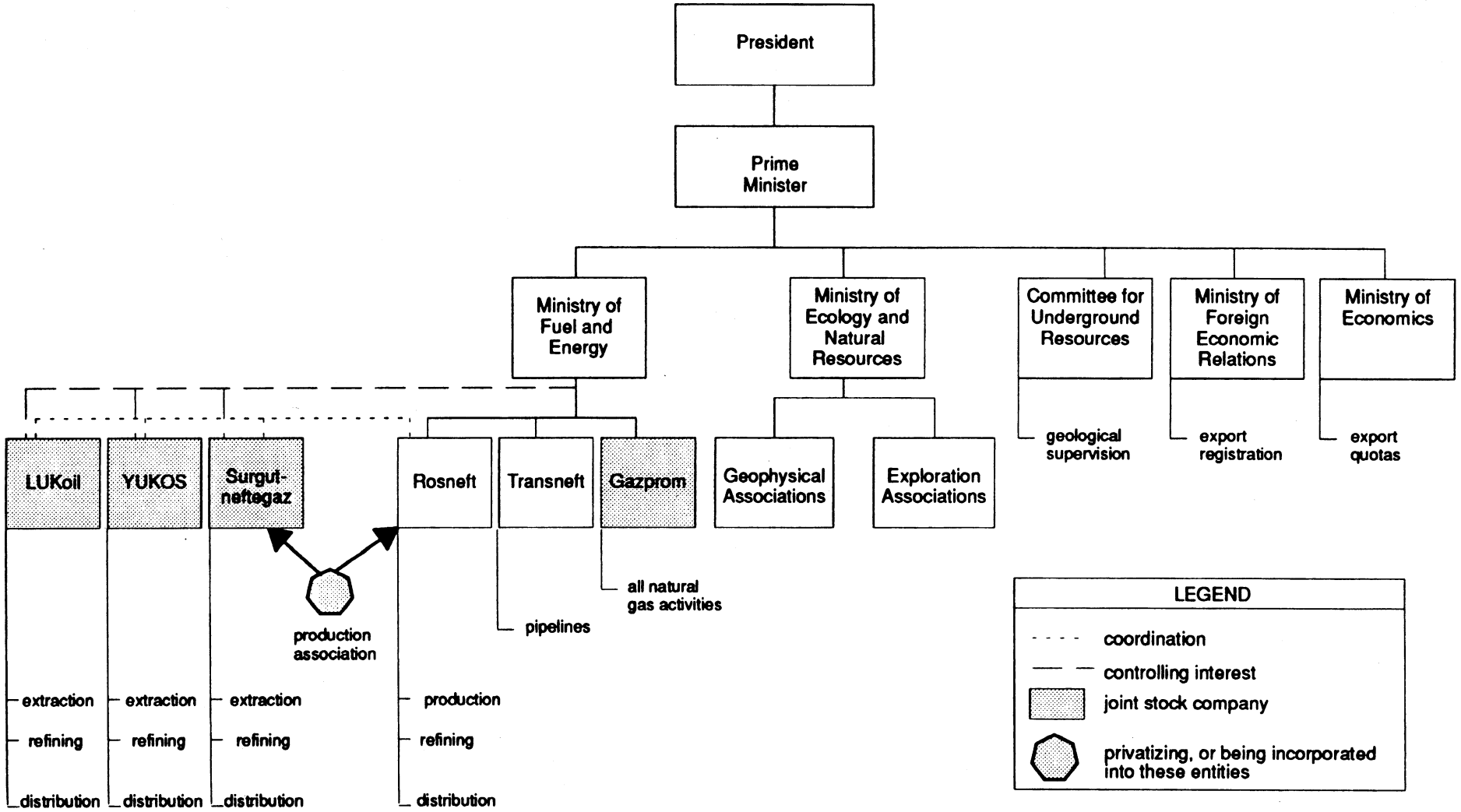
[6] U.S. Department of State telegram, message reference No. 7181, prepared by U.S. Embassy, London, Apr. 22, 1993.

[7] Interfax-America, *Petroleum Report*, May 28-June 4, 1993, p. 6.

[8] The maximum efficient rate is the rate at which extraction of crude petroleum from a given field can be maximized with respect to both total volume recovered and rate of recovery. Canadian Energy Research Institute, *Oil in the Former Soviet Union*, pp. 11-13.

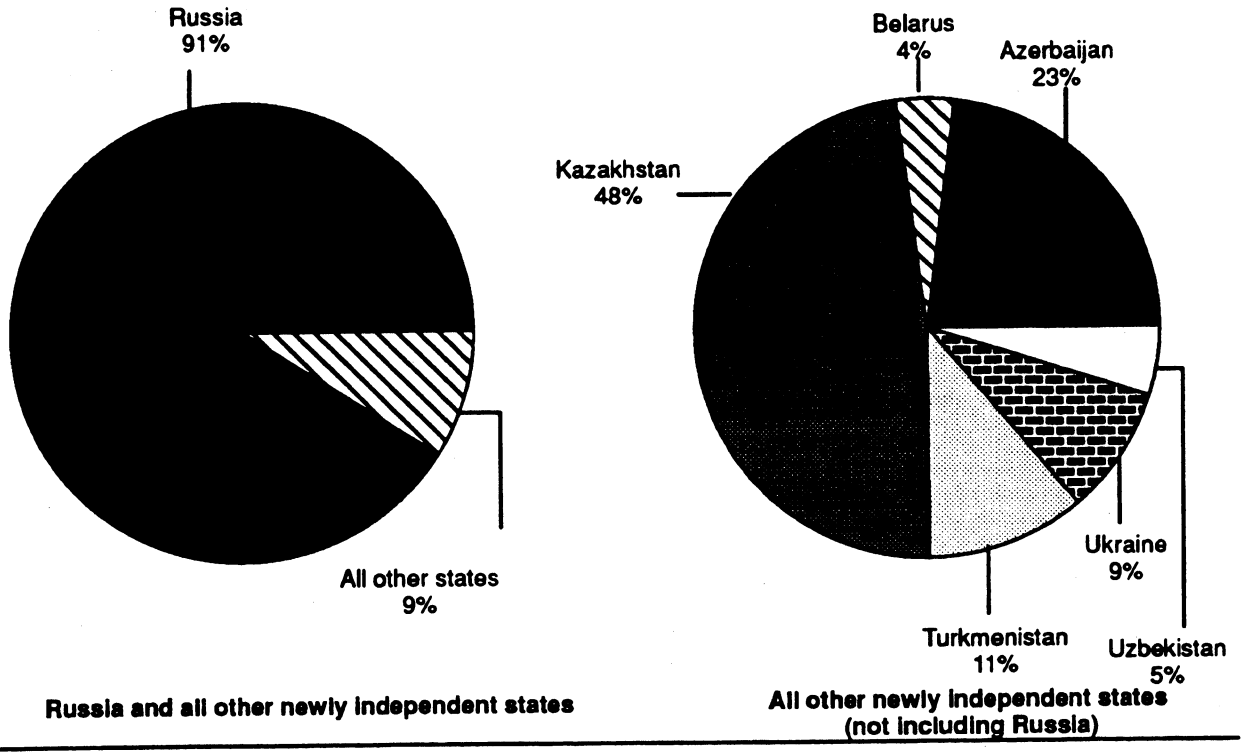
[9] The FSU used water-flooding techniques in most of its wells. This involves drilling multiple wells and injecting water into certain wells to create pressure barriers that force the crude toward designated producing wells. This method initially provides high yields of crude and requires fewer producing wells thus incurring lower production costs; however, injecting a large volume of water into a well under high pressure may cause the water to channel and will then reduce the total amount of crude recovered from a reservoir.

Figure 2-2
Structure of the Russian petroleum and natural gas industries



Source: Commonwealth of Independent States: Petroleum Industry Structure and Organization, Canadian Energy Research Institute, *Oil in the Former Soviet Union*, and Interfax-America, *Petroleum Report*.

Figure 2-3
Share of crude petroleum production in the NIS, 1991



Source: U.S. Department of Energy.

and increasing technological and organizational problems, forced the FSU to move far more rapidly than expected to fields in less promising geographical areas. By the 1980s, expenditures for the maintenance of necessary infrastructure and new technology were sacrificed to maintain short-term production levels. Nevertheless, total production of crude petroleum fell from a high of almost 12 million barrels per day in 1983 to 8.4 million barrels per day in 1992 (table 2-2). The decline in crude petroleum production is also attributed to outdated production technologies and equipment.[10] In the FSU, for example, most drilling equipment and other supplies (pipe) that are used in drilling operations were produced in Azerbaijan. With the dissolution of the Soviet Union and the disruption of the supply distribution system, Russian PAs have had a difficult time obtaining replacement equipment.

Moreover, easily recoverable reserves occurring in shallow, hard-rock formations were found and recovered using turbo-drilling techniques;[11] such reserves are now almost exhausted. The NIS lack the technology to drill deep wells that are often required in harsher environments and require more difficult rotary drilling.[12] For example, NIS exploration techniques

Table 2-2
U.S., FSU/NIS, and world production of crude petroleum, 1982-92

Year	United States	FSU/NIS	World
	1,000 barrels per day		
1982	8,649	11,912	53,481
1983	8,688	11,972	53,255
1984	8,879	11,861	54,488
1985	8,971	11,585	53,981
1986	8,680	11,895	56,227
1987	8,349	11,985	56,601
1988	8,140	11,978	58,662
1989	7,613	11,625	59,773
1990	7,355	10,880	60,471
1991	7,417	9,887	60,221
1992	7,153	8,354	60,141

Source: Official statistics of the U.S. Department of Energy.

[10] USITC field interviews with U.S. petroleum companies.

[11] Turbo-drilling uses a down-hole, turbine-powered drilling mud that turns only the attached bit and not the entire drill string.

[12] Rotary drilling is a system in which both the hollow drill pipe and the bit are rotated at the surface of the well by a rotary table. Drilling mud is pumped down the pipe and out through fluid courses in the bit, forcing the rock cuttings to the surface.

rely on 30-year-old seismic technology that is less effective in locating petroleum-bearing formations than the techniques used by Western companies to routinely discover similar formations.

A lack of sufficient capital is another contributing factor in the decline in NIS energy production.[13] When the FSU reduced its funding to all industrial and production sectors in 1990, capital investment for petroleum production decreased by 4.5 percent from the rate of the previous year.[14]

Natural Gas.—The FSU natural gas industry was not affected by the same problems that plagued the petroleum industry because gas sector infrastructure is relatively new and the industry requires less sophisticated technology to maintain current levels of production. As a result, capital resources were invested in increasing production rather than repairing or replacing current equipment. FSU production of natural gas (which is concentrated in Russia) increased at an average annual rate of about 5 percent during 1982-91, reaching more than 28 trillion cubic feet in 1991 (table 2-3 and figure 2-4).

[13] USITC staff interviews with representatives of major U.S.-based multinational petroleum companies, U.S. Government officials, and petroleum industry analysts.

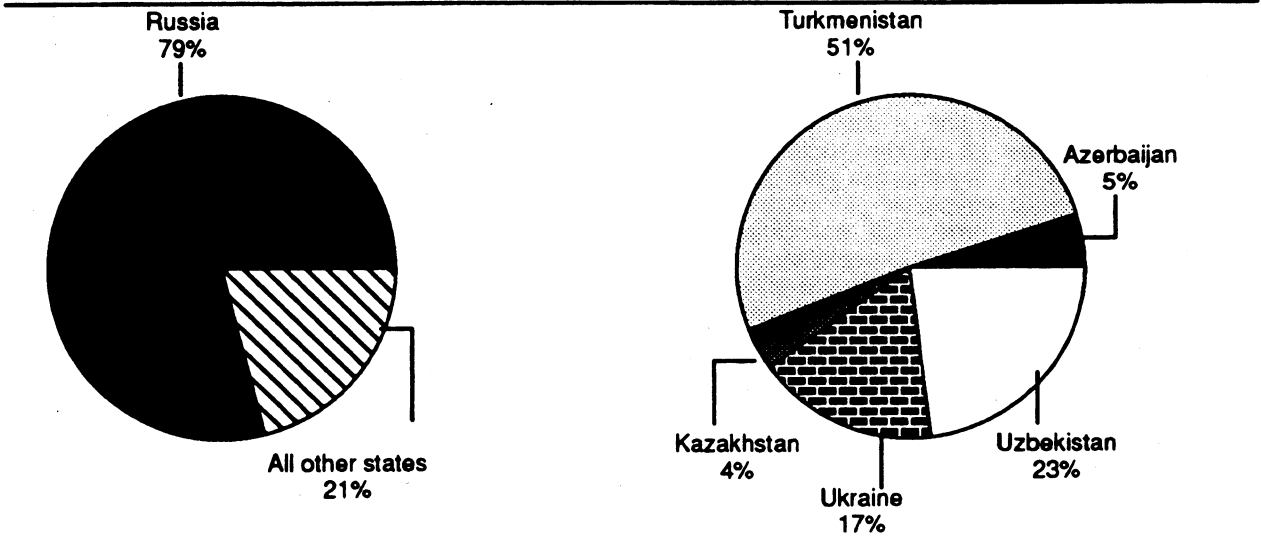
[14] The official exchange rates prevailing in the former Soviet Union during 1989 and 1990 were 0.63 Ruble/$ and 0.59 Ruble/$, respectively. At these rates, capital investment of 15.5 billion rubles amounted to $24.6 billion in 1989 and capital investment of 14.8 billion rubles amounted to $25.1 billion during 1990. However, analysts concur that ruble exchange rates were not meaningful prior to exchange rate unification and the introduction of large-scale interbank currency auctions on July 3, 1992. Unification occurred at the floating exchange rate of 135 Ruble/$. At this rate, the capital investment for petroleum production would have amounted to $115 million during 1989 and to $110 million during 1990. There are no meaningful inflation rates available for 1989 and 1990 to adjust these numbers. For an analysis of ruble exchange rates prevailing at the time of rate unification, see Linda S. Goldberg, *Foreign Exchange Markets in Russia: Understanding the Reforms* (Washington, DC: International Monetary Fund, Jan. 1993). The rate of exchange in mid-June 1993 was 1,072 Ruble/$.

Table 2-3
U.S., FSU/NIS, and world production of natural gas, 1982-92

Year	United States	FSU/NIS	World
	Billion cubic feet		
1982	17,820	17,682	55,683
1983	16,094	18,927	55,308
1984	17,466	20,744	60,094
1985	16,454	22,707	62,615
1986	16,059	24,195	63,786
1987	16,621	25,358	68,410
1988	17,103	27,192	71,317
1989	17,311	28,111	74,352
1990	17,810	28,782	75,294
1991	17,751	28,600	76,038
1992	17,763	(1)	(1)

[1] Not available
Source: Official statistics of the U.S. Department of Energy.

Figure 2-4
Share of natural gas production in the NIS, 1991



Russia and all other newly independent states

All other newly independent states (not including Russia)

Source: U.S. Department of Energy.

Infrastructure.—Because the major energy-producing regions are concentrated in thinly populated Western Siberia while the major domestic and export markets are along the western border, the FSU relied on an extensive pipeline grid to transport energy resources to refineries, export pipelines, and port terminals. Currently, more than 95 percent of the internal movement of energy products is transported through major trunk pipelines,[15] the two most important of which are the Friendship or Druzhba line (for petroleum) and the Siberian (for natural gas).[16]

Transportation arrangements are an important issue within the NIS as many producers must use pipelines or ports that are outside their territory (See figure 2-5, 2-6). For example, only two of the five most important petroleum export terminals remain on Russian soil. New transportation agreements are being negotiated, however. Recent discussions between Russia, the Czech Republic, and Slovakia resulted in an agreement for transmission of natural gas whereby Russia will pay fees to the Czech Republic. The Czechs will pay Slovakia $1.30 for 1,000 cubic meters of gas transported per 100 kilometers. This agreement will continue until June 1994, when the pipeline will be split at the Czech-Slovakian border by a metering station.[17]

[15] Valery Chernyayeu, President Transneft, Vice President of the Rosneftegaz Corp., The Second Annual Russian Oil Conference on The Russian Oil Industry: Foreign Investment Opportunities, London, Feb. 11-12, 1993.

[16] The Siberian trunk pipeline enters the Transgas pipeline of the Czech Republic and Slovakia at Uzhgorod and continues to Western Europe, where it is the main transportation line for German, Austrian, French, and Italian supplies. In 1992, the Transgas pipeline accounted for 70 percent of Russian natural gas exports. USITC field interview in the Czech Republic, Mar. 1993.

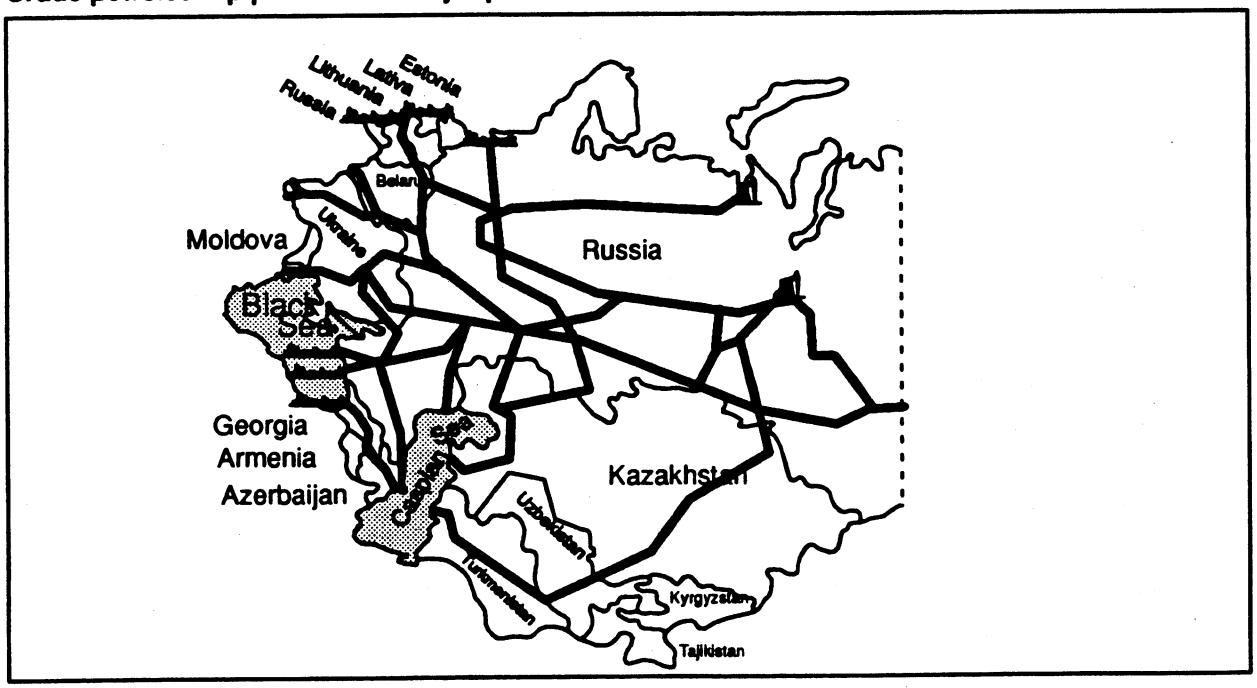
Consumption

Consumption of crude petroleum in the NIS has declined since 1987, while increasing in the United States and other regions of the world (table 2-4). The NIS decline is attributable to a number of factors, including negative economic growth in the NIS; the progressive shift from artificially low prices to market-determined prices; and the displacement of crude petroleum by natural gas for industrial use. The share of NIS energy demand met by natural gas increased during the decade, accounting for 42 percent of the energy consumed in the NIS in 1992 compared with 27 percent in 1982. This shift was largely in response to state export policies that tried to maximize hard currency earnings. Since crude petroleum was more easily transported to foreign markets, domestic consumption was shifted to natural gas.[18] Abundant NIS reserves of natural gas suggest that consumption will remain level or increase in the future.

[17] Ibid.

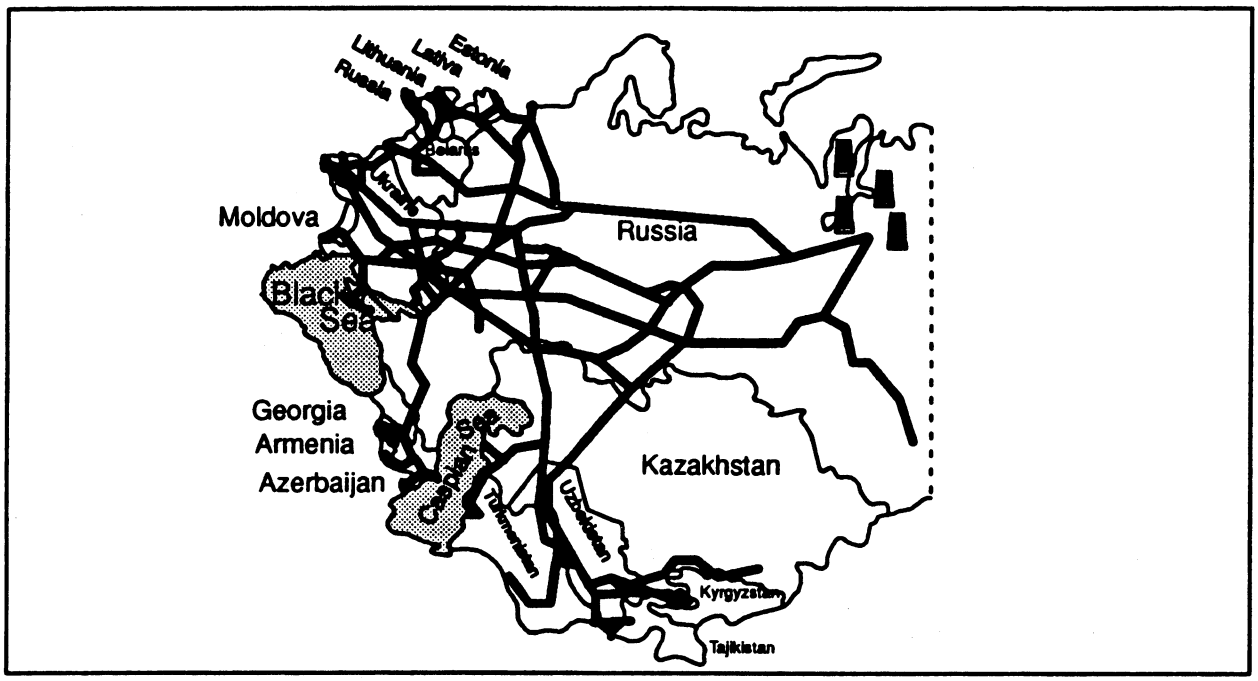
[18] While crude petroleum can be easily transported via pipelines and tankers, the physical nature of natural gas limits transportation primarily to pipelines alone. Natural gas can be liquefied but this process is costly and difficult.

Figure 2-5
Crude petroleum pipelines and major ports of the NIS



Source: Compiled from U.S. Government sources.

Figure 2-6
Natural gas pipelines of the NIS



Source: Compiled from U.S. Government sources.

Table 2-4
U.S., FSU/NIS, and world consumption of crude petroleum and natural gas, 1982–92

Year	Crude petroleum			Natural gas		
	United States	FSU/NIS	World	United States	FSU/NIS	World
	1,000 barrels per day			*Billion cubic feet*		
1982	11,901	9,253	59,503	18,701	15,522	71,927
1983	11,853	9,218	58,744	16,957	16,823	65,219
1984	12,124	8,651	59,836	18,254	18,512	70,208
1985	11,968	8,650	60,098	17,349	20,302	66,727
1986	12,704	8,975	61,762	16,748	21,522	64,415
1987	12,872	8,995	63,010	17,560	22,462	67,538
1988	13,092	8,890	64,832	18,329	24,129	70,496
1989	13,347	8,890	66,030	18,586	24,529	71,485
1990	13,107	8,740	66,155	19,256	24,961	72,845
1991	13,083	8,600	66,604	19,395	25,000	74,596
1992	13,093	[1]8,300	[1]67,906	19,569	[1]25,000	[1]75,265

[1] Estimate.
Source: Official statistics of the U.S. Department of Energy.

Trade Patterns

Due to its vast indigenous supply of energy resources, the FSU had little need to import crude petroleum and natural gas. Imports of crude petroleum (most of which came from Arab OPEC countries) were about 3 percent of consumption in 1990, and imports of natural gas (primarily from Eastern European nations) averaged less than 0.5 percent of production annually during the decade.

The FSU was, however, heavily dependent on exports of crude petroleum and natural gas for revenues. These commodities accounted for over 45 percent of total trade and up to 80 percent of convertible currency earnings during the late 1980s and early 1990s. During the first half of 1992, energy products generated about half of Russia's total export revenues.[19] Indeed, the need for hard currency was the

[19] Yuri Yershov, "Soviet Export of Fuel and Energy Materials," *Foreign Trade*, No. 8, 1990, p. 22.

primary force behind FSU energy exports during the decade. Exports of crude petroleum fluctuated in an effort to maintain FSU buying power despite erratic global petroleum prices (table 2-5 and figure 2-7). A second significant factor dictating FSU export levels was the level of crude petroleum and natural gas production. Despite production difficulties in the petroleum industry, crude petroleum exports averaged about 20 percent of production for the 1982-1992 period. Since dissolution of the FSU, exports have declined to about 14 percent of production. During 1982-92, FSU exports of crude petroleum peaked in 1988 at 2.8 million barrels per day but subsequently fell to 1.5 million barrels per day in 1992.

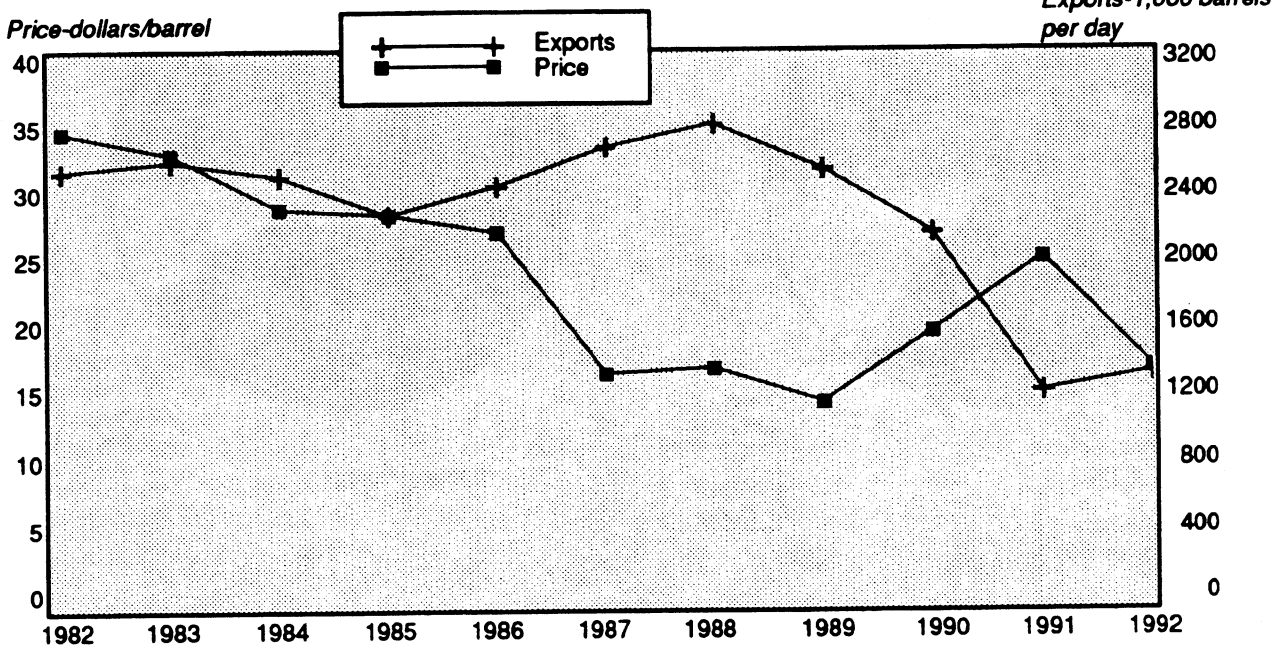
Table 2-5
FSU/NIS Imports and exports of crude petroleum and natural gas, 1982–92

Year	Crude petroleum		Natural gas	
	Imports	Exports	Imports	Exports
	1,000 barrels per day		*Billion cubic feet*	
1982	100	2,500	80	2,240
1983	140	2,600	80	2,185
1984	264	2,509	80	2,312
1985	262	2,275	105	2,510
1986	240	2,450	105	2,778
1987	291	2,684	78	2,973
1988	396	2,826	78	3,140
1989	167	2,554	36	3,618
1990	271	2,170	54	3,935
1991	0	1,215	(1)	3,677
1992	(1)	1,468	(1)	3,500

[1] Not available.

Source: Official statistics of the U.S. Department of Energy, Interfax *Petroleum Report*, and *Petroleum Intelligence Weekly*.

Figure 2-7
Relationship of the FSU/NIS crude petroleum exports to aggregate world petroleum prices, 1982-1992



Source: U.S. Department of Energy.

The search for hard currency also shifted export markets from other NIS and Eastern European countries (primarily East Germany, Czechoslovakia, and Poland) to markets in Western Europe (Finland, Italy, France, West Germany) (figure 2-8). For example, between 1991 and 1992, Russian deliveries of crude petroleum to other NIS countries dropped from 1.2 billion barrels to 557 million barrels.[20] Although the FSU supplied 75 percent or more of Eastern European crude petroleum consumption during the 1980s,[21] trade was often conducted at concessionary prices in transferable rubles or through barter in exchange for construction services and equipment to build transportation infrastructure.[22] Western markets offered hard currency.

[20] Interfax America, *Petroleum Report*, Feb. 12-19, 1993, p. 9.

[21] Etienne H. Deffarges, Donald J. Howard, and John E. Treat, "Central European projects could alter oil movement patterns," *Oil & Gas Journal*, Aug. 19, 1991, p. 49.

[22] For example, the Orenburg and Yamburg gas pipelines were constructed on FSU soil using East European workers and supplies. Poland's involvement in the Yamburg pipeline consisted of building a 360-kilometer stretch of pipeline and related facilities in exchange for 45 billion cubic meters of natural gas annually at below world market prices over a 20-year period. The former Czechoslovakia and East Germany, Hungary, and Bulgaria also contributed extensively to the project and reportedly received various amounts of natural gas at below world market prices for their work.

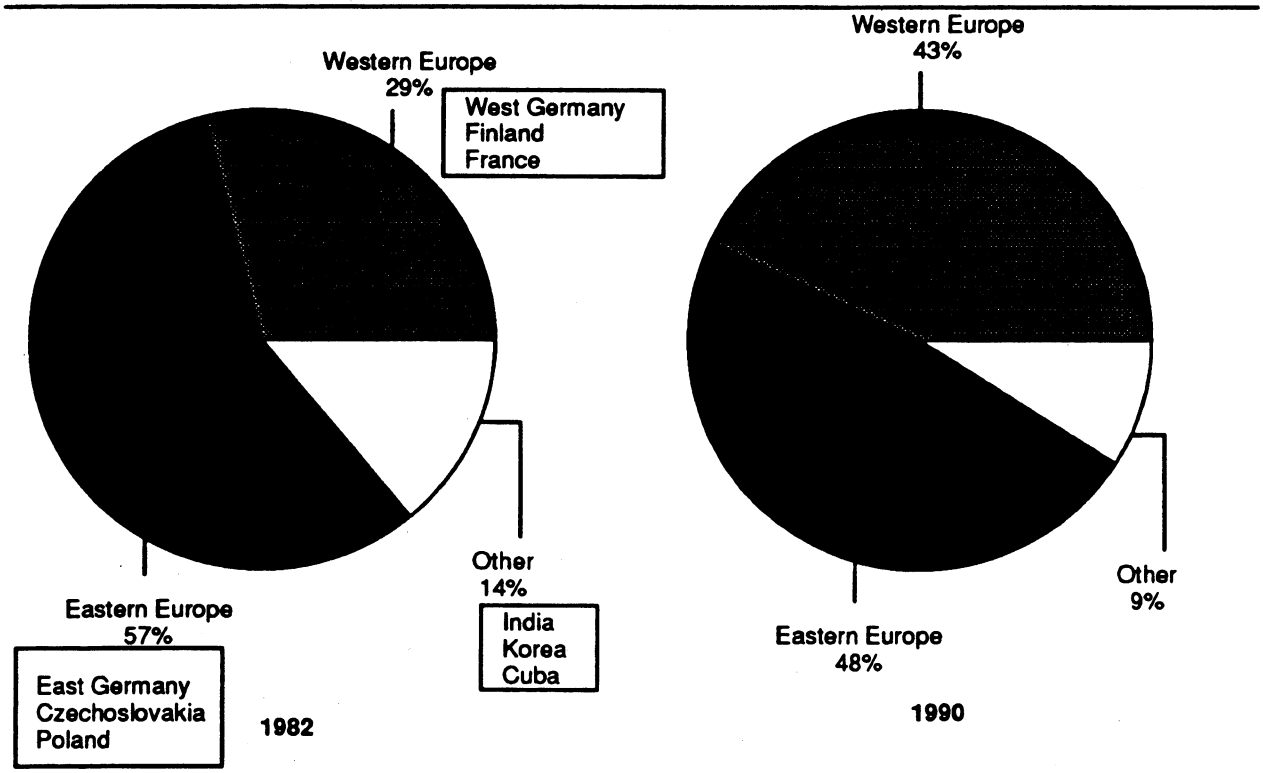
FSU export markets for natural gas were far more limited than were markets for crude petroleum because of transmission restrictions. During the past 10-year period, FSU exports of natural gas averaged 12 percent of production, increasing from 2.2 trillion cubic feet in 1982 to 3.5 trillion cubic feet in 1992. The major export markets were the countries of Eastern and Western Europe; during 1992 approximately half of all Russian exports of natural gas went to Western Europe.

The U.S. Energy Industries

Industry Structure

In the United States, about 19,000 companies are involved in the production of crude petroleum and natural gas. Approximately 70 percent of total U.S. production of crude petroleum is accounted for by the large, multinational companies (such as Exxon, Mobil, and Shell) that are involved in both U.S. and foreign exploration and production, and U.S. trade. These

Figure 2-8
FSU export markets for crude petroleum, 1982 and 1990



Source: U.S. Department of Energy.

companies typically obtain the rights to explore and develop underground resources. The remaining exploration and production is handled by smaller companies (e.g., wildcatters), often under arrangements with the larger firms. Oilfield service companies compose another segment of the industry. As readily accessible domestic reserves have become depleted, exploration and drilling have moved into harsher environments such as Alaska and offshore. In response, new and more sophisticated recovery technology has been developed and implemented. Oilfield service firms contract to operate drilling equipment, as well as to service wells on a contract-fee basis.

Production

As a result of the sharp decline in the world price of crude petroleum from $25 in 1985 to $12.50 in 1986, marginal wells in the United States were shut down and U.S. exploration and production began to decrease. Production fell from a high of almost 9 million barrels per day in 1985 to about 7 million barrels per day in 1992. Marginal U.S. production is unable to absorb such price declines largely because of higher operating costs in the United States, compared with those in other producing areas throughout the world. Stricter environmental regulations and depletion of easily accessible (low-cost) reserves, in conjunction with the decrease in world prices, also contributed to reduced economic viability of many U.S. wells during this time.

Consumption

Consumption of crude petroleum in the United States generally increased during 1982-92 due largely to the relative abundance of less expensive crude petroleum on the world market and expanded industrial activity. There was a slight decline in crude petroleum consumption during 1990-91 in anticipation of shortages resulting from the Persian Gulf war. Domestic consumption of natural gas remained relatively stable throughout the decade.

Trade Patterns

Imports.—The United States has become increasingly dependent on imported crude petroleum during the last decade as domestic production decreased. U.S. imports of crude petroleum rose from 23 percent of U.S. consumption in 1982 to 46 percent in 1992. U.S. imports increased from 3.5 million barrels per day to over 6 million barrels per day during that period (table 2-6). Moreover, there was a gradual increase in imports from OPEC countries. In 1982, almost 50 percent of total U.S. imports were from OPEC sources; in 1992, such imports had increased to about 57 percent of total U.S. crude petroleum imports. Although there were several significant non-OPEC sources of U.S. crude petroleum imports during the period, including Canada and Mexico, the three OPEC countries of Venezuela, Nigeria, and Saudi Arabia, supplied 51 percent of all imports (table 2-7). In response to increased dependency on imported oil and reliance on limited sources, the United States is trying to lessen its dependence on Middle East crude petroleum.[23]

[23] Honorable Greg Laughlin (D-TX), U.S. House of Representatives, prehearing submission to the USITC, Jan. 29, 1993, p. 2.

Table 2-6
U.S. imports and exports of crude petroleum and natural gas, 1982–92

Year	Crude petroleum		Natural gas	
	Imports	Exports	Imports	Exports
	1,000 barrels per day		*Billion cubic feet*	
1982	3,488	236	933	52
1983	3,329	164	918	55
1984	3,426	181	843	55
1985	3,201	204	950	55
1986	4,178	154	750	61
1987	4,674	151	993	54
1988	5,107	155	1,294	74
1989	5,843	109	1,382	107
1990	5,894	142	1,532	86
1991	5,782	116	1,773	129
1992	6,054	114	2,051	245

Source: Official statistics of the U.S. Department of Energy.

Table 2-7
Crude petroleum: U.S. imports, by principal sources, 1982-92

(1,000 barrels per day)

Source	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Arab OPEC:											
Saudi Arabia	530	321	309	132	618	642	911	1,116	1,195	1,703	1,595
Algeria	90	176	194	84	78	115	58	60	63	44	24
United Arab Emirates	81	18	90	35	38	56	23	21	9	2	0
Iraq	3	10	12	46	81	82	343	441	514	0	0
Kuwait	2	7	24	4	28	70	80	155	79	6	39
All other	30	1	5	(1)	11	(1)	(1)	1	4	(1)	(1)
Total	736	533	634	300	854	965	1,415	1,794	1,864	1,754	1,657
Non-Arab OPEC:											
Nigeria	510	301	207	280	437	529	607	800	784	683	665
Indonesia	226	315	304	292	297	262	186	158	98	102	70
Venezuela	155	164	253	306	416	488	439	495	666	668	822
Gabon	40	59	57	51	25	35	15	49	64	84	123
Ecuador[2]	32	56	47	56	64	23	33	80	38	53	57
All other	35	48	10	27	19	98	1	(1)	(1)	32	(1)
Total	988	944	878	1,012	1,259	1,435	1,281	1,582	1,650	1,622	1,737
Non-OPEC:											
Mexico	645	766	659	715	621	602	674	716	689	759	785
Canada	214	274	341	468	570	608	681	630	643	743	787
United Kingdom	441	365	378	278	317	304	254	160	155	106	200
Norway	102	65	112	31	53	70	62	127	96	74	119
Trinidad and Tobago	92	83	87	98	93	75	71	73	76	72	70
All other	260	300	337	298	411	615	669	761	722	651	699
Total	1,754	1,853	1,914	1,888	2,065	2,274	2,411	2,467	2,381	2,405	2,660
Grand total	3,488	3,329	3,426	3,201	4,178	4,674	5,107	5,843	5,895	5,781	6,054

[1] Less than 500 barrels per day.
[2] Ecuador withdrew its membership in OPEC in November 1992.

Note.—Because of rounding, figures may not add to the totals shown.

Source: Compiled from official statistics of the U.S. Department of Energy.

U.S. trade patterns in natural gas are quite different from those of crude petroleum for two reasons—self-sufficiency[24] and limited transportability. Although U.S. imports more than doubled during the decade from 933 billion cubic feet to 2.1 trillion cubic feet, imports averaged only 6 percent of consumption throughout the period. Most natural gas imports came from Canada (approximately 93 percent), spurred by the adoption of the U.S.-Canada Free-Trade Agreement in 1989, increased U.S. demand, Canadian Government policy changes, increased pipeline capacity, and favorable pipeline transmission tariffs.[25]

Exports.—In contrast to the collective NIS, the world's third-largest exporter of crude petroleum in 1992, U.S. exports of crude petroleum are prohibited, except as approved by the U.S. Government.[26] During the past 10-year period, total crude petroleum exports averaged 1 percent of consumption. Such exports have primarily been Alaskan North Slope crude petroleum exchanged under a commercial agreement between U.S. and Canadian refiners,[27] although some test shipments were exported to the Republic of Korea, Taiwan, and Australia.[28]

Since most natural gas exports are transported by pipeline to contiguous countries, the United States has consistently exported natural gas to Canada and Mexico. Total U.S. exports to all sources increased significantly during the period rising from 52 billion cubic feet to 245 billion cubic feet. Even so, exports are still an insignificant part of U.S. natural gas commerce, averaging approximately 1 percent of production during the period.

A significant increase in U.S. natural gas exports to Mexico occurred between 1988 and 1992 when exports rose from 2 billion cubic feet to 94 billion cubic feet.[29] This surge is attributed to Mexico's new air pollution regulations[30] and increased industrial demand in northern Mexico, which lacks the necessary transportation infrastructure to utilize Mexican reserves from the southern part of the country.

[24] U.S. natural gas production can satisfy over 90 percent of current domestic demand.

[25] U.S. Department of Energy, Energy Information Administration, *Natural Gas 1992, Issues and Trends* (Washington: GPO, 1993), pp. 7 and 39.

[26] The export of crude petroleum is prohibited under the provisions of the following laws: sec. 103 of the "Energy Policy and Conservation Act," Public Law 94-163, Dec. 22, 1975; the "Export Administration Act of 1979," Public Law 96-72, Sept. 29, 1979; the "Naval Petroleum Reserves Production Act of 1976," Public Law 94-258, Apr. 5, 1976; and the "Trans-Alaska Pipeline Authorization Act," Public Law 93-153, Nov. 16, 1973.

[27] Alaskan North Slope crude petroleum can be exported to an adjacent foreign country to be refined and consumed therein in exchange for the same quantity of crude petroleum being exported to the United States provided—(1) the exchange will result in lower prices for consumers of petroleum products in the United States; (2) within 3 months of the exchange, the transaction results in lower acquisition costs to the refiner than the refiner would have to pay for domestically produced crude; and (3) at least 75 percent of cost savings must be reflected in wholesale and retail prices of products refined from such imported crude. For additional information see USITC, *Industry and Trade Summary: Crude Petroleum*, USITC publication No. 2574, Nov. 1992.

[28] These shipments were made on a test basis in order to determine the marketability of Alaskan North Slope crude petroleum on the world market during the current surplus conditions.

[29] U.S. Department of Energy, *Natural Gas 1992*, p. 10.

[30] Since 1991, anti-air pollution regulations in Mexico have been in effect requiring power generation facilities and industrial users to burn more natural gas. Ibid., pp. 7-10.

CHAPTER 3
NIS Restrictions to Foreign Investment in the Energy Sectors

The newly independent states (NIS) that emerged from the dissolution of the Soviet Union in 1991 were left a legacy of obsolete production facilities, huge and inefficient state-owned monopoly producers, archaic telecommunications systems, inadequate transportation and distribution systems, almost nonexistent wholesale structures, and economies in crisis. Physical conditions in the crude petroleum sector were poor in areas such as maintenance and repair, efficiency of reservoir recovery, safety, and environmental protection. The sector also suffered from lack of access to modern technology and management techniques.[1] There are 32,000 abandoned crude petroleum wells in Russia, up from 25,000 in 1992 and 7,000 in 1988.[2] In Russia's natural gas sector, low levels of capital investment have limited expansion and development of reserves. The major need in the gas sector is to increase the reliability of gas pipelines and compressors to stop leakage. At least 40,000 km of Russian gas pipelines are more than 20 years old and need repair.

Russia and the other energy-producing states need major infusions of foreign investment to halt current crude petroleum production declines and to increase efficiencies in their energy sectors. It is estimated that Russia's crude petroleum sector alone needs an initial investment of $25 billion and then capital injections of $6-7 billion annually to regain its 1988-89 production levels by the year 2000.[3]

Generally, conditions for attracting foreign investment in the NIS, although poor, are slowly improving. The investment climate in the crude petroleum and natural gas sectors is not the same throughout the energy-producing states. For example, investors note that Kazakhstan and Azerbaijan provide a favorable investment climate that encourages foreign investment in their energy sectors. In contrast, "uncertainty" is the watchword in Russia. Conflicting laws, burdensome regulations, onerous taxation, and jurisdictional struggles between local and central authorities remain unresolved problems and continue to frustrate foreign investors. In spite of these problems geological risk is slight, and investors are lured to Russia by the promise of its enormous hydrocarbon reserves. But investors in Russia have been reluctant to commit large sums of capital. More than 40 joint venture (JV) crude petroleum and natural gas projects operating in Russia have generated $200-$300 million in foreign investment, a relatively small amount, considering the vast amounts of capital the country needs to revitalize its industry.[4]

This chapter examines some of the major NIS-related impediments to foreign investment in the energy sectors with emphasis on the Russian Federation. It also examines some of the various forms investment can take.

Investment Impediments

Lack of a Legal and Regulatory Framework

In the absence of comprehensive petroleum and gas legislation, numerous decrees and regulations have been promulgated for Russia's crude petroleum and natural gas sectors. The regulations are constantly changing, often tend to be unclear, and are sometimes contradictory. Many different parties are involved in the formulation and implementation of Russia's energy sector legislation, including various government ministries and a number of foreign advisors. Given the different goals of each of these groups, it is not surprising that there is little cohesion in the resulting legislation, or that the investment climate is confused.

The legal uncertainty in Russia is aggravated by the confused relations between the Federal Government and autonomous local governments. Contracts must be signed not just between the companies concerned, but also with local and Federal authorities after approval by various subcommittees of the Supreme Soviet. Russian officials admit that the administrative hurdles are difficult to overcome, but they have expressed optimism that new, pending comprehensive legislation will address some of the problems.[5] The major existing legislation used to

[1] For further details on these and other problems, see, Organization for Economic Cooperation and Development (OECD), Committee on Non-Member Countries, *Final Report of the Energy Working Group*, Oct. 29, 1992.

[2] USITC field interviews in Moscow, Mar. 1993.

[3] Deutsche Bank Research, *Focus: Eastern Europe*, Jan. 6, 1993, No. 66, p. 4.

[4] Interfax-America, *Petroleum Report*, May 14-21, 1993, p. 7.

[5] USITC field interviews in Moscow, Mar. 1993.

regulate Russia's crude petroleum and natural gas sectors includes the following:

Law on Foreign Investment.—Adopted in 1991, this law is similar to a foreign investment law adopted by the former Soviet Union (FSU) with a major exception: the Russian law does not contain a grandfather clause. Russia's foreign investment law allows for the exploitation of natural resources and stipulates that special concession agreements must be entered into with authorized agencies.[6] The legislation to create these agencies is still pending, however, and in their absence, agreements are being approved by authorities under the Law on Mineral Resources and regulations contained in a resolution issued by the Supreme Soviet.[7] However, contrary to stipulations in the Law on Mineral Resources that require public competition (bid or auction) for exploration and extraction licenses, some companies have negotiated directly with government officials for licensing agreements.[8]

Law on Mineral Resources.—Also referred to as the Law on Subsoil, the Law on Mineral Resources was passed by the Russian Parliament in February 1992, ending the state's monopoly that precluded foreign investors from obtaining leases for petroleum, gas, and mineral development.[9] This law stipulates that Russia owns all subsoil natural resources, but that local governments have the right to participate in decisions on how to develop and use the subsoil resources within their boundaries.

The Law on Mineral Resources also specifies the requirements for obtaining exploration, extraction, and other licenses. The licensing function is divided between Federal and local authorities, and the law stipulates that all licenses for exploration and extraction be issued by public competition. Five types of licenses are provided for: exploration license, not to exceed a duration of 5 years; extraction license, not to exceed 20 years; license for nonextractive uses; license for the protection of geological features; and license for the collection of mineral samples. Exploration and extraction licenses may be combined into a single license for a period of 25 years. However, if these licenses are not initially combined, the law expressly provides that the holder of the exploration license does not have a priority right to an extraction license.

In practice, the auction and tender procedures that are required by law for the issuance of licenses are not being followed, and are, as noted above, in some cases supplanted by direct negotiations.[10] Investors generally see this disparity as another example of practice in Russia not following stated principle.[11]

Pending legislation in Russia includes the following:

Draft law on concessions and production sharing.—This legislation, which has been awaiting enactment for more than a year, is intended to regulate grants of exploration and development rights for foreign investment in the petroleum and natural gas sectors. The draft text provides for long-term leases for certain geographic areas based on a license granted to a foreign investor. Two types of licenses are specified: licenses for exploration that may be issued for up to 3 years and extended for an additional 2 years; and licenses for production and development that may be issued for up to 30 years and extended for an additional 50 years by decision of the legislature.

An obvious problem with the draft concessions law is that the time periods for licenses extended under it conflict with those established by the Law on Mineral Resources.[12] Moreover, the Law on Mineral Resources stipulates that licenses may be granted only by auction or competitive bid. The draft law on concessions, by contrast, expressly permits direct negotiations.[13]

Draft crude petroleum and natural gas legislation.—The Law on Mineral Resources is not specific to petroleum and gas. Since mid-1992, Russian officials have promised comprehensive petroleum and natural gas legislation to overhaul the existing legal basis for foreign investment in these sectors.[14] A compromise draft document was submitted to the Supreme Soviet on March 11, 1993, but constitutional questions and political issues preoccupied Parliament at that time, and action on the draft legislation was delayed.[15] Consideration of the draft resumed in June, but there is no timetable for its approval and implementation.

[6] See art. 40 of the "Law on Foreign Investments in the RSFSR," under Russia, in app. D.

[7] Resolution No. 3314-1, dated July 15, 1992, "Regulations on the Order of Licensing in the Use of Mineral Resources."

[8] Attorney at the law firm of Chadbourne & Parke, interview with USITC staff, Mar. 31, 1993.

[9] Foreign investors can participate in exploration and development unless specifically prohibited from doing so by other laws. Laws governing foreign investment in other energy-producing states provide similar "escape clauses" for the respective national legislatures. For example, see article 3 of the law "On Concessions in the Republic of Kazakhstan" and article 6 of the law "On the Protection of Foreign Investment" under Azerbaijan in app. D.

[10] USITC field interviews in London and Moscow, Mar. 1993.

[11] Ibid.

[12] For more details, see "Law on Mineral Resources" in app. D.

[13] USITC field interviews in Moscow, Mar. 1993.

[14] There have been four different versions of the petroleum and natural gas legislation, each with a different vision of the role foreign investment should play in the Russian energy sector.

[15] For background information on the constitutional crisis in Russia and the implications for investors in the petroleum sector, see, Stephen MacSearraigh, "Impasse: Western love affair turns sour as Russians head for the polls," *Nefte Compass* (London), Apr. 23, 1993, pp. 1-2.

The draft petroleum and gas legislation is expected to address all levels of activity from production and processing, to transport. It is also expected to (1) separate completely the functions of state management in the sector from those of industry-related management; (2) eliminate local monopolies in the sector; and (3) develop market infrastructure.[16] Reportedly, the new legislation will also overhaul the current system of licensing and taxation, and issue new rules concerning petroleum and natural gas pipelines and environmental protection.[17] Russian officials note that the new legislation will be just a beginning; implementing rules and regulations on both the Federal and local levels will be necessary.[18]

Uncertain Taxation Regime

Various and increasingly complex duties and taxes are a major impediment to foreign and domestic investment in the NIS. The tax system that faces investors in Russia's petroleum and natural gas sector can endanger the economic viability of existing and planned capital projects. The most frequently expressed concerns from investors are that taxes are too numerous, have unclear provisions and deductions, are frequently changed, and are introduced without warning or apparent logic.[19]

The overall levy on typical projects can be ruinous because the taxation system is not based on profitability.[20] Generally in other countries, start-up money is spent by the investor, the project is developed, costs are recovered, and later, higher tax rates are imposed on project profits. In Russia, however, taxes are imposed on revenue flows rather than profits.[21]

Officials from the Russian Subcommittee on Taxation estimate that taxes absorb 52 percent of the gross revenues of petroleum projects.[22] However, Price Waterhouse analysts estimate that Russian taxes absorb as much as 75 percent of gross revenues and impose a loss of $45 on each ton of petroleum produced.[23] Another estimate places the tax bite as high as 80 percent of gross revenues.[24] There are over 15 taxes with which energy-producing ventures in Russia must contend. Major components of the tax system include—[25]

1. Export tax—levied at 30 European Currency Units/ton ($5.15/barrel) on crude petroleum sold abroad.
2. Production royalties—combined state and local assessment equal to 16 percent of the gross value (world price) of production.
3. Profits tax—levied at 32 percent on taxable income, but with straight line depreciation expensing of certain outlays (excluding interest), full loss carry-forward provisions, and deduction for reinvested earnings (up to 50 percent of taxable income).
4. VAT—20 percent of the cost of all domestic and imported inputs.
5. Social reserve fund—a levy equal to 37.5 percent of total wages, collected for the purpose of rebuilding social infrastructure.
6. Repatriation tax—For U.S. investors, 5 percent of remitted funds. Could be higher or lower for legal residents of other jurisdictions.[26]

Many investors rely on special exemptions from some of the levies based on the timing of their venture formation. They do so with some degree of uncertainty, particularly since the tax exemption procedure is complicated and some companies have found the implementation of their exemption delayed for unspecified lengths of time. Companies engaged in exploration or in new field development claim that the tax situation is so uncertain that they are unable to

[16] Interfax-America, *Petroleum Report*, Aug. 14, 1992, p. 5.

[17] Ibid.

[18] USITC field interviews in Moscow, Mar. 1993.

[19] Ibid. In addition to investor complaints, Russian private sector representatives have also questioned the reasonableness of the current tax structure. Some maintain that the exorbitant taxes are not to help the industry as government officials maintain, but are in reality an attempt by the Ministry of Finance to raise revenue for the Federal treasury. For example, in spite of recent petroleum price increases, almost all of the increased revenues have been offset by increased excise taxes. Russian officials justify their high and increasingly numerous taxes by the need to provide for the social safety net as unemployment rises. They also point to International Monetary Fund (IMF) requirements that made IMF support contingent upon the Russian Government's taking control of its budget deficit.

[20] James L. Smith, "Tax and investment update: Poor economic prospects face investors in the Russian oil industry," Department of Economics, University of Houston, Apr. 5, 1993.

[21] U.S. State Department telegram, message reference No. 7181, prepared by U.S. Embassy, London, Apr. 22, 1993.

[22] Sergey Gorbachev, First Deputy Minister of Finance, Second Annual Russian Oil Conference, "The Russian Oil Industry: Foreign Investment Opportunities," London, Feb. 11-12, 1993. (Hereafter cited as "Conference Proceedings.")

[23] Byron Ratliff, Director of Petroleum Services, Price Waterhouse, Conference Proceedings.

[24] Vyacheslav Nikiforov, Director, Economic Department, Rosneftegaz, Conference Proceedings.

[25] Smith, op. cit.

[26] As of the end of the first quarter 1993, other taxes on revenue included—mineral use tax (8 percent), mineral resource tax (10 percent of the domestic sales price), excise tax (0-30 percent, according to geological characteristics), price regulation fund tax (10-30 percent of the price per ton net of excise duty), and a $3.50-per metric ton port charge. In addition, the personal income tax is 40 percent; the profit repatriation tax, 15 percent; and the finance charge on currency exchange, 1 percent. Companies were also paying excise taxes on the wages they paid. (Compiled from information supplied by the Petroleum Advisory Forum and Ernst and Young, Moscow).

assess with reasonable accuracy the amount of tax that they will have to pay when production begins.[27]

Domestic Russian companies are not exempt from the onerous tax bite. According to Russian officials, the taxation situation has contributed to the bankruptcy, insolvency, or forced suspension of production of virtually every production association (PA).[28]

The Russian export tariff instituted in a December 31, 1991, decree is the most controversial tax. The tariff rate, approximately $5.15 per barrel, is equal to about 30 percent of the world petroleum price. Russian officials say the tariff was established to balance the difference between international and domestic petroleum prices in an effort to curtail illegal sales by producers. In addition, some broker firms were buying the low-priced petroleum domestically for resale at higher prices on the world market.[29]

The export tariff reportedly met with nearly unanimous disapproval from foreign companies who claimed the high tariff made their operations in Russia uncompetitive in world markets.[30] Technically, exemptions from the tariff are to be granted to JVs that have at least 30-percent foreign capital and that are registered prior to January 1, 1992, when the export tariff took effect.[31] The exemption is effective until investment costs are recouped. However, some of the exemptions are not being honored by Customs officials.[32] Russian officials have indicated that the controversial duty, which is a significant source of revenue for the Federal treasury, will not end until the difference between internal and external prices is eliminated, perhaps by 1996. (See section below on "Petroleum and Natural Gas Price Controls.")

Representatives from Western governments and multilateral organizations, such as the International Bank for Reconstruction and Development (World Bank) and the European Bank for Reconstruction and Development (EBRD), reportedly have conveyed to Russian policymakers their views that the current tax regime discourages much-needed foreign investment.[33] In response to the concerns, Russian officials are drafting new tax legislation. They have made it clear, however, that the export tax will continue as long as needed, and that tax discounts and exemptions for individual companies will not exist under the new rules.[34]

Petroleum and Natural Gas Price Controls

The wide disparity between internal and external prices of crude petroleum and natural gas erodes future prospects for the Russian energy sector. The disparity, together with the inconvertibility of the ruble, can lead to corruption because large profits can be made illegally by switching volumes from one market into another. Eliminating the price disparity for petroleum would eliminate the need for export taxes, price equalization funds, and a bureaucracy to set prices and allocate petroleum products.

Despite some domestic price increases during 1992, the relationship between internal and external prices has not significantly improved. The price of petroleum relative to that of other products in Russia has fallen, not risen. Energy prices in Russia remain at a fraction of world levels. Russian industries pay as little as 10-20 percent of world prices for their energy; domestic consumers pay just 1-2 percent of world prices.[35] Under such a price structure, there is little incentive for the consumer to conserve energy, for the producer to improve productivity and earnings performance, or for the foreign investor to invest unless guaranteed the freedom to export. Historically, low petroleum prices, combined with high taxes, left the state-controlled PAs—which were obliged to sell their output domestically—with barely enough revenue to cover operating costs, and with insufficient foreign exchange to import essential supplies and equipment not produced in Russia.[36]

A decree on "State Price Regulation for Certain Kinds of Energy Resources," went into effect on September 18, 1992 and set a new floor price for crude petroleum, including gas condensate, of R4,000 per ton (up from R1,800-2,000). Producers who sold at prices above the minimum would have to pay a tax on any incremental income from sales above R4,000. Russian officials said that the intent of the decree was not to set maximum prices for petroleum, but to introduce mechanisms to block the unchecked growth of prices.[37] To that end, the decree repealed the upper

[27] USITC field interviews in London and Moscow, Mar. 1993.

[28] Valentin Kudinov, General Director, Udmurtneft, Conference Proceedings.

[29] USITC field interviews in Moscow, Mar. 1993.

[30] "Oil Export Tariffs Hurt Prospects for Investment, Businessmen Claim," Bureau of National Affairs (BNA), *Eastern Europe Reporter,* Mar. 26, 1992, p. 200.

[31] USITC field interviews in Moscow, Mar. 1993.

[32] Ibid.

[33] U.S. companies have indicated that, based on more centralized governmental structures, smaller government bureaucracies, and a clearer vision about the role they want to give to foreign capital, other NIS energy-producers such as Kazakhstan and Azerbaijan, might compare favorably with the level and methods of taxation in Russia.

[34] USITC field interviews in Moscow, Mar. 1993.

[35] Jacques Attali, President of the European Bank for Reconstruction and Development, Conference Proceedings.

[36] Since 1992, the traditional equipment supply arrangements between the Russian petroleum industry and other former republics have been severely disrupted. As under the old Soviet system, monopoly conditions persist. Strife-torn Azerbaijan is home to the factories that produced over 60 percent of the FSU oilfield equipment. Equipment deliveries from Azerbaijan have essentially stopped. *Oil & Gas Journal,* Feb. 3, 1992, p. 22.

[37] Foreign Broadcast Information Service, *Central Eurasia,* "Petroleum pricing concerns aired," Nov. 4, 1992, p. 56.

price limit for petroleum and the highest state-regulated wholesale industrial prices and instituted two new mechanisms: (1) indirect regulation of prices by restricting the level of profitability in petroleum production to 50 percent (Enterprises will have to remit half of what is earned from selling petroleum at a price higher than R5,000 per metric ton.), and (2) direct regulation by taxing excess profits for the Ministry of Finance Price Regulation Fund.

In December 1992, the Russian Government made the decision to exclude petroleum prices from the general price liberalization planned for the first half of 1993. Officials were reluctant to free petroleum prices because of the resultant large shocks to the economy.[38] Natural gas prices are also kept artificially low, but effective February 1, 1993, the Russian Government tripled the regulated price of natural gas—from 1,100 to 3,600 rubles per 1,000 cubic meters.[39]

Uncertain Property Rights

The Russian Government owns its petroleum and natural gas fields. This is a common situation in many countries and is not, in itself, an impediment to investors. What does create problems, however, is the existing confusion about how to obtain rights to these resources.

It is unclear how the Federal, regional, and local governments exercise their jurisdiction and how rights can be transferred to private domestic and foreign investors. Surface property rights are retained by the regional and local governments and are administered under a variety of land codes. Investors who have obtained subsurface rights from Federal authorities must obtain additional leases from these local authorities to use the land surface.

Unclear Jurisdiction

A great deal of disagreement exists between Federal and local authorities in Russia, due partly to conflicting investment goals. The central government has as a primary objective to increase foreign investment so as to stimulate and revive ailing industries. Top priorities of local governments are to increase the local standard of living, maintain social stability, and limit further environmental damage.[40] Increasingly, petroleum-rich regions, such as Tyumen, are demanding autonomy from central control to manage their own resources. This additional uncertainty frustrates attempts by foreign investors to clarify lines of authority and to determine who is in charge and whose approval is necessary to approve a transaction.

Investment projects are reviewed at many levels of government, frequently with varying criteria and demands for reopening negotiations. Contract negotiations can involve local, regional, and Federal officials, as well as individual enterprises. The most frequently heard complaint of western investors regarding this multiplicity of authority has been that regional governments impose additional conditions before they will accept the licenses granted at the Federal level.[41]

As mentioned, licenses to use surface land must be obtained from a local level of government. Since an investor cannot explore or extract petroleum or gas from underground without access to the land above it, local authorities are well-leveraged to drive their own bargains with the investor. There is no functioning mechanism for the resolution of conflicts between levels of government when they occur. Complicating the jurisdiction question is the fact that the massive Russian Federal bureaucracy that oversees the energy sectors is itself a complex maze of governmental and quasi-governmental agencies, many with undefined and overlapping responsibilities and authority.

Petroleum Export Controls

Throughout 1991, central control over exports was loosened in the petroleum sector and, to some extent, the natural gas sector of the FSU. Federal control over distribution further declined as JVs were established with the right to export an agreed-upon share of their production. In December 1991, however, Russia reinstituted controls over exports of strategic materials, including petroleum and gas. This action was taken because numerous illegal sales were occurring, which resulted in lost revenues to the government.[42]

Export licenses of some trading companies were revoked and the process of obtaining new licenses was made more difficult. In 1992, there were 80 licensed exporters; that number was cut to about 30 in 1993. Reductions to as few as five licensed exporters are

[38] USITC field interviews in Moscow, Mar. 1993.

[39] This is the price charged to large industrial customers. Individual consumers pay less, but home gas prices were still doubled. State subsidies will keep prices from rising to world market levels inside the country. Prices on sales to other NIS countries increased to 13,000 rubles per 1,000 cubic meters, up four times the domestic wholesale price but still well below the average world price.

[40] Paul Davies, Managing Director, JP Kenny Group of Companies, Conference Proceedings.

[41] U.S. Department of Energy analyst, interview with USITC staff, Mar. 31, 1993. Some investors have indicated that the jurisdictional ambiguity that plagues Russia is absent in Kazakhstan.

[42] Executive Order No. 628 "On Procedures for Export of Strategically Important Raw Materials," June 14, 1992. Russian officials have described criminal activity in the sphere of foreign trade as highly organized and profitable. One estimate places total state losses from illegal exports of strategic materials at between $4.2 and $4.5 billion. Interfax-America, *Petroleum Report*, Feb. 26-Mar. 5, 1993, p. 12.

being contemplated.[43] This reduction in the number of licensed exporters is supposedly a short-term measure until an automated system of control can be implemented to monitor export-import transactions.

Under the present system, the Russian Government possesses the right to control all Russian exports of crude petroleum. Russian authorities have recently exercised this right by informing JV companies that crude petroleum exports would be suspended for the month of June 1993.[44] In addition to creating a hostile investment climate, this action explicitly discriminates against the JV operations currently operating in Russia. Many of the affected firms intend to challenge the legality of this action because the foreign investment law gives JVs with more than 30-percent foreign capital the right to export their entire crude petroleum output. Russian officials have cited the need to regain control of crude petroleum exports and the limited capacity on the Transneft pipeline system as reasons for this action.

Currency Restrictions

The lack of ready access to convertible currencies is a major impediment to increased capital investment throughout the FSU. Each of the NIS energy producers has recognized the importance of ensuring the convertibility of its respective currencies in the long term. Russia has already introduced several measures considered indispensable for ensuring the convertibility of the ruble.

On July 3, 1992, the Russian monetary authorities abandoned the multiple exchange rate system by creating single rates between the ruble and foreign currencies.[45] Since then, the ruble has been freely floating, with only rare occasions of intervention by the Central Bank. On August 1, 1992, the Russian Government declared the ruble internally convertible and convertible for current account transactions.[46] Internal convertibility allows individuals and businesses to exchange the domestic currency for foreign currencies. Current account convertibility means the freedom to exchange the national currency for convertible currencies to import goods and services, repatriate foreign investment income, and make unilateral transfer payments.[47] Although capital account convertibility currently is not possible, Russia has signed bilateral treaties with several industrial countries, including the United States, allowing for the unlimited repatriation of capital invested by firms from these countries.[48]

During 1992, the mechanism of buying and selling foreign currencies was revised. The most important part of this mechanism is the interbank foreign exchange market where commercial banks bid for the available stock of convertible currencies on behalf of their clients.

The above-mentioned steps were necessary progress toward full convertibility, but the shortage of foreign exchange available in Russia has limited the practical application of these rights. Full internal and current account convertibility can be achieved only in a country that has adequate convertible currency reserves to meet domestic demand. The underlying requirement for this condition is a relatively stable economy and a sufficiently high foreign demand for the country's products, coupled with an ability to supply these products. Without these conditions, any foreign reserves held by a country at the introduction of unlimited freedom to convert for current account transactions would quickly evaporate.[49] These conditions do not currently exist in Russia.[50]

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[43] USITC field interviews in London and Moscow, Mar. 1993. See also, Stephen MacSearraigh, "Letdown: New taxes loom as Russian exporters face recentralization," *Nefte Compass* (London), Feb. 26, 1993, pp. 1-2.

[44] Telephone conversation with U.S. Embassy in Moscow on June 14, 1993; and Interfax-America, Inc., Petroleum Report, June 4-11, 1993, p. 8.

[45] Linda S. Goldberg, *Foreign Exchange Markets in Russia: Understanding the Reforms* (Washington, DC: IMF, Jan. 1993).

[46] IMF interview with USITC staff, Feb. 2, 1993.

[47] A currency is fully convertible if, in addition to the above-mentioned conditions of exchange, it also may be exchanged for the purpose of investment abroad. The freedom to exchange the national currency for the purpose of making investments abroad is called capital account convertibility. In the progress toward full convertibility, capital account convertibility is generally the last stage. For more information, see Joshua E. Greene and Peter Isard, *Currency Convertibility and the Transformation of Centrally Planned Economies,* Occasional Paper No. 81 (Washington, DC: IMF, June 1991), pp. 3, 5-6, and 17.

[48] The permission to repatriate capital does not represent a direct obligation on the Russian Government to pay back investors their capital in convertible currencies on request. Even if it is applied in a limited way to only foreign investors, the ability to take capital out of the country represents a step toward capital account convertibility. U.S. Treasury official, interview with USITC staff, Feb. 12, 1993.

[49] For detailed analysis of the preconditions for currency convertibility in the former nonmarket economies, see Greene and Isard, *Currency Convertibility,* pp. 9-15.

[50] In addition to the ongoing assistance now provided to Russia to help establish the macroeconomic conditions that will make the ruble convertible on an increasing scale, the leading industrialized countries also pledged funds that will specifically help in the process. On January 5, 1993, the G-10 countries (United States, Belgium, Canada, France, Germany, Japan, Italy, Sweden, the Netherlands, and the United Kingdom) pledged a $6.0 billion stabilization fund through IMF. Such a fund, made up of convertible currencies, will help ensure confidence in the ability of Russian banks to honor requests for convertible currencies, thereby creating an atmosphere of orderly exchange, free from episodes of panic buying and excessive speculation. The IMF has agreed to activate the fund when Russia fulfills certain economic stabilization targets. See U.S. Department of Commerce, International Trade Administration, *Obstacles to Trade and Investment*

Falling export revenues and a growing unwillingness on the part of exporters to convert their earnings into rubles have reduced the ability of Russian banks to obtain foreign exchange. The constantly changing rules and regulations governing when, and under what conditions, rubles can be exchanged further discouraged foreign firms from acquiring convertible currencies through the official interbank market. According to some reports, policymakers have recently hinted at the possibility of fixing the rate for the ruble and limiting the activity of the free currency market.[51]

The Russian Government requires mandatory conversion of 50 percent of foreign currency earnings to rubles. This requirement was eased for crude petroleum and natural gas enterprises by the Presidential Decree of March 19, 1993. To compensate for the industry's reduction in earnings, the decree freed crude petroleum and natural gas extracting, prospecting, and refining JVs from the mandatory sale requirement for foreign exchange obtained from the sale of petroleum, gas condensate, and their products.[52] The decree is effective through 1993. Some Russian Government officials expressed concern that the new measure will lead to a decrease in the domestic supply of convertible currencies available to the domestic currency market. The decrease, these officials assert, could accelerate the ongoing depreciation of the ruble.[53]

The outlook for internal and current account convertibility is no more promising in the other NIS energy-producers. For example, in addition to the absence of the above-mentioned general preconditions, these countries also lack well-established national currencies. Azerbaijan, Belarus, Turkmenistan, and Ukraine are in relatively advanced stages of introducing their own national currencies. The intentions of Kazakhstan and Uzbekistan regarding the introduction of national currencies are less clear. With the exception of Ukraine, all energy-producing states of the FSU still use the ruble in domestic transactions. There are no indications that either the ruble holdings of these countries or their fledgling national currencies can be exchanged for convertible currencies.[54] Western companies wanting to invest in these countries must either convince the host governments to obligate themselves to provide convertible currencies necessary for their operations or engage in barter or countertrade.

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in the New Republics of the Former Soviet Union, Mar. 1992, p. 26; and BNA, *International Trade Reporter*, Jan. 13, 1993, p. 58.

51 *Business Eastern Europe*, Mar. 15, 1993, p. 57.

52 The JV has to be at least 30-percent foreign owned to qualify for this exemption. IMF official, interview with USITC staff, Apr. 12, 1993, and Interfax-America, *Petroleum Report*, Mar. 19-26, 1993, p. 8.

53 Ibid.

54 A bilateral investment treaty allowing U.S. firms to repatriate their profits and capital has been signed with Kazakhstan. The treaty awaits ratification by the U.S. Senate. U.S. Department of Treasury official, interview with USITC staff, Feb. 12, 1993.

Differences in Business Practices

Misunderstandings can abound when East meets West, and most Western businessmen operating in the NIS, and NIS representatives, agree that there is a considerable amount of suspicion on both sides.[55] For their part, Western businessmen speak of a substantial increase in crime and corruption since the demise of the FSU, and cite increasing demands from all levels for bribes and other payments in order to complete their transactions.[56] Conversely, NIS representatives relate their own experiences with Western JV partners in the petroleum sector, who continually engage in practices that are "criminally colored." Russian officials, for example, point to their stringent controls on export licenses and quotas as necessary due to "leakages" of hard currency earnings on the part of some of these partners.[57]

The lack of commercial experience on the part of government officials and entrepreneurs in Russia and the other NIS countries often translates into misunderstandings when NIS officials and private sector representatives meet with their Western counterparts and confront such unfamiliar concepts as risk, costs and competitive pricing, accountability, quality control, contracts, and liability.[58] During meetings with Commission staff, more than one Russian official proclaimed that Russians have a historical distrust of foreign domination and exploitation.[59]

Moreover, since living standards in the NIS have not improved in a tangible way, there is growing suspicion on the part of many NIS citizens that Western-style economics do not apply here, and are merely a ruse so that Western companies and their governments can plunder their national assets.[60] Such sentiments translate into increasingly restrictive actions by government agencies and individuals, thereby limiting the inflow of foreign investment into the

55 USITC field interviews in London and Moscow, Mar. 1993.

56 It was the pervasiveness of illegal business activity on the part of Russian Government officials that prompted President Yeltsin to issue his Anti-Corruption Decree in April 1992. (For a description of alleged corruption in Russia, see, BNA, *Eastern Europe Reporter*, Aug. 17, 1992, pp. 664-5.) U.S. businessmen operating in the NIS (and elsewhere abroad) are subject to the U.S. Foreign Corrupt Practices Act (FCPA) that prohibits many of the more notorious business practices reportedly occurring in Russia. U.S. businessmen have commented that the FCPA places them at a competitive disadvantage in Russia. USITC field interviews in Moscow and London, Mar. 1993.

57 USITC field interviews in Moscow, Mar. 1993.

58 OECD, Committee on Non-member Countries, *Final Report of the Energy Working Group*, Oct. 7, 1992, p. 20.

59 USITC field interviews in Moscow, Mar. 1993.

60 Paul Davies, Managing Director, J.P. Kenny, Conference Proceedings.

country's petroleum and natural gas sectors.[61] The perception that more restrictive policies were being followed was heightened last year when a multibillion dollar contract for the development of the Stockman gas deposit was assigned by Presidential Decree to a newly assembled consortium of 19 domestic military enterprises.[62]

Differing views also exist regarding the corporate role in community development. Western investors make a clear distinction between project investment and contribution to the community. Investors have stated that they pay signature bonuses, taxes, and royalties, from which governments can choose to allocate expenditures for social infrastructure such as roads, housing, schools, or hospitals. Companies may wish to contribute to these projects separately from their venture investment, but they generally do not wish to assume what is the responsibility of governments in providing for the needs of their own communities.[63] Many local authorities, who under the old Soviet system saw their natural resources drained away with little benefit to their communities, now use their leverage during contract negotiations to insist that investors commit to substantial community investments at the outset. This can add significantly to the cost of a project at a time when its economic viability may not yet be certain.[64]

Finally, there seems to be a large gap between what foreign investors want to do in terms of investment, and what Russians want in terms of foreign investment. There was a prevailing sense conveyed by some Russian representatives interviewed for this study that they would prefer to do without foreign investors altogether, and instead rely on multilateral funding for project development to revive their industry by themselves. Russians have been inundated by teams of Western investors who express great interest in participating in projects but ultimately do not proceed beyond the discussion stage. To many Russians, the relatively low level of actual investment to date does not justify the time and money spent in evaluation, tender, and pre-award phases of projects.[65]

[61] For example, the Government's decision in November 1992 authorizing the limited sale of shares in the state gas monopoly (Gazprom) to foreign investors was challenged immediately in a constitutional court. U.S. State Department telegram, message reference No. 14106, prepared by U.S. Embassy, Brussels, 1992.

[62] *Business Eastern Europe*, Dec. 21, 1992, p. 619. The Presidential Decree put an end to a bidding process that had lasted nearly 6 months. The consortium of western companies that lost the bid included Conoco, the Norwegian company Norsk Hydro, and three Finnish companies, Neste, Metra Engineering, and Imatran Voima. With the encouragement of high-level officials, the consortium had spent about $100 million developing the project over the last 3 years.

[63] Mark Moody-Stuart, Group Director and Exploration and Production Coordinator, Royal Dutch/Shell Group of Companies, Conference Proceedings.

[64] Ibid.

[65] USITC field interviews in London and Moscow, Mar. 1993.

Political Uncertainty

There is a perceived political uncertainty to investing in the NIS. However, international petroleum companies have proven themselves to be remarkably tolerant of similar adverse conditions all over the world. Few company representatives interviewed for this study cited political uncertainty as a significant disincentive to invest in the NIS. Many investors, Russian officials, and private sector representatives have expressed the view that market reform in the NIS is irreversible and will go forward no matter who is in charge, although a significant change in leadership could slow reforms considerably.[66] Of more concern to investors is the uncertainty associated with the current (spring 1993) constitutional crisis.

In Russia, political uncertainty does, however, mean that the rules keep changing. Requests from officials to modify contracts to comply with new and constantly changing laws cast doubts on the ability of investors to control their investments. Confusion persists over who can approve contracts and who determines winners of bid tenders. Frequent government shuffles of personnel can mean that agreements and contracts negotiated with one set of officials could be overturned or substantially redefined by their successors.[67]

Forms of Investment

Joint Ventures[68]

The first JV in the FSU energy-producing industries was established in 1989 when Canadian Fracmaster and Shell joined with a Russian company to increase crude petroleum recovery at a field in Western Siberia. Passage of the Foreign Investment Law in 1991 opened the way for more ventures. To date, JVs between foreign firms and local partners have been the primary vehicle for foreign investment in the energy sectors in the NIS. JVs are viewed by some Russian officials as a means to halt production declines, increase convertible currency revenues, and acquire needed technology and management skills. Investors are attracted to the JV option because it provides them with access to market intelligence from within the system. A good domestic partner also helps the foreign partner to navigate through the complex bureaucracy and can diminish many of the risks associated with investing in the NIS.[69] The Russian

[66] Ibid.

[67] Ibid.

[68] In addition to many of the major U.S. petroleum companies, about 30 smaller U.S. companies are involved in Russian JVs. In many instances, U.S. companies entered into partnerships with other western firms to establish their JVs. See app. E for a list of U.S. and foreign energy joint ventures in the NIS.

[69] Gabriele Cagliari, Chairman, ENI, "The Russian Oil Industry: Obstacles and Opportunities," Conference Proceedings.

PAs, which are usually the domestic JV partners, are generally considered by Western companies to be very capable organizations.

In early 1993, 66 new JVs with charters specific to the petroleum and natural gas sectors were registered. Of these, 31 will actually be involved in petroleum extraction.[70] Last year, JVs in the Russian petroleum sector extracted a total of 4.65 million tons of petroleum.[71] JVs are less welcome in Russia's natural gas sector than in the petroleum sector because the investment requirements in the gas sector are primarily for rehabilitation of existing infrastructure and not to increase production as is the case in the crude petroleum sector. Currently, there are no JVs in this sector.

Production-Sharing Agreements

Although Russia has not yet passed legislation permitting production sharing, it is an option available to investors if approved (on a case-by-case basis) by the Supreme Soviet. Russia's first petroleum production-sharing agreement was approved in March 1993, by the Presidium of the Russian Parliament and could serve as a model for similar agreements in the future. The agreement, with Elf Neftegas (a subsidiary of the French company Elf Aquitaine) and its Russian JV partner (Interneft), calls for Elf to assume full financial risks for exploration of a 17,800-kilometer tract in the Volograd and Saratov regions.[72] Elf will invest at least $500 million in exploration over a 9-year period. If discovery is made, Elf will be paid in petroleum. By setting out a specific formula for sharing production, the agreement effectively protects Elf from changes in legislation, particularly regarding taxation. A 12-percent royalty will be deducted before the petroleum is shared. Of the remaining production, 45 percent will go to Elf Neftegas until its investment expenses are amortized; 10 percent will contribute to the cost of a pipeline, if necessary.[73] The formula for dividing the remaining production between Elf and the Russian Government is based on production: Russia will receive 60 percent and Elf 40 percent of output up to 100,000 barrels per day, increasing to 85 percent for Russia and 15 percent for Elf on production of 400,000 barrels per day and above.[74] The project could generate as much as $7 billion. As part of the agreement, funds from the project will be kept in an escrow account offshore. Elf Aquitaine signed a similar production-sharing agreement with Kazakhstan last year.

Equity-Sharing Agreements: Privatization Programs

The Russian Federation embarked on a privatization program in 1992 through Presidential Decree.[75] The program is intended to heighten public interest in economic reform by creating a large group of investors with a stake in its success. The program calls for 60 percent of state property to be privatized during 1993-95, with 30 percent of the privatization occurring in 1993.[76] A basic tenet of the program is that the state, as in the past and the foreseeable future, will maintain a controlling share in privatized petroleum companies.[77] Dividends accruing to the state will be retained by the operating companies to develop production and provide social services. During a 3-year transition period, the privatized companies will divest some of their holdings through public auctions and exchanges for vouchers. During that period, foreign investors may bid to acquire up to 15 percent of the shares that will be auctioned.[78] It is unlikely that foreign investors will show much interest in the privatized shares, particularly since it has not been made clear how they could participate in important management decisions.

The first stage of the privatization program calls for the conversion of all petroleum and refining

[70] Interfax-America, *Petroleum Report*, Apr. 2,-9, 1993, p. 15.

[71] Ibid.

[72] The area covered by the agreement is estimated to contain between 100-500 million tons of crude petroleum. Interfax-America, *Weekly Business Report*, Mar. 5-12, 1993, p. 4.

[73] Helen Avati, "French Elf Finds Persistence pays off as it signs production-sharing accord," *Nefte Compass* (London), Mar. 12, 1993, p. 3.

[74] Ibid.

[75] On Nov. 27, 1992, President Yeltsin issued a decree for the petroleum sector that will allow limited foreign ownership. The decree calls for the transformation of state petroleum enterprises (includes companies involved in exploration and production, refineries, transport companies, distribution networks, and other related facilities and operations) into joint stock companies, of which foreign investors may acquire no more than 15 percent. BNA, *Eastern Europe Reporter*, Dec. 21, 1992, p. 1033. Another decree, issued Dec. 18, 1992, was to transform Russia's gas industry into joint stock companies. Reportedly, that decree stipulates that by March 1993, all state enterprises and associations in the gas industry should be transformed into public joint stock companies. Interfax-America, *Petroleum Report*, Dec. 18-25, 1992, p. 3.

[76] Alexander Belousov, Head of Department of Fuel and Energy, State Committee on Public Property, Conference Proceedings.

[77] In a typical privatization, workers will receive 40 percent of the shares, the state will receive 38 percent, and the remaining shares will be auctioned. USITC field interviews in Moscow, Mar. 1993.

[78] In August 1992, the potential acquisition of PA shares by foreign investors was restricted. An executive order required specific Presidential approval for the sale of capital assets in the sector, thereby eliminating the discretionary power previously possessed by the PAs. The Executive order limited the foreign acquisition of shares in the petroleum PAs to 15 percent. See app. D under Russia and "Acquisition of fixed industrial and commercial assets through privatization." For comments on this decree, see BNA, *Eastern Europe Reporter*, Sept. 14, 1992, p. 743.

organizations into joint stock companies. The next stage envisages the formation of three large, vertically integrated petroleum companies. As these petroleum companies are being established, 30 percent of their shares will be in the hands of Rosneft, a specialized state company established for that purpose. Pipelines and associated industries are also to be transformed into joint stock companies, Transneft and Transnefteproduct, with the majority of their stock controlled by the state.

Most observers applaud the move toward privatization of state-owned enterprise that Russia has undertaken. However, due to unresolved details, these programs could hamper foreign investment in the short term.[79] Some features of the privatization programs remain unclear, such as the possibility that the vertically integrated companies could absorb some or most of the PAs.[80] That could pose problems for investors who have questioned how they can be expected to risk substantial capital entering into JVs with companies that might soon be part of a different company, and under different management.

Kazakhstan and Azerbaijan allow foreign participation through the acquisition of shares of existing companies. However, at present there is no known case of equity sharing between U.S. firms and local entities. Contracts between foreign firms and the PAs are considered business secrets; their provisions may or may not contain equity sharing.

[79] Sheldon Stoughton, Bankers Trust Co., Conference Proceedings. An example of an unresolved issue is the question of what happens to the reserves at the disposal of a privatized PA. Reserves, which are owned by the state and licensed to the PA, are not subject to privatization. Shareholders at certain fields could find that their shares are not valid for the same length of time accorded the license.

[80] Conversion of the PAs into joint stock companies began in mid-1992. By law, 51 percent of the shares are retained by the Russian Government and 49 percent are turned over to the state committee charged with privatization. See discussion of PAs in ch. 2.

Tenders and Auctions

Several international tenders and auctions have been held in Russia for the rights to use the country's underground resources and to conduct exploration and development.[81] For example, the international consortium of Marathon, McDermott, Mitsui, Shell, and Mitsubishi (MMMSM) won the right to conduct a $80 million feasibility study on the offshore shelf of Sakhalin Island. The agreement between the Russian Government and the consortium allowed for the study but did not guarantee MMMSM the rights to develop the lease. The feasibility study has since been completed, and MMMSM is now negotiating with the Russian Government to complete and sign a final agreement on development rights. A second tender has been announced inviting foreign firms to bid on developing crude petroleum and natural gas fields in another offshore section of Sakhalin Island. There are indications that the Russian Government will hold as many as five additional tenders for sections in the Sakhalin area over the next several years.

Some analysts claim that the current economic situation in Russia provides only very limited investment opportunities for foreign firms, even outside the petroleum and natural gas sectors. These analysts predict that most investment opportunities for foreign firms will come over the long term and will take the form of asset purchases under JV schemes rather than the acquisition of equity during the ongoing privatization.[82] However, Russian officials disagree and believe that offering tenders will encourage investors to participate in reviving their energy industries.

[81] A tender is an offer of money or services in payment of an obligation (i.e., to produce crude petroleum or natural gas on an obtained lease).

[82] The Economist Intelligence Unit, "Business Eastern Europe," Mar. 15, 1993, p. 7.

CHAPTER 4
U.S. Statutory Regulations and Other Factors Affecting Involvement of U.S. Firms in the NIS Energy Sectors

In an effort to support the institution of market-based economies in the newly independent states (NIS), the U.S. Government has suspended or repealed the majority of the statutory provisions and regulations that, directly or indirectly, impeded or restricted investments in the NIS, including those in the crude petroleum and natural gas sectors.[1] The two U.S. statutory provisions that constituted the major impediments to investment in the NIS crude petroleum and natural gas sectors, the Byrd Amendment to the Trade Act of 1974 and the Stevenson Amendment to the Export-Import Bank Act of 1945, were repealed by Joint Resolution of Congress as of April 1, 1992.[2]

The Byrd Amendment restricted the amount of service the U.S. Export-Import Bank (Eximbank)[3] could provide for operations in the former Soviet Union (FSU) to an aggregate amount of $300 million. Applications to the Eximbank for credit guarantees during a 3-month period (January through March of 1991) were valued at approximately $840 million, far exceeding the overall limitation as imposed by the legislation. The Stevenson Amendment prohibited Eximbank loans or financial guarantees to the FSU for involvement in the petroleum, natural gas, or other fossil-fuel-related industries. The Stevenson Amendment also contained a similar $300 million loan/credit guarantee restriction to the Byrd Amendment.[4]

Industry officials characterized the existing impediments related to U.S. statutory provisions as being less significant than those that persist in the NIS (see discussion of NIS impediments in chapter 3). However, continuing concerns relate to provisions concerning technology-transfer restrictions, bilateral tax agreements and investment treaties, and the Freedom Support Act of 1992.

Technology-Transfer Restrictions

Although U.S. industry officials[5] stated that there were no specific instances in which technology transfer restrictions directly inhibited an investment from occurring in the NIS, industry sources indicated that there is a potential for future restrictions. Specifically, under the National Security Controls Act (NSCA), the "President may . . . prohibit or curtail the export of any goods or technology that could be used to "make a contribution to the military potential" of certain nations.[6] However, the NSCA requires export licenses in only a limited number of situations, such as (1) when the export of such goods is formally restricted by multilateral agreement, (2) when the goods involved possess capabilities that are not available in similar or competitive goods produced in other nations, or (3) when the United States is seeking the agreement of other foreign suppliers to limit the availability of the good in question.[7]

A number of U.S. firms have successfully acquired a considerable number of export licenses for equipment

[1] On April 23, 1993, Speaker of the House of Representatives Thomas Foley (D-WA) appointed Dan Rostenkowski (D-IL) and Lee Hamilton (D-IN) co-chairs of a Cold War Review Panel. According to the press release announcing the panel's creation, "this panel has been charged to carry out an expeditious review of all U.S. statutes predicated on the Cold War relationship between the United States and the FSU. This review is expected to lead to recommendations for legislative action that would reflect the new commercial and political realities between the United States and the former Soviet republics, especially Russia." Areas that have been specifically cited for the panel to review include title IV of the Trade Act of 1974 (involving freedom-of-emigration requirements) and the Jackson-Vanik Amendment.

[2] Public Law 102-266, 102d Congress.

[3] The Eximbank, owned and operated by the U.S. Government, lends money and guarantees loans from private sources. The primary goal of the Eximbank is to allow the United States to increase the value of its exports.

[4] Procedures existed that provided for increasing the ceiling on the loan/credit guarantees of the Stevenson Amendment. No such provisions existed for the Byrd Amendment; only a repeal or formal change of the existing law could alter its ceilings.

[5] Firms include U.S.-based multinationals, U.S. service and equipment suppliers, as well as firms that are already participating in joint ventures (JVs) in the NIS crude petroleum and natural gas sectors.

[6] National Security Controls Act, 50 App., USCA 2404.

[7] Ibid., p. 289.

and other materials necessary to accomplish tasks and responsibilities associated with their contractual obligations in the NIS. In this context, there were no instances reported by industry officials in which the denial or delay in acquisition of such export licenses adversely affected a decision concerning potential investments or caused any of the firms already active in the NIS to reconsider their current projects.[8] However, according to industry sources, existing technology-transfer restrictions might, in the future, constrain use of the most recently available technologies, considering the rapid technological advances being made in the sector (e.g., seismic or computer equipment).

Bilateral Tax Agreements

In general, bilateral tax agreements contain provisions that protect investors from being subject to taxation on their profits both in their home nation and the nation in which their projects are in operation, within certain limits specified in the individual agreements. The absence of a bilateral tax agreement between the United States and the individual NIS allows the profits of U.S. investors to be subject to double taxation. The previously existing tax agreement with the FSU, the *1975 U.S.-U.S.S.R. Tax Treaty,* lacked provisions eliminating the possibility of double taxation.

A new tax treaty between the United States and Russia was signed in June 1992. The treaty was ratified by the Russian Parliament in October 1992, but still awaits U.S. Congressional action.[9] Although implementation of the negotiated tax treaty would eliminate certain double taxation on interest and royalties, one provision of the treaty is being questioned by some U.S. companies. The proposed treaty calls for a tax exemption for U.S. companies operating in Russia for a period of 18 months, while similar Russian tax treaties with Italy and Finland call for a tax-exempt period of 36 months.[10] Negotiations between the United States and Russia on the issue are continuing.

[8] Delays of approximately 60 days for the acquisition of an export license for a specific type of personal computer were reported to the Commission by an official of the Halliburton Oil Producing Co., which is based in Oklahoma, City, OK. However, the official also stated that the personal computer in question only recently became available on the open market and the previous generation of personal computers were already in use in the NIS. The delay in approval was characterized as an inconvenience, but was not viewed as an impediment or barrier to any investment decision or decision concerning participation in the NIS industry.

[9] Staff of the Senate Committee on Foreign Relations, telephone conversation with USITC staff, May 26, 1993.

[10] Ibid.

Bilateral Investment Treaties

Bilateral Investment Treaties (BITs) establish standard regulations regarding international investments, such as rules defining requirements for most-favored-nation tariff treatment, access to international adjudication for the resolution of disagreements, and definitions of international rules on expropriation and standards of reparation. BITs do allow countries to restrict investment in specified sectors, including energy, and most countries exercise that right in order to maintain additional control over their mineral resources. Among the NIS, only Armenia has placed specific restrictions on energy in its BIT. In a side letter to its accord, Russia maintained that its energy sectors are expected to remain open to foreign investment, but it reserved the right to impose future restrictions.[11]

U.S. agreements on BITs with several of the successor states have been reached.[12] The BIT with Russia was signed in June 1992, and is awaiting approval in the U.S. Senate.[13] Significant provisions of the BIT between the United States and Russia are as follows:

1. Guarantees (subject to certain specific sectoral exceptions) nondiscriminatory treatment for U.S. investors in their admission to Russia and their operations there.
2. U.S. investments will receive no less favorable treatment than that accorded local enterprises, including receipt of licenses, access to financial institutions and credit markets, and access to public utilities, commercial rental space, raw materials, and all types of service at nondiscriminatory prices.

Freedom Support Act of 1992[14]

Section 907 of title IX of the Freedom Support Act of 1992 directly prohibits aid to Azerbaijan for any causes other than nuclear weapons disarmament. This

[11] Information supplied by U.S. Department of Energy, Energy Analyst, June 15, 1993.

[12] BITs with the following NIS have been negotiated, but are not yet in force: Kazakhstan, Kyrgyzstan, Moldova, and the Russian Federation. Negotiations are proceeding to complete BITs with Belarus and Ukraine.

[13] Treaty with the Russian Federation Concerning the Encouragement and Reciprocal Protection of Investment, July 28, 1992, U.S.-Russian Federation, S. Treaty, Doc. No. 33 102d Congress, 2d Session (1992).

[14] The Freedom Support Act represents a major commitment on the part of the United States to assist the NIS in their move toward democratic and economic reform. The act is the basic framework that authorizes the U.S. Government to provide humanitarian, economic, and technical assistance to Russia and the other NIS. The

act prohibits U.S. assistance until steps are taken by the Government of Azerbaijan to cease all blockades and other uses of force against Armenia and Nagorno-Karabakh. No sanctions were imposed against any nations other than Azerbaijan that are involved in the conflict.

As a result of the U.S. sanctions, the Government of Azerbaijan has delayed signing a contract with a U.S. firm for the development of the Azeri petroleum field, which is estimated to contain about 200 million tons of recoverable crude petroleum. A second contract with another U.S. firm is also reported to be in jeopardy. Meanwhile negotiations are proceeding between the Government of Azerbaijan and non-U.S. companies interested in these projects.[15] Congressional action to revise the Freedom Support Act to remove the sanctions against Azerbaijan is being considered.[16]

Perspectives of U.S. Firms

Representatives of U.S. firms already active in the NIS, or of firms in the process of negotiating projects, voiced several concerns relating to the role of the U.S. Government in helping to resolve the difficulties associated with doing business in the NIS. According to these representatives, the United States lacks a pro-active posture in the NIS, in contrast with certain other Western governments that actively support the interests of their domestic companies. They suggested that the U.S. Government could take a more aggressive role in encouraging the Russian Government to address the problems encountered by U.S. and other investors. Other governments, such as the French and Japanese, are reportedly working far more actively than the U.S. Government to secure access to the NIS crude petroleum and natural gas sectors for their nations' domestic firms.[17]

Representatives of U.S. firms also asserted that certain restrictions prohibiting the U.S. Government from undertaking a major role in private industry dealings with either foreign governments or agents of private firms in foreign nations, place U.S. companies at a competitive disadvantage in the NIS.[18] Given the restrictions placed on direct U.S. Government intervention, it has been suggested by some academicians and even Russian officials, that indirect pressure from Washington could be helpful in resolving some of the current problems facing investors.

Some private investors also maintained that the U.S. Government should be involved in the provision of additional insurance against confiscation of materials and other property brought into the NIS, as well as other possible major losses of investments in the NIS. Although there generally is adequate insurance provided by government-based lenders against direct expropriation, losses attributable to any other factors are typically not as well protected.

Much of the attention paid by U.S. Government agencies in their efforts to develop closer relationships between U.S.-based firms and the industries and governments of the NIS countries has been devoted to major U.S.-based multinational energy companies.[19] However, smaller U.S. companies that offer certain specific services, from exploration services, such as seismic assays, through specialized well drilling involving complex recovery techniques, also stand to benefit from closer relationships with the NIS industry. The basis for most of the involvement of these service-oriented firms has been their historical relationships with the major multinationals that are entering the NIS in the form of joint ventures. However, some of these smaller firms have also approached NIS production associations directly to solicit contracts and investigate the possibility of performing other services.[20]

Private firms asserted that the U.S. Government could further private industry's goals and assist in moving Russia closer to a market economy by helping to educate the Russians in the areas of competition, firm profitability, and general tax theory.[21] U.S. academic and Russian representatives have suggested that linking future U.S. loans to such educational

14—*Continued*
act authorizes an increase of about $12 billion to the U.S. International Monetary Fund quota to help finance structural adjustment and a stabilization fund in Russia and the other successor states. *Freedom Support Act,* Public Law 102-511, 102d Congress.

15 Interfax-America, *Petroleum Report,* "Amoco and Pennzoil Face Difficulties in Azerbaijan," Jan. 1-8, 1993, p. 6.

16 Telephone conversation with staff of Congressman Weldon's office, June 15, 1993.

17 For examples, see "French Companies Lead the Pack in Promoting C.I.S. Joint Ventures," *Oil and Gas Journal,* Apr. 6, 1992, pp. 44-47; and Kosaku Yoshida, "New Economic Principles in America - Competition and Cooperation; A Comparative Study of the U.S. and Japan," *The Columbia Journal of World Business,* winter 1992, pp. 31-32.

18 This relates to the prohibition of government influence when there is a question of such influence providing assistance to one firm at the expense of another and the resulting appearance of monopolistic behavior, as well as to the prohibitions of the Foreign Corrupt Practices Act.

19 USITC field interviews with U.S. firms currently involved in JVs or in negotiations for JVs with the Russian industry.

20 The Russians are currently trying to attract companies to repair inoperative wells; U.S. oilfield equipment services companies are being sought for such projects. Interfax-America, *Petroleum Report,* Apr. 2-9, 1993, p. 13.

21 Ibid. Examples of possible methods for such education programs that were cited in the interviews were seminars, classes set up through Russian universities, and on-the-job training. These same ideas were suggested by many of the representatives from the Russian Government and industry at the Conference on the Russian Oil Industry. Second Annual Russian Oil Conference, "The Russian Oil Industry: Foreign Investment Opportunities". (Hereafter cited as "Conference Proceedings.")

efforts would be a pro-active step that could help induce a change in the economic philosophy of those managing the Russian energy enterprises.[22]

The United States-Former Soviet Union Energy Caucus (US-FSU), a nonpartisan effort comprised of members of the U.S. Congress, is currently working to further the causes of U.S. private industry involvement in the NIS. According to Congressman Greg Laughlin (D-TX), Co-Chairman of the Caucus, the "members of the US-FSU Energy Caucus believe it is better that private American capital be invested in the FSU energy sector rather than in the form of additional foreign aid."[23] Congressman Laughlin and Congressman Curt Weldon (R-PA) established the caucus because they "believe that energy holds the key to the successful transformation of the former Soviet Union from a socialist to a free market economy."[24]

[22] Conference Proceedings.

[23] Transcript of hearing before the Commission on investigation No. 332-338, Jan. 28, 1993, p. 12.

[24] Ibid., p. 8.

Another suggestion posed by U.S. business representatives and industry observers involved the coordination of activities of the U.S. Government agencies that assist private industry. U.S. firms stated that the significant efforts made by various agencies and working groups (e.g., State Department and Commerce Department) to provide assistance to U.S. firms could be made more effective and efficient if resources were pooled.[25] As a step toward a coordinated effort, the Trade Policy Coordinating Committee (TPCC), headed by the Secretary of Commerce, was recently formed to assist U.S. firms negotiating in the NIS by organizing and consolidating the efforts of the various support agencies that may be involved. In addition, there is also a Government Coordinator for U.S. Assistance to the NIS located in the State Department. The function of this office is to coordinate all U.S. Government policies (i.e., Eximbank, OPIC, AID, Department of State,) that pertain to the NIS.

[25] USITC field interviews with U.S. firms currently involved in JVs or in negotiations for JVs with the Russian industry, in Moscow, Mar. 1993.

Chapter 5
Project Financing in the NIS Energy Sectors

Participation in projects to restore and further develop the energy sectors of the newly independent states (NIS) requires substantial financial commitments from firms from the United States and other countries. The lack of adequate collateral in the NIS to cover the risks involved in these projects, together with the uncertain economic and political environment, makes such financial commitments extremely risky. Therefore, participation by U.S. and other foreign firms in the NIS crude petroleum and natural gas industries is largely dependent upon the availability of adequate capital and project risk insurance to protect investors against a major financial loss.[1]

Traditionally, crude petroleum and natural gas investment projects throughout the world have been financed through sources that are now either unwilling or unable to undertake the risks involved in investing in similar projects in the NIS. According to the European Bank for Reconstruction and Development (EBRD), the traditional financing sources and their constraints for NIS energy projects are the following:[2]

Industry self-financing—Firms are faced with numerous investment opportunities and the NIS must compete with other areas of the world for scarce private sector capital. After peaking in the 1980s, the operating cash flows of many companies declined. Mandatory investment for environmental and product quality improvements associated with many energy projects (e.g. double-hull tankers) are considered significant. National companies in Organization of Petroleum Exporting Countries (OPEC) countries concentrate most of their investment on their own internal industries, infrastructure, and social investment needs. Non-OPEC national companies, such as Mexico's PEMEX and Petro-Canada, offer little funding outside of their own countries.

Commercial banks—Commercial credit is very limited for international petroleum and gas investment projects. Commercial banks reduced their commitment to these sectors because of a number of factors, including the debt situation of many developing countries, the real-estate crisis, capital adequacy requirements and risk re-assessment, and the petroleum price slide that occurred in the 1980s.

International bond markets, institutional investors, and private funds—These sources have generally not yet assessed the NIS in terms of petroleum and gas investment projects, but are likely to be future sources of capital.

One source of traditional financing that is increasingly important for investment in the NIS crude petroleum and natural gas sectors is that provided through export credit agencies and their guarantee programs. In the United States, the major export credit agencies are Eximbank and the Overseas Private Investment Corporation (OPIC). The operations of export credit agencies relative to the NIS are discussed below.

The World Bank "Negative Pledge" Clause

Financing decisions made by Eximbank and OPIC are influenced by the policies set forth by the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (World Bank). Eximbank and OPIC generally defer to these international organizations concerning the availability and appropriateness of support and/or financing of specific projects.

In 1992, the U.S. and Japanese Eximbanks led other Group of Seven (G-7) export credit agencies in pressuring the World Bank to waive its "negative pledge" clause regarding lending agreements with Russia. The negative pledge "protects the World Bank against the commitment of government resources, or the use of governmental authority to mobilize resources, which will or might result in other foreign creditors obtaining foreign exchange in preference to the Bank through the creation of liens or other priority interest on public assets."[3] To enforce this rule, the World Bank effectively forbids borrower governments to pledge publicly owned assets (such as petroleum

[1] Stephen Ferriss, Bankers Trust Co., The Second Annual Russian Oil Conference on the Russian Oil Industry: Foreign Investment Opportunities, London, Feb. 11-12, 1993. (Hereafter cited as "Conference Proceedings.")

[2] EBRD, "Information session: Oil and gas sector review," Feb. 12, 1993, pp. 40-42.

[3] "Negative Pledge: World Bank Tussles with Export Credit Agencies," *Nefte Compass* (London), Feb. 26, 1993, p. 12.

reserves or future petroleum earnings) to particular creditors.[4] The export credit agencies argued that the negative pledge clause impedes lending and therefore stalls opportunities to help revive the Russian economy. The World Bank has agreed to modify its policy and is developing a plan to allow for a limited waiver of the negative pledge, but progress has been slow. Of concern is the detrimental effect such a policy could have on the borrower country. Since the World Bank and IMF often link the extension of credit to a country's commitment to undertake major reforms, a borrower, through a negative pledge waiver, could pledge its assets and receive private capital from other creditors, effectively limiting the World Bank's ability to enforce requirements in structural adjustments. Without World Bank assistance, major sectors in the borrower country could suffer, since it is unlikely that private creditors will invest in sectors where there is little potential for foreign exchange earnings (e.g. sewage treatment systems).[5] The World Bank is expected to announce a decision on the negative pledge waiver sometime prior to the end of 1993.

Eximbank

The Eximbank offers a wide range of financial support programs, including loans and guarantees of loans made by others, to facilitate the export of U.S. goods and services. Eximbank also provides additional financial security through its agent, the Foreign Credit Insurance Association, which insures against nonpayment on export credit transactions. Among the NIS countries, the Eximbank short-term insurance program is available in Belarus, Kazakhstan, Russia, Turkmenistan, Ukraine, and Uzbekistan. Russia is also eligible for Eximbank's medium-term insurance program and the medium-term loan/guarantee program.[6]

According to the Eximbank, the former Soviet Union (FSU) relied to some extent on imports of equipment from Western Europe for its petroleum and gas sectors.[7] On April 13, 1993, Eximbank and Russia signed a memorandum of understanding setting forth the major principles of an Oil and Gas Framework Agreement. The agreement will facilitate the sale of equipment and technology by U.S. companies needed to revitalize Russian crude petroleum and natural gas production facilities that are either closed or producing below capacity.[8] Eximbank also made a preliminary agreement with Russia's Ministry of Fuel and Energy to provide $500 million in financing to cover the first transactions, once the framework agreement is in place and Russia has been approved for a waiver of the World Bank's negative pledge clause.[9] the agreement provides Eximbank with repayment security from the proceeds of oil and gas export sales by Russian production associations, rather than Russian Government guarantees. Revenues from sales to foreign purchasers will be deposited in offshore escrow accounts to service the debt.[10]

OPIC

There are normally significant risks associated with large-scale projects involving exploration and development of crude petroleum and natural gas fields, regardless of the political or economic situation in the host country. OPIC provides three principal programs to assist U.S. investors with their projects: (1) financing of investments through direct loans and loan guarantees; (2) insuring investment projects against a broad range of political risks, including currency inconvertibility, expropriation, and political violence; and (3) providing investor services, including advisory services and project development services.[11]

OPIC has signed bilateral agreements with each of the successor states to the FSU. During FY93, OPIC is expected to provide loan financing to six or seven private sector projects in the NIS, totaling approximately $170 million.[12] In addition, OPIC is evaluating financing proposals for 55 private sector projects in the NIS, totaling over $1 billion.[13] In FY92, commitments for political risk coverage for five private investment projects in the NIS totaled $128 million.[14] OPIC estimates that requests for political risk insurance in FY93 will be considerably higher.

Anderman-Smith Operating Co. was the first U.S. firm to receive political risk insurance from OPIC for investment in the NIS petroleum and natural gas sectors.[15] On September 30, 1992, OPIC insured $7 million of the company's investment in connection with a joint venture (JV) in Western Siberia. On May 3, 1993, OPIC made its first loan guarantee to a petroleum company for the purpose of investment in the NIS petroleum and natural gas sector. Conoco, involved in a Russian JV called "Polar Lights," received a $50 million loan guarantee.[16] OPIC officials anticipate that demand for loans and loan guarantees during FY94 and FY95 will be $1.6 billion for an estimated 59 projects valuing a total of $8.3 billion. Of these anticipated projects, 10 are petroleum and gas projects valued at $7 billion.[17]

[4] Jane Collin, "Loan Deals," *Nefte Compass* (London), Feb. 26, 1993, p.8.

[5] Ibid.

[6] Information supplied by Eximbank.

[7] Eximbank, press release, "U.S. Eximbank and Russia agree to principles of $2 billion oil and gas framework agreement," Apr. 15, 1993.

[8] Eximbank estimates that the $500 million agreement will support 8,000-9,000 U.S. jobs in the U.S. oil and gas equipment and services sector. Ibid.

[9] Ibid.

[10] Ibid.

[11] Because the ruble has never been a convertible currency, insurance on currency inconvertibility is not available in the NIS. USITC telephone conversation with OPIC official, June 15, 1993.

[12] OPIC, "Special Report: OPIC Investor Services for Central & Eastern Europe and the Newly Independent States," Mar. 1993, p.3.

[13] Ibid.

[14] Ibid.

[15] OPIC official, telephone interview with USITC staff, June 16, 1993.

[16] Ibid, June 15, 1993.

[17] Ibid.

EBRD

Another important international source for the financing of private investments, including those in crude petroleum and natural gas, is a network of regional development banks, such as the EBRD. The London-based EBRD was founded in April 1991, to serve the development needs of the Eastern European nations and the Soviet Union. EBRD shareholders include the 23 European market economies, Japan, Canada, Australia, and the United States (the largest shareholder at 10 percent). EBRD is focusing its principal support on petroleum and gas projects because these sectors are of critical importance to the growth of the entire NIS economy.[18] As of early 1993, the EBRD had approved five private sector petroleum and gas projects in Russia, committing $218 million in EBRD funding.[19] Fewer and smaller projects in Kazakhstan and Azerbaijan, Turkmenistan, and Uzbekistan are under development.[20]

G-7 Actions

Recent problems involving stabilization of the Russian monetary system are being addressed by a collection of loans and loan guarantees designed to support Russia's economic reforms.[21] This loan program, initiated by and coordinated through the G-7 nations, contains certain additional funds that may be made available to private firms specifically interested in involvement in the renovation of the Russian petroleum and natural gas sectors. The package, which resulted from an emergency 2-day meeting of the foreign and finance ministers of the G-7 nations, includes approximately $28.4 billion in aid not previously committed, as well as promises to defer principal and interest payments on current loans.[22] The package pledges funds to be made available for the following programs:[23]

Source	Amount
New IMF Program for nations moving toward market economies	$3 billion
EBRD	$300 million
World Bank	$5 billion
IMF Fund to stabilize the ruble	$6 billion
IMF "standby" loans	$4.1 billion
World Bank cooperation with countries' export guarantees (for energy projects)	$10.0 billion

[18] EBRD, "Information session: Oil and gas sector review," Feb. 12, 1993.

[19] Ibid.

[20] Ibid.

[21] Stephen MacSearraigh and Jane Collin, "G-7 totting up the real benefits of the G-7's Russian largesse," *Nefte Compass*, Apr. 16, 1993, pp. 1-2.

[22] Ibid.

[23] Ibid.

Also, a credit agreement is expected to be signed formalizing a financing agreement between the World Bank and the Government of Turkmenistan to assist in financing the reconstruction of the Krasnovodsk refinery. This agreement is representative of the type of accords that are beginning to occur as the smaller successor states assert control over the renovation of their own petroleum and natural gas industries. The agreement calls for the World Bank to finance about 50 percent of the total cost of the project, estimated to be $500 million.[24]

Credit lines are also expected to be made available to Russian PAs to specifically to facilitate the export of U.S.-produced equipment for the restoration and renovation of the Russian petroleum and natural gas sectors. The amounts and sources of these credit lines are as follows:[25]

Source	Amount
U.S. Eximbank	$2 billion
Japanese Eximbank	$1.5 billion
European Bank for Reconstruction and Development	$1 billion
World Bank	$1 billion

Russian officials hope to begin drawing on these lines of credit to purchase $5 billion in production equipment for its to begin restoration work. Shipments of equipment are expected to begin in the fall of 1993.

European Energy Charter

Another development that may mitigate risks involved in NIS energy projects is the European Energy Charter. On December 17, 1991, in The Hague, 48 nations agreed to negotiate the charter, including the United States. The charter was initiated by the European Community (EC) as an attempt to create a "continental energy market."[26] The charter requires signatories to cooperate on a broad range of issues, including energy production, conversion, distribution, and environmental safety. The designers of the charter are hopeful that it could provide a basis for trade agreements and increased cooperation between the NIS, particularly Russia, and Western Europe.[27]

An effort to activate the stalled charter initiatives is being made under the auspices of the Energy Private Investment Support (EPIS), a group of six European banks brought together by the Abn-Amro Bank.[28]

[24] Interfax-America, *Petroleum Report*, "World Bank Finances Reconstruction of Krasnovodsk Refinery," May 3-5, p. 11.

[25] *Russian Petroleum Investor*, Apr. 1993, p. 6.

[26] U.S. Department of State official, interview with USITC staff, June 16, 1993. See also, "Financier Seek Political Risk Insurance under European Energy Charter," Petroleum Economist, Feb. 1993, p. 40.

[27] Ibid.

[28] This bank is known as the "mother bank" for Royal Dutch Shell Corp. since it is the primary means used by the company for financing its overseas projects.

EPIS has established a special EC political risk insurance fund for European companies to initiate those large-scale energy projects in the NIS that would generate hard currency exports.[29] Resources designated for the risk insurance fund are estimated to be between $6 billion and $12 billion.[30]

[29] U.S. Department of State telegram, message reference No. 151541Z, unclassified, Apr. 16, 1993.
[30] Ibid.

CHAPTER 6
Future Prospects

Although global demand for energy will probably increase most rapidly in areas of expanding population and industrialization, general consumption and production patterns are likely to remain relatively unchanged through the year 2000.[1] The Organization of Petroleum Exporting Countries (OPEC) nations are expected to continue to account for the largest share of the world's production of crude petroleum, and the member-nations of the Organization for Economic Cooperation and Development (OECD)[2] are expected to remain the world's major consumers (tables 6-1 and 6-2). The most significant new consumer and source of energy in global markets is likely to be the newly independent states (NIS). Future developments in the

[1] The World Bank, *World Development Report 1992*, p. 114.

[2] OECD member countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

Table 6-1
Crude petroleum: Projections of world production, 2000 and 2010
(Million barrels per day)

Projections[1]	World	OPEC	FSU/China	Other
Year 2000:				
U.S. Department of Energy	74.7	30.9	12.6	31.2
Canada	72.8	33.4	13.3	26.1
DRI	73.2	33.4	13.2	26.6
County NatWest	75.7	32.9	12.8	30.0
World Bank	72.6	31.0	14.7	26.9
Year 2010:				
U.S. Department of Energy	84.0	41.9	14.7	27.4
Canada	78.4	42.7	10.7	25.0
DRI	80.8	40.6	13.3	26.9

[1] Projections are based on anticipated average crude petroleum prices ranging from $20 to $27 per barrel in 2000 and from $27 to $35.70 per barrel in 2010.

Source: U.S. Department of Energy, *International Energy Outlook 1992*; the National Energy Board, *Canadian Energy Supply and Demand 1990–2010*; DRI/McGraw-Hill, *International Oil Bulletin*; County NatWest, *County NatWest–USA Oil Market Outlook*; and the World Bank, *Price Prospects for Major Primary Commodities*.

Table 6-2
Crude petroleum: Projections of world consumption, 2000 and 2010
(Million barrels per day)

Projections[1]	World	OECD	FSU/China	Other
Year 2000:				
U.S. Department of Energy	75.0	41.6	10.6	22.8
Canada	72.8	41.9	10.0	20.9
DRI	73.2	40.9	10.8	21.2
County NatWest	75.4	42.3	10.6	22.5
World Bank	72.6	37.8	12.5	22.3
Year 2010:				
U.S. Department of Energy	84.3	43.6	12.6	28.1
Canada	78.5	44.4	9.1	25.0
DRI	80.6	43.6	11.4	25.6

[1] Projections are based on anticipated average crude petroleum prices ranging from $20 to $27 per barrel in 2000 and from $27 to $35.70 per barrel in 2010.

Source: U.S. Department of Energy, *International Energy Outlook 1992*; the National Energy Board, *Canadian Energy Supply and Demand 1990–2010*; DRI/McGraw-Hill, *International Oil Bulletin*; County NatWest, *County NatWest–USA Oil Market Outlook*; and the World Bank, *Price Prospects for Major Primary Commodities*.

NIS petroleum and natural gas industries will depend in large part, however, on an influx of capital and technology from the West and resolution of internal issues, such as transportation infrastructure agreements.

Production and Consumption

Despite the current technical difficulties in the NIS petroleum sector, with the assistance of foreign investment, declining production is expected to reverse by the year 2000, and production should be between 9 million and 13 million barrels per day by 2010 (table 6-3).[3] Until 1995 or 1996, domestic consumption is expected to continue to decline due to the countries' emphasis on petroleum exports to obtain hard currency, and related shifts in NIS energy demand.[4] In the longer term, NIS petroleum consumption is expected to grow in response to a resumption of general economic growth. The outlook for future NIS production of natural gas is promising, and given the large reserves and relatively sound condition of the industry, production could increase by almost 40 percent over current levels; to an annual rate of 40 trillion cubic feet by 2010 (table 6-4).[5] Consumption of natural gas is also projected to increase, stabilizing at about 44 percent of total energy consumption.[6]

Table 6-3
Crude petroleum: Range of U.S. projections of production and consumption in the NIS, 1995, 2000, 2010

(Million barrels per day)

Year	Production	Consumption
1995	7.0 – 10.0	5.0 – 8.0
2000	8.0 – 11.0	6.0 – 9.0
2010	9.0 – 13.0	6.3 – 11.4

Source: Official statistics of the U.S. Department of Energy.

[3] U.S. Department of Energy, *International Energy Outlook 1992*, April 1992, p. 10-11 and *Oil in the Former Soviet Union*, p. 82.

[4] NIS consumption is projected to decrease prior to 1995 or 1996, possibly to as low as 6.1 million barrels per day from the consumption of 7.2 million barrels per day in 1991. Ibid., p. 81.

[5] Some economists voice concern that negative development called "deindustrialization" or "Dutch disease," could surface in the energy-producing states of the former Soviet Union in the long term. Associated with excessive development in the petroleum and natural gas sector, Dutch disease occurs when local investment in capital goods and infrastructure, complementing the buildup of the sector with foreign capital, and coupled with the movement of manpower into the sector denies needed resources to the rest of the economy. USITC staff telephone conversation, Prof. Peter A. Lindert, Dept. of Economics, UCLA, Apr. 6, 1993.

[6] *Oil in the Former Soviet Union*, p. 94.

Table 6-4
Natural gas: Range of U.S. projections of production and consumption in the NIS, 1995, 2000, 2010

(Trillion cubic feet)

Year	Production	Consumption
1995	30.5 – 34.0	23.8 – 25.2
2000	32.0 – 38.2	23.8 – 27.4
2010	35.0 – 40.0	26.0 – 37.7

Source: Official statistics of the U.S. Department of Energy.

There has been speculation that large increases in world supply of crude petroleum and natural gas could result in significant price fluctuations and the shut down of marginal production areas. As a result, OPEC, which currently holds the only surplus capacity in the world, has considered inviting the NIS to join its organization, although no formal invitations have yet been issued.[7] Russia and Kazakhstan have expressed an interest in cooperating with OPEC, and officials from both countries attended the April 13, 1993, meeting of OPEC and non-OPEC producers held in Oman.[8] It could be some time, however, before Russia or Kazakhstan would be ready to join OPEC; the NIS industry is not yet stable enough to abide by the production quotas and pricing guidelines as required under the provisions of OPEC membership.

The energy-producing NIS formed an intergovernmental council in April 1993, to develop and coordinate energy production and distribution throughout the former Soviet Union (FSU). An agreement calling for cooperation in terms of extracting, transporting, processing, and utilizing crude petroleum and natural gas was signed by representatives of Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Lithuania[9], Moldova, Russia, Tajikistan, Ukraine, and Uzbekistan.[10] The group agreed to two specific preliminary pacts between Russia and other NIS:

- Armenia, Belarus, and Kazakhstan will supply Russia with exploration and production equipment and materials in exchange for Russian crude petroleum exports.
- Georgia tentatively will swap petroleum pipe for Russian crude petroleum.

[7] USITC field interviews with officials of OPEC, Mar. 1993.

[8] USITC staff conversation with OPEC officials, and *Platt's Oilgram News*, vol. 71, No. 71, Apr. 13, 1993, p. 4. Officials from Azerbaijan were scheduled to attend but did not appear, citing domestic difficulties. Other non-OPEC attendees at the April 13 meeting included representatives from Angola, Bahrain, Brunei, China, Colombia, Egypt, Malaysia, Mexico, Norway, Oman, the United States, and Yemen.

[9] Although Lithuania is not a member of the NIS, it is a major export center for Russian petroleum.

[10] "Plummeting Output Spurs FSU's Mini OPEC," *World Oil*, Apr. 1993, p. 31.

Similar agreements are expected in the future as Russia attempts to reclaim some degree of central control by encouraging other NIS to support the Russian petroleum industry. OPEC representatives have indicated they welcome the creation of an NIS cartel and would cooperate with any efforts made toward maintaining an orderly global petroleum market.

Potential Export Markets

In the short term, NIS energy exports are expected to be directed along existing transportation networks to current export markets in Eastern and Western European countries and other NIS. However, shifts in NIS exports from Eastern to Western European markets are very likely, given the need for hard currency and unresolved transportation infrastructure issues. Since the dissolution of the Soviet Union, Russia continues to supply crude petroleum and natural gas to the other NIS, but at significantly lower levels.

Supply contracts for 1993 indicate that Russia intends to further reduce exports of crude petroleum and natural gas to the other NIS while maintaining export levels to Western markets. These markets are important because the ability of the NIS to export crude petroleum and natural gas to Western countries will be an important factor in their ability to repay foreign debts and to purchase additional equipment and technology.

One serious impediment to increasing and diversifying foreign markets is the limited access to reliable export networks for many NIS producers. The dissolution of the FSU created significant supply and distribution disruptions among the successor states. Some countries with large amounts of resources are generally landlocked by resource-poor states that control the distribution systems. For example, Russia has had difficulty exporting crude petroleum and natural gas through pipelines that now traverse the other NIS before reaching East European borders[11], and the second-largest NIS crude petroleum producer, Kazakhstan, is landlocked with no direct pipeline routes to foreign markets.[12] Although new export routes are being developed both by domestic and foreign entities (table 6-5), many have not yet reached completion. However, as infrastructure is repaired and constructed and NIS production increases, new export markets are likely to emerge.[13]

In addition to pipeline expansions, port expansions in Eastern Russia may encourage tanker shipments to the U.S. west coast and Pacific Rim countries such as Thailand, Hong Kong, the Philippines, and Singapore (which has world-class petroleum refineries). These Asian nations depend upon imported crude petroleum to refine into petroleum products for sale to Japan and other consuming countries.

The United States is also a potential market for NIS exports. Recent trade concessions by the U.S. Government that reduced the rates of duty for crude petroleum from 21 cents per barrel to 5.25-10.5 cents per barrel may facilitate trade. U.S. imports of crude petroleum from Russia began in early 1993, although they average less than 500 barrels per day.[14]

NIS exports of crude petroleum, the region's major source of hard currency, will continue to be marketed to the "highest bidder."[15] Western Europe is likely to be a contender as an important future market for such exports because of its proximity and its historical position as a major export market for the FSU. In 1990, Western Europe received 43 percent of all FSU exports of crude petroleum, about 3.4 million barrels. Western European nations view increased availability of NIS crude petroleum as an opportunity to diversify their sources of supply in order to mitigate any future supply disruptions.

[11] Disputes have arisen between Ukraine and Russia concerning the price of crude petroleum and natural gas sold to Ukraine and transit fees charged for shipment. On Nov. 16, 1992, the Russian Government announced that energy commodities leaving the ruble zone must be purchased in hard currency. More than 90 percent of Russian export pipelines, including the Friendship petroleum line, pass through Ukraine. *Eastern Bloc Energy*, vol. 5 (Dec. 1992) p. 15.

[12] Pipelines through Russia and the Czech Republic and Slovakia transport 44 million barrels of crude petroleum annually; natural gas is also directed through these countries for export.

[13] For example, increasing the volume of natural gas exports is limited by the finite capacity of existing pipelines, transportation fees imposed by various states traversed by the pipelines, and the fact that natural gas is sold on long-term fixed supply contracts to a limited number of customers. However, in the long run, construction of new pipelines will ease constraints on exports of natural gas.

[14] USITC telephone conversation with U.S. Department of Energy, June 17, 1993.

[15] Interfax-America, *Petroleum Report*, May 28-June 4, 1993, p. 9.

Table 6-5
Proposed improvements to the crude petroleum and natural gas sectors

- The Caspian Pipeline Consortium was formed by Kazakhstan, Oman, Azerbaijan, and Russia to establish a pipeline system to transport crude petroleum from the Tengiz field in Kazakhstan to the Russian Black Sea terminal at Novorossiysk.

- A $1.4 billion agreement was signed by the Governments of Azerbaizan and Turkey to transport crude petroleum from Azerbaijan by pipeline through Iran to a terminal on the Mediterranean coast of Turkey. The capacity of the new pipeline is reported to be 500,000 barrels per day.

- A preliminary agreement has been signed between Russia and Poland for the construction of a gas pipeline from the Yamal Peninsula in Russia through Belarus, Poland, and continuing to Germany. Capacity is slated to be 52 billion cubic meters per year.

- Russia has announced plans to construct and expand petroleum port terminals. Three Black Sea ports—Tuapse, Novorossiysk, and Kavkaz—and two ports in the far eastern section of Russia—Nakodka and Vladivostok—will be expanded to increase capacity, while two new facilities will be constructed, one on the Baltic Sea and the other on Lake Ladoga near St. Petersburg.

- Kazakhstan is reportedly reconditioning the Aktau port on the Caspian Sea to facilitate sea exports.

- Ukraine announced that it will build a 293-million-barrel-per-year crude petroleum terminal at the port of Yuzhny near Odessa.

- Ukraine, Russia, and Iran have discussed the possibility of constructing a gas pipeline from Iran to Ukraine through Russia to reduce Ukraine's reliance on Russian energy.

Source: Compiled from various editions of Interfax-America, *Petroleum Report,* and other publications.

APPENDIX A
Request Letter From the Senate Finance Committee

DANIEL PATRICK MOYNIHAN, NEW YORK
MAX BAUCUS, MONTANA
DAVID L. BOREN, OKLAHOMA
BILL BRADLEY, NEW JERSEY
GEORGE J. MITCHELL, MAINE
DAVID PRYOR, ARKANSAS
DONALD W. RIEGLE, JR., MICHIGAN
JOHN D. ROCKEFELLER IV, WEST VIRGINIA
TOM DASCHLE, SOUTH DAKOTA
JOHN BREAUX, LOUISIANA

BOB PACKWOOD, OREGON
BOB DOLE, KANSAS
WILLIAM V. ROTH, JR., DELAWARE
JOHN C. DANFORTH, MISSOURI
JOHN H. CHAFEE, RHODE ISLAND
DAVE DURENBERGER, MINNESOTA
STEVE SYMMS, IDAHO
CHARLES E. GRASSLEY, IOWA
ORRIN G. HATCH, UTAH

VANDA B. McMURTRY, STAFF DIRECTOR AND CHIEF COUNSEL
EDMUND J. MINALSKI, MINORITY CHIEF OF STAFF

cc: The Commission

United States Senate

COMMITTEE ON FINANCE
WASHINGTON, DC 20510-6200

September 22, 1992

DOCKET NUMBER
1724
Office of the Secretary
U.S. International Trade Commission

The Honorable
Don E. Newquist
Chairman
U.S. International Trade Commission
500 "E" Street, S.W.
Washington, D.C. 20436

Dear Mr. Chairman:

The former Soviet Union historically depended heavily on exports of crude petroleum and natural gas for hard currency. Recent political changes and a foreign debt exceeding $83 billion have made crude petroleum and natural gas exports even more critical at a time when production of these commodities has reached an all time low. The United States is the world leader in crude petroleum and natural gas exploration and production technology, including types adapted to harsh climates and difficult terrain. Although commitment of U.S. capital and technology would aid the further development of the petroleum and natural gas industry in the newly independent states of the former Soviet Union (NIS), to date only a few U.S.-NIS joint ventures have begun to produce crude petroleum and natural gas in the area.

On behalf of the Senate Committee on Finance, and under the authority of section 332(g) of the Tariff Act of 1930, I am requesting that the Commission conduct a baseline analysis of existing trade and investment patterns in the crude petroleum and natural gas sectors of the energy producing states of the NIS, as well as an examination of the current and potential impediments affecting the production, distribution, transportation, and storage of and trade and investment in these commodities. In its report, the Commission should evaluate the energy-producing states of the NIS in terms of reserves and production of crude petroleum and natural gas, as well as analyze the past, current, and likely future trade patterns of these nations for these products.

More specifically, among the issues the Commission should review are:

(1) Crude petroleum and natural gas production in the NIS over a five-to-ten year period;

(2) Crude petroleum and natural gas trade over a five-to-ten year period, including principal markets for both the United States and the NIS;

(3) Impediments, if any, to increased crude petroleum and natural gas exploration and production in the NIS, such as U.S. export restrictions concerning technology and foreign investment restrictions in the NIS;

(4) The investment situation in the NIS, such as the role of joint ventures and equity-sharing, or petroleum pricing policies that could affect the industry; and

(5) To the extent feasible, the future markets for increased NIS crude petroleum and natural gas production.

The Committee would appreciate receiving the study no later than nine months after receipt of this letter. Thank you for your attention to this important matter.

Sincerely,

Lloyd Bentsen
Chairman

APPENDIX B
Notice of Investigation

INTERNATIONAL TRADE COMMISSION

[Investigation No. 332-338]

Trade and Investment Patterns in the Crude Petroleum and Natural Gas Sectors of the Energy-Producing States of the Former Soviet Union

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation and scheduling of public hearing.

SUMMARY: Following receipt of a request on September 23, 1992, from the Senate Committee on Finance, the Commission instituted investigation No. 332-338, Trade and Investment Patterns in the Crude Petroleum and Natural Gas Sectors of the Energy-Producing States of the Former Soviet Union, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)). The Committee requested that the Commission provide its report not later than June 23, 1993.

EFFECTIVE DATE: October 28, 1992.

FOR FURTHER INFORMATION CONTACT: General inquiries regarding the investigation may be directed to Mr. Edmund Cappuccilli (202-205-3368) or Ms. Cynthia B. Foreso (202-205-3348), Energy and Chemicals Division, Office of Industries, U.S. International Trade Commission, Washington, DC 20436. For information on legal aspects of the investigation, contact Mr. William Gearhart of the Commission's Office of the General Counsel (202-205-3091). The media should contact Mr. Edward Carroll, Acting Director, Office of Public Affairs (202-205-1819). Hearing-impaired persons can obtain information on this study by contacting the Commission's TDD terminal on 202-205-1810.

BACKGROUND: As requested, the Commission in its report will seek to provide a baseline analysis of existing trade and investment patterns in the crude petroleum and natural gas sectors of the energy-producing States of the newly independent States of the former Soviet Union (NIS), as well as an examination of the current and potential impediments affecting the production, distribution, transportation, and storage of these commodities. In its report, the Commission will also seek to evaluate the energy-producing States of the NIS in terms of reserves and production of crude petroleum and natural gas, as well as analyze the past, current, and likely future trade patterns of these States in these products.

More specifically, as requested by the Committee, the Commission, in conducting its study, will review the following issues:

(1) Crude petroleum and natural gas reserves and production in the NIS over a 5-10 year period;

(2) Crude petroleum and natural gas trade over a 5-10 year period, including principal markets for both the United States and the NIS;

(3) Impediments, if any, to increased crude petroleum and natural gas exploration and production in the NIS, such as U.S. export restrictions concerning technology and foreign investment restrictions in the NIS;

(4) The investment situation in the NIS such as the role of joint ventures and equity-sharing, as well as petroleum pricing policies that could affect the industry; and

(5) To the extent feasible, the future markets for increased NIS crude petroleum and natural gas production.

PUBLIC HEARING: A public hearing in connection with this investigation will be held in the Commission Hearing Room, 500 E Street, SW., Washington, DC 20436, beginning at 9:30 a.m. on January 28, 1993. All persons shall have the right to appear by counsel or in person, to present information, and to be heard. Requests to appear at the public hearing should be filed with the Secretary, United States International Trade Commission, 500 E Street, SW, Washington, DC 20436, no later than noon, January 15, 1993. Any prehearing briefs (original and 14 copies) should be filed with the Secretary not later than noon, January 21, 1993. Any post hearing briefs should be filed by February 4, 1993.

WRITTEN SUBMISSIONS: In addition to or in lieu of filing prehearing or posthearing briefs, interested parties are invited to submit written statements concerning the matters to be addressed in the report. Commercial or financial information that a party desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons in the Office of the Secretary to the Commission. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted at the earliest practical date and should be received no later than February 4, 1993. All submissions should be addressed to the Secretary, U.S. International Trade Commission, 500 E Street, SW, Washington, DC 20436.

Issued: October 28, 1992.

By order of the Commission.

Paul R. Bardos,

Acting Secretary.

[FR Doc. 92-26784 Filed 11-3-92; 8:45 am]

BILLING CODE 7020-02-M

APPENDIX C
U.S. Government, Foreign Government, and Private Firms Interviewed by the USITC Staff

U.S. Government, Foreign Government, and Private Firms Interviewed by the USITC Staff

Domestic Fieldwork

U.S. Department of Commerce
U.S. Department of Energy
U.S. Department of State
U.S. Geological Survey
National Bureau of Economic Research
Congressional Research Service
U.S. Export-Import Bank
International Monetary Fund
Overseas Private Investment Corporation
International Bank for Reconstruction and Development (World Bank)

U.S.-Based Private Firms

Amoco Corp.
Bechtel Energy Resources
Coastal Corp.
Chevron
Conoco Oil Co. (Polar Lights Project)
Exxon International
Occidental Petroleum Company
Pennzoil
Phibro Energy Production, Inc.
PlanEcon
Schade, Harrison, Segel, and Lewis
Shell Oil Company
Sovlink
U.S.-Russian Business Council

Foreign Fieldwork

London

American Embassy, Energy Attache
Bankers Trust Co.
British Gas, plc
British Petroleum Company
European Bank for Reconstruction and Development
European Energy Environment, Ltd.
Lehman Brothers, International
Marathon Oil Company
Nefte Compass
Premier Consolidated Oilfields, plc
Petroleos de Venezuela (UK) S.A.
Sabex Futures, Ltd.

Moscow

American Embassy, Energy Attache
All-Union Scientific Research Institute of Natural Gases (VNIIGAS)
Ernst and Young Associates
Halliburton Company
Ministry of Foreign Economic Relations of the Russian Federation
Ministry of Fuel and Energy of the Russian Federation:
- Board of Economic Regulation
- Department of Oil and Gas Industry
- Administration for Foreign Economic Relations
- Department of State Regulations

Occidental Petroleum Company (CIS)
Phibro Energy Production, Inc.
Russian Academy of Sciences, Institute of Energy Research
Russian Energy Efficiency Center
Russian Project Finance Bank
Russian Research Oil & Gas Institute

Prague

Chempol
Czech Gas Company
Czech Ministry of Industry and Trade
Transgas Corporation

Vienna

Austrian Ministry of Economics
Austrian Power Company
Creditanstalt
Organization of Petroleum Exporting Countries
U.N. Industrial Development Organization

Conference

The Second Annual Russian Oil Conference—The Russian Oil Industry: Foreign Investment Opportunities

This seminar, held in London, was sponsored by the Royal Institute of International Affairs, the Centre for Foreign Investment and Privatization in Moscow, and Petroleum Intelligence Weekly and was entitled *The Russian Oil Industry: Foreign Investment Opportunities*. Among the speakers on the agenda were Directors of many Russian ministries, organizations, and various industry institutes, including the Deputy Prime Minister of the Russian Federation, the President of Rosneftegaz; the Chairman of the Committee on Industry and Energy of the Supreme Soviet, Russian Federation; and the Chairman of the Moscow Oil Exchange.

APPENDIX D
Major Laws Governing Foreign Investment in the Primary Energy-Producing NIS

Russia, Kazakhstan, and Azerbaijan[1]

Russia

The General Framework for the Acquisition of Fixed Industrial and Commercial Assets

Law on Foreign Investments in the Russian Federation—enacted July 4, 1991

Article 1 establishes the right of foreign legal entities, citizens, states, and international organizations to invest in Russia. It also establishes the right of foreigners to use the country's land and natural resources.

Article 3 provides for the following modes of foreign investment in the country: (1) shared participation in enterprises set up jointly with legal entities and citizens in Russia; (2) the creation of enterprises wholly owned by foreign investors; (3) acquisition of enterprises, property complexes, buildings, shares, stocks, and bonds; (4) acquisition of rights to use land and other natural resources; (5) acquisition of other property rights; and (6) other investment activity not prohibited by law.

Article 6 establishes the unconditional legal protection of foreign investment in Russia. It provides for a legal treatment of foreign investments not less favorable than the one extended to Russian legal entities and citizens.

Article 7 establishes that foreign property may not be nationalized or requisitioned except under extraordinary circumstances. For such an action, legislation by the Supreme Soviet is required. Article 8 specifies that compensation for nationalized or requisitioned property would be based on the actual value of the property in a convertible currency, and payment would be affected without undue delay.

Article 9 establishes that disputes arising from foreign investments could be settled through arbitration, or in the Russian court system, or at some international forum.

Article 10 guarantees the transfer of profits and liquidation proceeds abroad.

Article 11 of the law allows foreign investors to reinvest their profits in Russia.

Article 16 requires all foreign investments in excess of 100 million rubles to be registered with the government. Registration is processed by the Committee for Foreign Investment, but final approval may, in some instances, require authorization by the Council of Ministers.

Article 17 establishes that the Russian state is obliged to register an enterprise with foreign investments within 21 days of submission of the application, or report to the applicant the reasons for refusal.

Article 21 empowers enterprises with foreign investments to set up subsidiaries within and without Russia.

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[1] This appendix was compiled from translations of laws and regulations obtained from various U.S. and Russian Government agencies. The descriptions of the segments selected for inclusion abridge the original, often unedited English-language translations. Some of the laws and regulations have been translated from Russian-language newspapers. Firms interested in legal actions concerning foreign investment in the three countries are advised to turn to the original, official versions of the laws and regulations described.

Article 24 exempts from customs duty property intended to start up the operations of foreign-owned enterprises.

Article 31 allows enterprises with foreign investments to use their properties for the purpose of collateral.

Article 37 allows foreign investors to participate in the privatization of state and municipal enterprises, and also in uncompleted capital construction projects.

Article 38 establishes that the rights to use the land or other natural resources is regulated by the Land Code and other legislation.

Article 40 requires foreign investors to conclude concession contracts with the Government of Russia in order to acquire rights "to work and exploit renewable and nonrenewable natural resources and engage in economic activity connected with the use of objects owned by the State but not transferred to enterprises." The period of concession contract depends on the nature and terms of concession but cannot be more than 50 years.

Law on Property in the Russian Federation—enacted December 24, 1991

Articles 27 and 28 establish that provisions of property of the local citizenry also apply to the property of foreign citizens located in Russia, unless legislative acts provide otherwise. These articles also stipulate that foreign legal persons in Russia are entitled to own industrial and other enterprises, buildings, structures, and other property for the purposes of carrying out their entrepreneurial activities.

The Decision of the Council of Ministers of the RSFSR "On the Use of Monetary Means in Soviet Rubles by Foreign Firms in the Territory of the Russian Federation—enacted December 3, 1990

Paragraph 1 establishes that foreigners are not permitted to acquire for rubles buildings and structures, except incomplete ones.

Acquistion of Fixed Industrial and Commercial Assets Through Privatization

Decree of the President of the Russian Federation "On Measures on the Implementation of Industrial Policy in the Process of Privatization"—effective November 16, 1992.

Article 1 reaffirms government control for a period of at least 3 years over privatized enterprises in the petroleum and natural gas sector.

Decree of the President of the Russian Federation "On Specific Features of Privatization and Reorganization into Joint Stock Companies of State-Sector Enterprises, Production and Research and Production and Associations in the Oil and Oil-Refining Industry and Oil Supplies,"—effective November 17, 1992

Article 5 establishes that the percentage of foreign ownership in terms of shares in joint stock and oil companies, created pursuant to this decree, shall not exceed 15 percent.[2]

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[2] For a background report on Russia's progress in privatization until August 1, 1992, see article of Jeff Riddell, *International Economic Review*, September 1992, pp. 15-23.

Land and Subsoil

Land Code of the Russian Federation—enacted April 25, 1991

Articles 3, 7, and 13 stipulate that plots of land may not be transferred into the ownership of foreign citizens and into inherited life-time possession. Under the code, foreign businesses are allowed to lease land. However, the decree of the President of the Russian Federation, which was published on March 25, 1992, allows foreigners to acquire plots of land if the purchase occurs in conjunction with privatization.

Law On Mineral Resources—enacted February 21, 1992

The law establishes that the Russian Federation owns all underground natural resources, but provides local and regional governments the opportunity to participate in decisions regarding the use of resources within their respective boundaries. The law empowers all three levels of the government (i.e., Federal, regional, and autonomous republics) to share in the responsibility of licensing the development of mineral resources.

Article 9 stipulates that the subsoil may be used in conjunction with entrepreneurial activity, regardless of forms of property and citizenship, except as otherwise provided by legislative acts of the Russian Federation. (In other words, foreign investors may be prohibited from using subsoil.)

The law provides for the following five types of licenses:

(1) exploration license or geological study license, not to exceed a duration of 5 years; (2) extraction license, not to exceed 20 years; (3) the license for construction and operation of underground structures not connected with mineral extraction; (4) the license for the protection of geological features (e.g., the creation and maintenance of scientific and educational testing areas, geological parks, preserves, natural landmarks, and caverns); and (5) the license for the collection of mineral samples, including archeological digs. (The available translations did not specify time limits for the last three types of licenses.)

The law establishes that licenses may be granted only by auction or competitive bid. Its antitrust provisions make it illegal to replace auction or competitive bidding with direct negotiations. Under the law it is illegal to limit access to auctions or to bidding, or to refuse licenses to winners of auctions or bidding.

The law states the grounds for refusing a license; all the grounds involve lack of conformity with regulations, attempts to willfully mislead the authorities, and lack of financial and/or technical competence of the applicant. The law states various reasons for terminating a license.

The law establishes that foreign investors will have to pay for the use of resources, but it does not address the required level of compensation.

Regulation No. 3314-1, "On the Order of Licensing in the Use of Mineral Resources,"—issued by the Supreme Soviet on July 15, 1992

The regulation provides procedure for issuing licenses to foreign investors in the Russian energy sector. The coordinator of the process is the State Committee on Geology ("Geolkom"). The license includes agreement on the permitted level of extraction, production sharing with the local partner, the use of geological information, standards for environmental protection, and safety conditions.

Decree No. 847 "On the Excise Collection on Oil Extracted in the Territory of the Russian Federation"—issued on November 1, 1992

The decree set criteria for the limitation of fees involved in the production of natural resources by foreign investors.

Exchange Activities

Law "On Commodity Exchanges and Exchange Trade"—enacted February 20, 1992

Article 19 of the law establishes that foreign entities that are not members of commodity exchanges may participate in exchange trade only through exchange agents. (A substantial portion of crude petroleum not sold to the state at minimum prices is sold at higher prices on commodity exchanges.)

Finances

Law "On Currency Regulation and Exchange Control"—enacted October 9, 1992

It provides for the procedure involved in opening and maintaining accounts by foreign investors.

The use of property for purposes of security is provided by the Civil Code and the more recent Law on Pledge. Under the provisions of these laws, produced petroleum or natural gas can be pledged as security.

The Resolution of the Council of Ministers/Government of the Russian Federation "On Bonds for Hard Currency"—effective on March 15, 1993

The resolution offers hard currency bonds to the creditors of state agencies.

Kazakhstan

Law "On Foreign Investments in the Kazakh SSR"—enacted December 7, 1990

Article 1 establishes that foreign investors in the republic may be foreign legal persons, foreign citizens, and legal entities of Kazakhstan in which the controlling block of shares or a significant portion of the shares belongs to foreign citizens and/or legal persons.

Article 3 determines that the objects of foreign investments in the country may be enterprises, other property, and the rights for the use of natural resources. Foreign investment may take the form of equity participation.

Article 9 establishes that foreign investments are permitted in any economic branch and activity, with the exception of manufacturing products for direct military purposes.

Article 10 establishes that the profit earned by foreign investors may be freely reinvested in the territory of the republic.

Article 15 ensures the protection and exercise of intellectual property rights of foreign investors and legal persons with foreign participation.

Article 16 states that property imported into the republic as investments by foreign investors and not destined for sale, as well as personal property of foreign specialists employed in enterprises with foreign participation, is not liable to customs duties.

Article 19 spells out the necessity to avoid double taxation of foreign investors by means of conclusion of appropriate international agreements.

Article 20 provides for the following tax benefits: (1) When the share of a foreign investor exceeds 30 percent, the investor may be exempt from profit taxes for 5 years after the first declaration

of profit. The investor pays tax on profit at a reduced rate of 50 percent during the subsequent 5 years; (2) Expenses for humanitarian purposes are deductible from taxable profits.

Law "On Basic Principles of External Economic Activities"—enacted December 15, 1990

Article 6 establishes that no state agency shall interfere in the external economic activities of non-state entities. Article 7 establishes that the legal persons involved in external economic activities, regardless of forms of property and types of activities, have equal rights in carrying out such activities within the limits of existing legislation. Profits after taxes remain at the full disposal of the legal persons who earned them.

Article 9 guarantees the protection of the rights and legitimate interests of the legal persons involved in external economic activities. Nationalization of the property of participants in external economic activities is not permitted. The state shall compensate participants in external economic activities if it causes damage to them.

Article 12 defines the procedure for settling disputes between participants in external economic activities and the state in courts.

Law "On Investment Activity in the Kazakh SSR"—enacted June 10, 1991

Article 6 establishes that all investors, domestic or foreign, have equal protection under the law.

Decree of the President of the Kazakhstan "On Ensuring the Independence of External Economic Activities of the Kazakh SSR"— effective on August 31, 1991

Article 3 establishes that the allocation of quotas and licensing of exports and imports, including barter transactions, are the exclusive prerogatives of the state.

Article 11 provides for the right to hold currency, extending the legal protection of property to the possession of currencies.

Articles 13 and 14 provide for the legality of transferring foreign currencies from Kazakhstan to abroad and vice versa.

Law "On the State Independence of the Republic of Kazakhstan"— enacted December 16, 1991

Specifies that the country's land and its subsoil, along with its waters, air space, economic, scientific, and technical potential, constitute the exclusive property of the state.

Law "On Concessions in the Republic of Kazakhstan"—enacted December 31, 1991

Article 1 provides for the legality of foreigners to lease property, land, and natural resources.

Article 3 determines, that although the state cedes to the concessionaire the right of possession and use of the objects of concession, it retains the exclusive right of their disposal. It further states that a foreign "investor-concessionaire" may buy out the property on lease, with the exception of land and natural resources. It establishes that concessions in the country are provided on a tender basis.

Article 4 states that concessions are permitted in all domains and types of activity where legislation has not prohibited them. Contracts of concession may provide for the use of national territory and its renewable and non-renewable natural resources; certain water areas, including the inner shelf and the natural resources therein and thereunder; individual deposits; and industrial establishments.

Article 6 establishes that applications for concessions are sent to the State Committee of State Property, which verifies the financial reliability and professional competence of the applicants and guarantors. Concession contracts are registered with the Minister of Finance.

Article 9 provides for the ways a concessionaire can pay for the concession: (1) non-recurrent payments (bonuses), affected before the concessionaire invests; (2) lease payments (rentals), independent of concessionaire's income; (3) payments based on extraction and production (royalties), the basic type of systematic payment for subsoil use; and (4) payments based on income (taxes), which may be determined by a mutual agreement.

Article 10 provides that the duration of a leasing contract cannot be less than 5 years and cannot be more than 40 years. A concession may be returned to the state before the expiration of its contractual duration.

Article 18 establishes that for an appropriate payment, the lessor has the obligation of granting to the concessionaire the exclusive right to exploit the by-product of natural resources, with the exception of certain mineral resources.

Article 19 limits the proportion of foreign specialists in the higher echelons of administrative and technical staff to 30 percent. (It is not clear from the available material if this restriction also applies to fully foreign-owned firms.)

Article 20 guarantees protection against unjustified nationalization, confiscation, liquidation, and requisition. It also guarantees full reimbursement of expenses and losses in the event of a pre-term cancellation of the contract or illegal act by the authorities.

Law "On the Protection and Support of Private Enterprise"—enacted July 4, 1992

Article 1 of the law provides that citizens and legal persons of other countries, as well as persons without citizenship, enjoy the same rights and carry the same obligations in the private sector as the citizens and legal persons of Kazakhstan, except as otherwise provided by the legislative acts of the Republic of Kazakhstan.

Foreign investors are required to register their projects with the Ministry of Foreign Economic Relations. Approval procedure is limited to 30 days.

Azerbaijan

Law "On the Protection of Foreign Investment"—enacted January 15, 1992

The law determines the legal and economic principles involved in making foreign investments in the republic. Article 3 specifies that foreign firms may make investments in the territory of the republic by: (1) equity participation in enterprises established jointly with local legal entities (i.e, joint ventures); (2) establishment of enterprises fully-owned by foreign investors; (3) acquisition of enterprises, or other physical property, shares in enterprises (i.e., equity investment); (4) acquisition of the rights to use land and other natural resources; and (5) conclusion of agreements with local legal persons (e.g., industrial cooperation agreements).

Article 5 specifies that the legal treatment of foreign enterprises shall not be less favorable than the treatment of local enterprises. The same article provides for the possibility of granting tax benefits to foreign investors in sectors designated as priority (such as the energy sector, including the extraction of petroleum and natural gas).

Article 6 establishes the requirement for licensing certain types of activities by foreign investors, and the possibility of restricting the activities of foreign investors through special legislation. (The list of the types of activities has not yet been provided.)

Article 7 provides for the possibility of legislative action to determine territories where foreign investment activities are limited or prohibited, proceeding from considerations of national security.

Article 9 ensures foreign investors of full and unconditional legal protection. (The same assurance is also provided by other legislative acts and the country's international treaties.)

Article 11 specifies that foreign investments shall not be subject to nationalization, except when damage is caused to the people or to State interests. The decision on nationalization is subject to legislation.

Article 12 establishes that compensation paid to foreign investors in the event of nationalization or requisition shall correspond to the value of investments on the date of the adaptation of the decision of nationalization or requisition.

Article 14 establishes that the government shall not object to the repatriation of profits after payment of taxes and duties.

Article 25 establishes that property imported into the country as the contribution of a foreign investor to the authorized capital of a joint venture or for establishing an enterprise fully owned by a foreign investor shall be exempt from customs duty and shall not be subject to import tax.

Law "On Profit Taxation"

This law provides taxation of foreign investors to the extent of 25 percent and taxation of domestic investors to an extent of 35 percent. On August 19, 1992, further legislation established that the rules of the country's agreements with the International Monetary Fund, the World Bank, the International Finance Corp., the International Development Association, the Conventions establishing the Investment Guarantee Agency and the International Center for Settlement of Investment Disputes apply to foreign investors since the country's accession to the above organizations.

All foreign investors are required to register their projects with the State. There is no time limit on the decision.

APPENDIX E
U.S. and Other Foreign Joint Ventures Operating in the NIS Energy Sectors

Table E-1
U.S. energy ventures in NIS

Company	Location	Remarks
Amoco (Gazprom)	Yamal Peninsula, Western Siberia	Development of wells in Novoporto and Bovanenkovo; resources at Yamal estimated at 2.2 billion tons of crude petroleum and 24.3 trillion cubic meters of gas.
Amoco/Unocal/McDermott/British Petroleum/ Statoil/Ramco/(Azeri State Oil Co.-SOCAR)	Caspian Sea, Azerbaijan	Offshore Azeri Field; 90 miles southeast of Baku; holds 1.8 billion barrels of crude petroleum and 2.5 trillion cubic feet of gas; could produce more than 300,000 barrels per day beginning in 1996-97 and have a life of 30 years; slippage in April 1 deadline for signing the agreement, between Kazakhstan and Russia. In May, SOCAR announced that Amoco, BP, and Pennzoil will jointly develop the Caspian Sea crude petroleum reserves of the Guneshli, Chirag, and Azeri fields which have an estimated cumulative 5 billion barrels of recoverable crude petroleum reserves.
Amoco (Yuganskneftegaz)	Yamal Peninsula	Develop the Priobskoye Field with reserves of 43.3 million tons; startup is scheduled for 1994.
Anderman/Smith Overseas, Inc. (Chernogorneft)	Tyumen Region, Western Siberia	Field is northeast of Samotlor; joint venture development of 70 to 100 million recoverable barrels; peak production of 20-25,000 barrels per day; initial production of 2-3,000 barrels per day; venture plans to spend $300 million drilling 220 wells; 3 wells to be drilled by the end of 1993; plan to drill 100 wells over next 5 years.
Anglo-Dutch (Mangystauneftegaz)	Mangystau Region, Kazakhstan	Joint venture to develop Tenge oilfield near Aktau with estimated reserves of 100 million barrels; gas reserves have been drilled at Tenge, but the deeper crude petroleum reserves have not been touched.
Apache Corp. (Kaspmorneftegaz)	Caspian Sea	Develop Kapaz offshore field in the Caspian Sea; 200 million barrels.
Arosco USA Inc. (Rov Zarubezhneft)	Workover for several Russian production associations.	Arosco negotiated financing for Rov Zarubezhn to buy 40 U.S. workover rigs; delivery is expected midsummer 1993; IRI International Corp. to supply 20 rigs, Kremco Inc.–10 rigs, and Cardwell International Inc.–10 rigs.
Aztec-Talas Inc. (Kyrgyz Oil Co.)	Kyrgystan	Aztec-Talas is moving equipment to fracture treat 20 or more wells in the next several months; wells range in depth from 6 to 9,000 feet and have been drilled in the last 2 years by Kyrgyz Oil Co.

Table E-1–Continued
U.S. energy ventures in NIS

Company	Location	Remarks
Benton Oil & Gas Co. (Purneftegasgeologia Industrial Assn.-PIA/Purneftegas) (Geoilbent)	Western Siberia	Geoilbent joint venture plans to drill 15-20 development wells in 1993 in the Gubkinskoye Field; recoverable crude petroleum reserves of 340 million barrels; phase 1 to achieve crude petroleum production of 10,000 barrels per day; Benton to fund about $15 million in 1993. Geoilbent has completed its Russian crude petroleum pipeline and expects to start production from North Gubinskoye Oilfield in third quarter, 1993; capacity of the 37 mile pipeline is 70,000 barrels per day; the oil field has been delineated with 60 wells.
Biedermann (Interkaspy)	Atyrau Region, Kazakhstan	Joint venture, Munai, to develop Kenbay Field with estimated reserves varying from 161-737 million barrels; Kenbay is the third largest oilfield in Kazakhstan.
Camco (Tyumengaztekhnologiya/ Urengoygazdobcha)	Western Siberia	Overhaul crude petroleum/gas wells and enhance recovery of gas and condensate in Urengoy Field.
Cardwell International Inc. (Rvo Zarubzhneft)	Western Siberia	$6.5 million contract to Cardwell for 10 workover rigs for Arctic operations; five 100 ton and five 50 ton all-wheel drive units are to be shipped by June 30; 7 of the rigs will go to Orenburg and 3 to Perm.
Carpathian Petroleum Inc. (Ukrneft)	Western Ukraine	Bitkovskoye Oilfield; feasibility study to increase present crude petroleum recovery from 60 million (to date) to 90 million barrels.
Caspian Pipeline Consortium-Bechtel/ Willbros/Oman/Governments of Azerbaijan	Kazakhstan and Russia	Tengiz Field and Baku to Novorossiysk (Black Sea) $850 million to $1.15 billion pipeline project will have an initial capacity of 300,000 barrels per day, expandable to 1.5 million barrels per day; 3-year completion schedule has been adopted; Kazakh portion from Tengiz to Groznyy underway; Baku to Groznyy leg exists, but needs upgrading; Bechtel will be overall manager and Willbros construction manager for the new line required for 500-mile Groznyy-to-Novorossiysk portion. In May, partners decided on a shorter route–Astrakhan, Komsomolskay, Tikhoretsk, and Novorssiysk–bypassing Groznyy and the troubled Chechen Republic; Azerbaijan has not formally ratified the change.

Table E-1—Continued
U.S. energy ventures in NIS

Company	Location	Remarks
Chevron (Kazakh Government) (Tengizchevroil-TCO)	Kazakhstan	Agreement signed April 6, 1993, establishing TCO as a 40-year, 50-50 joint crude petroleum venture to develop Tengiz and Korolev Oilfields and to export the production expected to reach 700,000 barrels per day from 600 wells by 2010; current oil production 65,000 barrel per day from about 60 wells; production to double in 130,000 barrels per day in 1997 when second treatment plant to remove hydrogen sulfide is completed; TCO expects to spend more than $1.5 billion on development in the next 3-5 years; $50 million to be spent for local civil infrastructure in Atyrau oblast; pending completion of a pipeline, Tengiz crude petroleum will be transported and exchanged with Russian facilities to ensure hard currency exports; partners could spend as much as $20 billion to develop the 6-9 billion barrels of recoverable crude petroleum.
Conoco (Polar Lights JV)	Timan-Pechora Basin	Conoco to develop Polyarnoye Siyaniye area with 3-4 billion barrels in a joint venture named Polar Lights; initial work in Ardalin complex with reserves of more than 100 million barrels is scheduled in 1994 from 24 wells; development of Ardalin to cost more than $300 million; building a pipeline to carry the crude petroleum from the Ardalin Field; Overseas Private Investment Corp. (OPIC) granted Polar Lights $50 million of financial assistance, OPIC's first in Russia; addional financing to come from European Bank for Reconstruction and Development and the International Finance Corp., a World Bank group; several U.S. companies are to manufacture about $100 million of equipment and components for Polar Lights facilities; first well could be spudded as early as June, 1993.
Conoco (Purneftegazgeologia)	Western Siberia	Doing limited development work in the Severo-Kharampurskoye Field; hopes to drill 1,800 wells there as well as in the new Yuzhmo-Kharampurskoye Field (in 1993) and Festivalnoye Field (in 1995).

Table E-1–Continued
U.S. energy ventures in NIS

Company	Location	Remarks
Dresser Industries (Gazprom)	St. Petersburg, Russia	Joint venture signed Mar. 27, 1992 to manufacture 100 turbine compressor sets each year (valued at $8-10 million apiece) for use in crude petroleum and gas pipeline transmission; Dresser will supply technical assistance and critical components for the conversion of the Kivorsky Zavod facility, which formerly produced Soviet military equipment; initial production slated for this year, full scale manufacturing second quarter, 1994.
Dresser Industries (Uzbekneftegas)	Uzbekistan	Letter of intent signed to design and build a gas injection condensate recovery project connected to the Kokdumalak Field; cost is expected to be $200 million for equipment and services; final agreement subject to securing suitable financing.
Enron/Wing Merril (Botas/Gama Guris)	Turkmenistan, Azerbaijan, Turkey	Natural gas pipeline from Turkmenistan, under the Caspian Sea to Baku, and from there through the Caucausus Mountains to Turkey; Turkmenistan produces 86 billion cubic meters a year, consumes 8 billion cubic meters; 13 trillion cubic meters gas reserves in Sovyetabad Field; project to cost $16 billion and provide 40 billion cubic meters of gas anually from Turkmenistan.
Equity Oil Co./Coastline Exploration, Inc. (Yeniseynefte-Gasgeologia/Yenisey-Geophysica)	Krasnoyarsk Region, Yakutia	Joint venture, Symskaya Exploration, Inc., intends to explore for crude petroleum on 1.1 million acres in the Yeniseysk district; expect to drill first well, middle of 1993; minimum expenditures of $12 million during first 5 years.
Exxon/Mobil	Western Siberia	Jointly pursue exploration/development contracts covering 86 million acres; have not sought rights to drill; interested in crude petroleum fields of 300-500 million barrels.
Fairfield Industries (Yakutskgeophysika)	Laptev Sea	Joint venture is undertaking seismic studies in the Laptev Sea in operation called Polar Search; minimum investment of $360,000 each authorized for 1992.
Gandalf Explorers Int./Easternoil Services Ltd. (Uralskgeo)	Pre-Caspian Basin, Kazakhstan	Exploration/development in Uralsk; 4 blocks with a total 33,360 square miles; one block has 186 million barrels of crude petroleum; other blocks virtually unexplored.

Table E-1—Continued
U.S. energy ventures in NIS

Company	Location	Remarks
GHK (Kuibyshevnet/Kuibyshevneft Production Association)	Samara Region	Exploration/development in Samara; first project involves restoration of production at 111 shut-in wells in Pervomayneft at a cost of $15-20 million. Began equipment shipments in late March to fulfill its contract to work over about 40 wells; the two groups have also signed a letter of intent to jointly develop about 50 million barrels of discovered, but nonproducing crude petroleum reserves.
Global Natural Resources, Inc. (Tatneft)	Tatarstan	Operate Onbysk Field; currently producing 1,700 barrels per day; plans call for drilling 25 new wells in 1993 and complete 25 wells drilled in 1992.
Grynberg Production	Kirghizia	Exclusive rights to explore for crude petroleum throughout Kirghizia; now producing 6,000 barrels per day; area believed to have enormous crude petroleum potential.
Grynberg Production Corp./Premier (U.S./ British)	Caspian Sea	Exploration/development protocol covering 44,000 square kilometers in the undeveloped Inchkhe More Field, offshore Dagestan and Kalmykia; recoverable reserves estimated at 100 million barrels.
Halliburton Geophysical Services (HGS) (Khanty-Manyiskegeophysica/Yamalgeo-physica)	Western Siberia	Joint venture to market up to 750,000 square kilometers of seismic data from Khanty-Mansyiske region in the south to the Yamal and Nenets regions in the north.
Halliburton Geogphysical Services (HGS) (Polar Lights JV)	Arctic Russia	Polar Lights let a contract to HGS for a 3D seismic survey in Nenetz autonomous district of Arctic Russia; will collect 1,100 line kilometers of seismic data covering more than 100 square kilometers on Polar Lights Ardalin field acreage; much of the work will be done by Pechorageofizika, the largest geophysical operation in the area.
Halliburton Kazakhstan Oilfield Services (Kazakhstanmunaigaz)	Atyrau, Kazakhtan	From its office in Atyrau, Halliburton will be servicing oilfields throughout Kazakhstan—import/operate pumps, stimulate flows, and perform drilling operations.
K. Hill International (Karazhanbastermneft)	Atyrau Region, Kazakhstan	Joint-stock company, Karazhanbas Oil Co., to assist in enhanced recovery production from the 24,000 barrel per day Karazhanbas field.

Table E-1–Continued
U.S. energy ventures in NIS

Company	Location	Remarks
Hytexplor (Krymgeologia)	Crimea	Develop/operate fields in Crimea/Ukraine; reserves of 100 million barrels of crude petroleum and 1 trillion cubic feet of gas; value of production sharing agreement in excess of $1 billion.
Marathon/McDermott/Mitsui/Shell/Mitusbishi (Rosneftegaz/Sakhalinmorneftegaz)	Off Sakhalin Island	Two fields–Pilton-Astokhskoye (2.4 billion barrels of crude petroleum and 4.4 trillion cubic feet of gas) and Lunskoye (13.9 trillion cubic feet of gas, 385 million barrels of crude petroleum, and 379 million barrels of condensate); $8-10 billion to develop; feasibility study completed and approved. Draft production sharing contract (PSC) is nearing completion; PSC needs approval from Sakhalin government and Supreme Soviet.
Maxus Energy Corp. (Yakutskgeophysika)	Yakutia	Evaluation agreement to study 3 promising areas within Yakutia; 4-year work program and a minimum expenditure of $1.5 million.
McDermott Inc. (Kaspnefteflot/Socar)	Repair/rebuild Caspian Sea fleet	Joint venture for shipyard operations in the Caspian Sea; prepare state-owned fleet of about 350 vessels–tugboats, drilling ships, barges, and other floating equipment for exploration/development efforts in the Caspian.
Mobil (Tyumen Regional Government)	Western Siberia, Tyumen Region	Will sell equipment and know-how in exchange for crude petroleum; $300 million will be invested in stabilizing production at existing well sites.
Noble Drilling/Larmag (Dutch) (Chelekenmorneftegaz)	Turkmenistan	Develop the Lam, Zhdanov, and Cheleken Fields in the Caspian Sea.
Occidental (Chernogorneft)	Western Siberia, near Nizhnevartovsk	Development of Vanyogan and Ayogan Fields; currently producing 40,000 barrels per day from 100 wells; production expected to rise to 65,000 barrels per day by 1994; recoverable reserves of 320 million barrels.
Occidental (Ukhtaneftegazgeologiya)	Komi	Develop 1.5 million acres of Timan-Pechora basin; 5-year exploration period and 25-year development period; Occidental will bear all exploration costs; area lies south of the Arctic Circle and west of the Ural Mountains, near the town of Ukhta.

Table E-1–Continued
U.S. energy ventures in NIS–Continued

Company	Location	Remarks
Parker Drilling Co. (Tengizchevroil)	Kazakhstan	Parker selected to provide drilling personnel to develop the Tengiz Oilfield; Parker will provide/manage the labor for existing rigs operating in the field, and also provide safety programs, training and inventory control; plans call for modernizing 3 Tengizchevroil-owned rigs for initial drilling efforts.
Parker Drilling Co. (BP-Statoil Alliance)	Western Siberia	Selected for Arctic workover project involving up to 100 wells in the Tarasov Field, located about 1,500 miles northeast of Moscow; job could take up to 2 years and will be handled by 2 Parker workover rigs, one is already in the CIS and the other is being shipped from Odessa, TX.
Pennzoil (Agansk Geological Enterprise)	Tyumen Region, Western Siberia	Siberian American Co. setup to develop West Mogotlorsk Field; recoverable reserves of 40-45 million barrels; drill 2 more appraisal well in 1993 in West Mogotlorsk Field.
Pennzoil/Ramco/(Kaspmorneftegaz)	Caspian Sea, Azerbaijan	Offshore Guneshli Field is already one-third developed; some 1.4 billion barrels of recoverable crude petroleum; currently produces 130,000 barrels per day; new areas should allow output to climb to 270,000 barrels per day. In May, SOCAR announced that Amoco, BP, and Pennzoil will jointly develop the Caspian Sea crude petroleum reserves of the Guneshli, Chirag, and Azeri Fields which have an estimated culmulative 5 billion barrels of recoverable crude petroleum reserves.
Petro-Hunt Corp. (Khantymansiysknefte)	Tyumen Region, Western Siberia	Explore/develop 5 areas of the Khanty-Mansyiske autonomous region; reserves in 5 areas total 3.1 billion barrels; drilled first test well in undeveloped Rogozhnikovskaya Field; project will require investment of more than $1 billion over 10 years; needs final approval for exemption from export tariff and export license.
Petro-Hunt Corp. (Arktikmorneftegasrazveda) . .	Pechora Sea	Drill wells and produce crude offshore in the Pechora Sea.
Phibro Energy (Anglosuisse Co./ Varyegannefteqaz-VNG)	Western Siberia	West Varyegansk and Tagrinsk Fields; producing 20,000 barrels per day; peak in 1997 at 150,000 barrels per day; producing 8,000 barrels per day net to venture; although exempted from export tax of $5.50 a barrel in July 1992, Phibro is still required to pay the tax; from April 1993 on, White Nights will not be permitted to export crude production unless local permits are issued by the regional government; such delays have a negative impact on joint ventures since White Nights needs to export crude petroleum to provide cash flow for operations.

Table E-1–Continued
U.S. energy ventures in NIS–Continued

Company	Location	Remarks
Ponder Industries (SOCAR)	Azerbaijan	Joint venture, Baku-Ponder Services JV, formed to provide oilfield services in Azerbaijan; more than 2,000 crude petroleum well workovers to be done along with shallow well infield drilling; equipment in place, has already done $10 million work under other service contracts.
Quintana (Udmurgeologia)	Western Siberia	Well rehabilitation project in Severo-Kimsomolskoye Field; crude petroleum reserves in place of 195 million tons; startup scheduled in 1994.
Senega	North Tyumen region	Senega, a joint stock company formed by U.S./Russian firms, will develop oil production from the Evo-Yakha and Samburg fields of north Tyumen; the fields are estimated to have reserves of 120 million tons of crude petroleum, 800 million tons of gas condensate and billions of cubic meters of natural gas; Senega plans to drill 30 wells in 1993 and more than 100 in 1994.
Synder Oil Co. (Permneft)	Urals Region, European Russia	Contract by end of 1992 to develop 6 crude petroleum fields in Urals region; 12 million needed for seed money; recoverable reserves of 120 million barrels; hopes to produce 25,000 barrels per day within 3 years, output of 2,000 barrels per day expected immediately.
Stan Cornelius Consortium (Uzbekneft)	Uzbekistan	Develop Mingbulak giant field with estimated reserves of 800 million barrels under a 28 year production-sharing agreement. Joint venture capitalized at $100 million; U.S. group to reinvest 15 percent of profits in republic's crude petroleum industry.
Texaco (Arkhangelskgeologia)	Western Siberia	Texaco is ready to proceed with $100 billion production-sharing contract to develop reserves in Timan/Pechora Fields, if it gets Russian parliament approval; possible reserves of 3-4 billion barrels; four fields - Roman Trebsa, A. Titov, Varandeyskoye and Toraveyskoye - contain 1.3 billion barrels; production area is near the Barents Sea; peak production of 240,000 barrels per day is expected after 20 years.
Texaco (Sutorminskneft)	Western Siberia	Texaco through subsidiary, Texaco International Operations, Inc., will restore crude petroleum production in idle wells in the giant Sutormin Field, 200 miles south of the Arctic Circle; field contains 1 billion barrels of recoverable reserves and currently produces 140,000 barrels per day; 40 percent of the wells in this field are idle due to various technical reasons; field operations to begin first quarter of 1993.

Table E-1–Continued
U.S. energy ventures in NIS–Continued

Company	Location	Remarks
Texeft Inc. (Tatneft Production Amalgamation)	Tatarstan	Romashkino Field; install vapor recovery systems to recover about 10,000 tons a month of previously lost hydrocarbons.
Ventech Engineers Inc. (Uraineftegas)	Western Siberia	Building a pre-fabricated mini refinery at Urai; the unit will produce 2,000 barrels per day of refined products; start-up is scheduled for October 1993. Began construction of hydrotreater/reformer for production of unleaded gasoline in May. Operations to start in June 1994.

Note.–Names in parentheses refer to the NIS entity.

Source: U.S. Department of Energy, Office of Oil and Natural Gas Policy, EP-52.

Table E-2
Foreign energy ventures in NIS

Company	Location	Remarks
ADP (Attilla Dogan Petrosan) (Turkish) Azeri State Oil Co. [Socar]	Caspian Seacoast	Joint venture to boost production from old fields in Neftechala district, southwest of Baku; venture capitalized at $51 million and revenues will be split Azeri–51 percent, ADP–49 percent.
AGIP (Italian)/[Lukoil]	Western Siberia	Develop/produce crude petroleum in Lukoil's upstream concessions in Siberia.
Beta Well Service Inc. (Canadian)	Western Siberia	Two contracts to work over 654 more crude petroleum/natural gas wells; first contract for 386 wells modifies and extends an initial 500 wells agreement in 1992 (300 of the 500 have been serviced); the second contract is for 268 wells in a new region of Western Siberia with work expected to start in mid 1993; four more Beta rigs are on the way to Russia to join six company units now at work.
Bitech/Rusia Petroleum [Rusia Bitech Petroleum]	Irkutsk Region, Siberia	25-year project to develop several fields, including Verkhnechonskoye petroleum field and Kaviktinskoye gas field, in a 137,000 square mile area with estimated reserves of 1.8 billion barrels of oil, 19 trillion cubic feet of gas, and 243 million barrels of condensate; estimate production of 200,000 barrels per day and 1 billion cubic feet per day by year 2000.
Botas (Turkish) [Socar]	Baku oilfields to Ceyhan, Turkey	Build a 1,060 kilometer pipeline to cost $1.4 billion to take Azerbaijani crude petroleum to Western markets; route from Baku to Iran to Erzurum to Ceyhan on the Mediterranean Sea; capacity of 800,000 barrels per day. Financing from World Bank, European Bank for Reconstruction and Development, and Citibank; construction to begin in early 1994, take 2 years to complete.
BP [Socar]	Caspian Sea, Azerbaijan	Joint venture development of Chirag Field in the Caspian Sea; interim agreement signed, draft development contract to Parliament after June 16, 1993.
Bridas (Argentinian) [Turkmengeologia]	Turkmenistan	Exploration rights to 10,000 square kilometers at Yashlar.
Bridas [Turkmenistan]	Turkmenistan	New producing onshore field containing proved recoverable reserves of 230 million barrels of crude and 890 billion cubic feet of gas.

Table E-2–Continued
Foreign energy ventures in NIS

Company	Location	Remarks
British Gas/AGIP (Italian) [Karachaganakgazprom]	Kazakhstan	Develop the Karachagansk crude petroleum and gas condensate field in the Uralsky region; reserves of 800 million tons of crude petroleum and condensate and more than 1 trillion cubic meters of gas; currently producing 75,000 barrels per day of condensate and 350 million cubic feet per day of gas.
British Gas/Gulf Canada [Komi Arctic Oil]	Komi, Russia	Current output of 10,000 barrels per day at Upper Vozey Field, plans to produce 20,000 barrels per day by early 1993.
British Petroleum/Statoil (Norwegian)	Offshore Caspian Sea, Azerbaijan	Feasibility agreement for developing the Dostlug Field; estimated at 1 billion barrels with recoverable reserves of 2 billion barrels; production could be more than 200,000 barrels per day; agreement also covers the Shak Deniz prospect which covers 200 kilometers.
Cana-Caz Global Oils (Canadian) [Mangystavneftegaz]	Mangystau Region	Cana-Caz is embarking on a $48 million workover project; over five years expects to workover 1,200 to 1,500 wells.
Comco (Swiss) [Zhiganskneftegaz]	Western Siberia	Set up Row, a joint venture, to develop the Zhigansk petroleum fields; Row will invest in overhauling the fields which produce about 1 million barrels per day.
Daiwa Europe (Japanese)	Kazakhstan	Sole advisor to build a 6 million ton per year refinery at Mangistau which will process heavy crude found in the Buzachi area; cost of project in excess of $1.6 billion.
Delfino/Fochi (Italian)	Belarus	$650 million contract to the two Italian firms to build a 3.3 million ton refinery at the Novopolotsk complex.
Deminex (Veba Oel, Rwedea, Wintershall)/ Nizhnevolzhskneft	Volgograd Region	Exploration and production covering 22,600 square kilometers; reserve potential of 120-150 million tons. Deminex to invest $8 billion with production costs of nearly $16 billion; drill 5 exploration wells between 1993-95, plannng a total of 234 exploration wells; first production expected in 1994.
Eastpac International (United Arab Emirates) [Turkmenistan]	Southwest Turkmenistan	Develop inland Kotyr-Depe Field; proven remaining reserves of 642 million barrels of crude petroleum and 2.16 trillion cubic feet of gas.

Table E-2–Continued
Foreign energy ventures in NIS

Company	Location	Remarks
Elf Aquitaine (French) [Temirunai]	Volga/Temir Area, Kazakhstan	Subsidiary of Elf Neftegas in charge of production-sharing contract in Kazakhstan covering 19,300 square kilometers southwest of Aktyubinsk; seismic is underway, first well planned for late 1993.
Elf Aquitaine [Interneft]	Volgorad/Saratov area, Russia	Subsidiary of Elf Neftegas in charge of production-sharing contract in Russia; covers a 18,000 square kilometer zone and provides for an investment of at least $500 million over 9 years; seismic work to start summer 1993.
Elf Aquitaine	Uzbekistan	Protocal signed to explore/produce crude petroleum and gas in Uzbek Republic; largest agreement signed to date with foreign crude petroleum company; country produces only 60,000 barrels per day of crude, but believed to have major potential in a number of sparsely explored areas.
Enterra Oil Field Services Ltd. (Dubai, U.A.E.) [Tengizchevroil]	Tengiz Field, Kazakhstan	Two year contract to Enterra for rental tools and services to support Chevron's operations at Tengiz; Enterra will provide down hole tools, fishing tools and services, and a machine shop support facility.
Eurosov Petroleum (British, European, Australian) [SINCO]	Western Siberia	Thirty percent of SINCO joint venture; spending $16.5 million on building a 65 kilometer pipeline to tie Yuzhnoye into existing transport system; $3 to 4 million on drilling at Yuzhnoye.
Fracmaster Ltd./Royal Dutch Shell Group [Yuganskneftegaz]	Siberian Fields	Workovers in fields near Nefteyugansk; production of 15,000 barrels per day in 1991, 20,000 barrels per day in 1992; target for 20-year project is 100,000 barrels per day.
Fracmaster/Pan Canadian [Tyumenneftegaz] . . .	Tyumen Region, Western Siberia	Project in Samotlor Field; Canadian partners to spend $75 million (Canadian $); production target from well stimulation and workovers is 35,000 barrels per day.
Fracmaster/Norcen Energy Resources [Oil and Gas Production and Tomskneft Production Association]	Tomsk Region, Siberia	Development project in Vakh Field; well stimulation and workover programs began in late July 1992.

Table E-2–Continued
Foreign energy ventures in NIS

Company	Location	Remarks
Fracmaster [Vasyugan Oil and Gas Production and Tomskneft Production Association]	Tomsk Region, Siberia	Increase petroleum production in Vasyugan Field by more than 20,000 barrels per day through well stimulation.
Geos Ltd. (Israeli) [Tatneft]	Tataria	Develop a 11,750 square kilometer concession; develop 350 million barrels of proven crude petroleum reserves in 57 fields.
Gulf Canada Resources/British Gas [Komineft Production Assn.]	Komi Area, Siberia	Project in 276,000 square mile territority; initial 6,000 barrels per day in early 1992 has risen to 16,000 barrels per day; by early 1993 production to reach 18,000 barrels per day.
Gulf Interstate Oil Co. (GIOC) (Dubai - U.A.E.)	Southern Russia	GIOC's Russian subsidiary, Gulf Russia, has been awarded an oil concession in the Stavropol region between the Caspian and Black Seas; initial test results indicate more than 300 million barrels of crude petroleum; exploration to begin in May 1993.
Hurricane Hydrocarbons Ltd./Wega D. Geophysical Ltd (Canadian)	Kazakhstan	Joint venture, Turan Petroleum, plans to spend up to $350 million to develop 3 fields with reserves of 124 million barrels; group plans to drill up to 100 wells and raise production to 37,000 barrels per day over 3 years.
Hyundai Consortium (S. Korea)	Kalmyk, Russia	3.5 billion barrels of petroleum reserves; 20,000 barrels per day production in 1994.
Itoh (Japanese)/Slovnaft (Czechoslovakian) [Nizhnevartovskneftegaz]	Nizhnevartovsk, Western Siberia	Oilfield development of 40,000 barrels per day production planned for 1993.
J.P. Kenny Exploration & Production Ltd. (U.K.) (Chernomorneftagas SPE)	Delfin section, Black Sea area	Joint venture, Crimean Petroleum Co., to explore and develop 4,000 square kilometer section in the Crimiean and Ukranian Black Sea area; first operation its kind in this part of the Black Sea; plans to begin exploration of the offshore Delfin section, which lies in more than 280 feet of water.
Larmag (Dutch)/Noble Drilling Corp./ [Turkmenistan]	Turkmenistan	Develop two producing fields with proven reserves of 230 million barrels of crude and 1.87 trillion cubic feet of gas.

Table E-2—Continued
Foreign energy ventures in NIS

Company	Location	Remarks
Manx Petroleum (British) [Tatneft]	Northeast Tatarstan	Venture covers 7,000 square kilometers of northeast Tatarstan; 9 oilfields with estimated 820 million barrels of reserves; immediate plan to complete 2 crude petroleum developments near Yelabuga on the Volga River (39 million barrel Bakhchisaraiskoye and 16 million barrel Yelginskoye); boost output to 30,000 barrels per day by year end 1993 from 800 barrels per day.
Marc Rich (Swiss) [Rosnefteprodukt]	Russia	Upgrade refineries at Ukhta, Volgograd and Lisitchansk with Total.
March Rich (Swiss) [Komineft]	Usinsk	Develop the Permocarbon Field at Usinsk.
Marubeni Corp./Chiyoda Corp. (Japanese) (Uzbekneftegas)	Uzbekistan	Marubeni and Chiyoda will build a new $1 billion refinery with a capacity of 5 million tons per year at a site 50 kilometers Southeast of Bukhara; a feasibility study of the project will be completed in August.
Mitsui & Co., Mitsubishi Corp., Tokyo Engineering Corp	Mangyshlak Peninsula, Kazakhstan	Build a 120,000 barrel per day refinery on the northeast coast of the Caspian Sea near Aktau; plant will refine crude from the Tengiz area; expected to cost about $1 billion.
Mitsui & Co. [Uzbekistan Government]	Uzbekistan	Agreement-in-principle to construct a petroleum refinery in Fergana.
Morinoak Derrick Overhaul Group (Scottish)	Western Siberia	Joint venture will service some 700-800 crude petroleum/gas derricks with Canadian rig builder Dreco; expects to have 60 people in West Siberia by the end of 1993.
Naphtha Corp. (Israeli)	Tomsk region, Western Siberia	$100 million exploration/production deal; Israeli consortium will get up to 16,000 barrels per day from Black Sea ports.
Neste (Finnish) [Komineft]	Timan-Pechora Basin	Develop 130 million barrels of crude reserves at Yuzhno-Shapkinskoye.
Nimir Petroleum Co. (NPC) (Saudi-Arabian) [Smeco]	Sakhalin Island	NPC recently bought a Russian company (Petrosakh) which had a concession on Sakhalin; producing 5,000 barrels per day just south of an area where Marathon, McDermott and Mitsubushi are operating.

Table E-2–Continued
Foreign energy ventures in NIS

Company	Location	Remarks
Nuovo Pignone (Italian) [Gazprom]	Western Siberia	Contract for $1.46 billion to renovate the gas pipelines from Western Siberia; plans call for at least thirty 30,000 kilowatt, five 25,000 kilowatt, and twenty-four 10,000 kilowatt gas generators during the next 4 years.
OMV (Austrian) [Lenaneftegazgeologiya]	Yakutsk Region, Siberia	Joint venture formed in August 1991, to explore for new natural gas deposits; cost of project is $30 million over next 3-5 years.
Orbicom (British) [Yamal Association] [Tyumen Association]	Yamal's northwest tip	Yamal Oil and Gas set up and granted a concession at giant Kharassavey gas/condensate field; Orbicom hurt by collapse of Vnesheconombank and has sought protection from United Kingdom creditors.
Panoco (Swiss) [Tatneft]	Tartarstan	Joint venture called Blue Kama will develop eight heavy oilfields near Nurlat, a city in south Tatarstan; 1.7 billion barrels of crude petroleum reserves; plan to raise output from 2,000 barrels per day currently to 150,000 barrels per day over the next 10 years.
Pet Oil (Turkish)	Azerbaijan	Rehabilitating 4 abandoned onshore oilfields at Mir Bashir, Kazanbulak, Acidere, and Naftalan; production should reach over 3,000 barrels per day.
Petrofina (Belgian) [Eniseyneftegasgeologiya] [Eniseygeophysika]	Eastern Siberia	Development of crude petroleum fields in two areas covering 20,000 square kilometers in the Krasnoyarsk Region.
Petronas (Malaysia) [Kazakhstanneftgaz]	Caspian Sea; Southern Kazakhstan	Exploration/development offshore and Kumkol Field; reserves estimated up to 14.6 billion barrels.
Quest Petroleum, Mannai Corp. (Qatar), Callina NL (Australian), and Starvaley (Canadian) [Komineft/Usinsk NGDU]	Komi	Komi Quest Joint Venture producing 2,000 barrels per day net to group from 7 workover wells in West Vozey and South Famen fields; expect production of 10-30,000 barrels per day net from 60 workover wells by September 1993; Qatar partner is providing $10 million for workovers and $1 million for exploration.
Richmond Oil & Gas (British) [Krasnoleninsk Oil & Gas]	Tyumen, Western Siberia	Operating fields producing about 10,000 barrels per day in three areas along the Ob River about 200 miles South of the Arctic Circle.

Table E-2–Continued
Foreign energy ventures in NIS

Company	Location	Remarks
Ronar (Banking Group of Britain, France, and Germany)/Hydrocarbon Engineering Transnational Co. [Kazakh Ministry of Fuel/Energy/Kazakhstanmunaigas]	Atyrau Refinery, Caspian area	Joint venture to modernize key refinery at Atyrau; project to cost more than $1 billion; products produced will include clear gasoline, diesel fuel, and kerosene.
Saga (Norwegian), Shell Exploration/ [Severgasprom, Arkhangekskgeologia, Ukhtaneftegasgeologia]	Timan-Pechora Basin, Archangels Province	Develop already discovered reserves; drill appraisal well on Mid-Kharyga field this winter; also work over Kharyga crude fields and Layavosh, Vasilkov, Komzha and Korovin gas fields.
Shell (British/Dutch) [Yuganskneftegaz]	Siberia	Shell-Russia to develop two fields: (1) Verkhne-Salymskoye Field with reserves of 27.3 million tons in 1993; and (2) Zapadno-Salymskoye Field with 80.97 million tons in 1994.
Siberian Oil Corp. (SINCO)/Eurosov Petroleum Ltd. (British, U.S., Australian)	Western Siberia	Begin production from Yuzhnoye Field, less than 40 kilometers from Samotlor Field; Yuzhnoye expected to produce 10,000 barrels per day by end of 1993 from reserves of 120-150 million barrels; plan to develop reserves of 1.7 billion barrels in 24 fields in a 400 by 400 kilometer area southwest of the Ob River.
SINCO (70 percent Russian energy firms; 30 percent Eurosov Petroleum Ltd.)	Western Siberia	Longon-based Eurosov consortium granted rights to develop Yuzhnoye Field; controls 24 oilfields with reserves of 1.7 billion barrels.
Stetlan (German)	Atyrau Region, Kazakhstan	To explore 3 undeveloped fields north of the Caspian Sea–Besbolek, Ayrankol, and Oktyabrskoye–with combined reserves of about 62 million barrels.
Thyssen Rheinstahl GmbH (German)/Mitsui & Co. (Japanese) [Yaroslavhefteorgsintez]	Central Russia	Construction and start-up of a catalytic reforming plant at a refinery in Yuroslavl; $200 million plus contract will finance the initial stages of contruction; completion is expected in 3 years; the refinery is one of the largest in European Russia, processing 15 million tons of crude petroleum yearly.
Total [Tatneft]	Tatarstan	Enhanced oil recovery project with Tatneft at 50-60 million barrel Romashinko Field; production is about 200,000 barrels this year; expected to rise to 12,000 barrels per day over the next 2 years.

Table E-2–Continued
Foreign energy ventures in NIS

Company	Location	Remarks
Total [Komineft]	Timan/Pechora Basin, Nenets Regions	Reserves of 250 million barrels at Khariaga Field; development to begin in 2 years, Total to invest $400 million to bring field on stream and $1 billion for total project.
TPAO/Pet (Turkish) Kazakh State Oil Co.	Kazakhstan	Operate 5 existing oilfields; Kazakh state will hold 50 percent of the company, TPAO (40 percent) and Ret. (10 percent).
Tracer Petroleum Corp. [Urengoyneftegaz Geologia]	Urengoy Area, Tyumen Region	Urengoil Trace Joint Venture to develop one of the larger fields in the West Siberian Basin; 1.8-million acre tract near Urengoy and Urengoy gas field; test drilling begun on field near Urengoy with estimated 284 million barrels of crude petroleum; temporary pipeline planned to allow production in third quarter, 1993; a 93-mile pipeline will have to be built to allow output up to 30,000 barrels per day, possibly in 1994.
Tracer Petroleum Corp. Dundee Bancorp Inc. (Canadian) [Urengoyneftegaz Geologia]	Western Siberia	Joint venture named Yamalo Ltd. received exploration and production license for Yaro-Yakinsk field in western Siberia.
Ukrsibneftegazholding (Ukrainian government-owned)	Western Siberia	Set up to finance development of oilfields in the Tyumen area; plans to invest around 200 billion rubles; also plans to invest in other Tyumen groups to develop crude petroleum supplies.
Vego Oel (German) [Yuzhkazneft]	Southern Kazakhstan	Negotiating for right to develop Akshabulak, Aksay, and Nuraly oilfields with combined reserves of 115 million barrels; already have participated in 3 pilot wells.
Vegyepszer (Hungarian) (Embaneft)	South Kamyskol Field, Kazakhstan	Joint venture to develop 22 million barrels. field, with likely production of 1,500 barrel perday; venture is for 10 years and is extendable.
Vyatka Oil Co.	West of the Urals	Development of Russia's Zolotaryevskoye oilfield, located in the Vyatka Region west of the Urals; site estimated to contain reserves of 150 million tons of crude petroleum; drilling and field construction is already underway.
Yamal Oil & Gas [Orbicom, Yamal and Tyumen Associations.]	Yamal	Concession on the giant Kharasavey gas/condensate field on Yamal's northwest tip; estimated to have 1.5 trillion cubic meters of gas.

Note.–Names in parentheses refer to the foreign country, and names in brackets refer to NIS entity.

Source: U.S. Department of Energy, Office of Oil and Natural Gas Policy, EP-52.