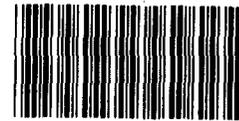


November 1992

EAST EUROPEAN ENERGY

Prospects for Improvement in Albania's Energy Sector



148104

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National Security and
International Affairs Division

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November 4, 1992

The Honorable J. Bennett Johnston
Chairman, Committee on Energy
and Natural Resources
United States Senate

Dear Mr. Chairman:

As you requested, we are providing information on (1) the trends in and problems related to Albania's energy production, imports, exports, and use; (2) the plans Albania has to address its energy problems; (3) the role of foreign trade and investment in Albania's energy sector and the factors that discourage them; and (4) the efforts of the U.S. government and international organizations to assist Albania's energy sector and improve Albania's business climate.

As agreed with your office, unless you publicly release this report earlier, we plan no further distribution of the report until 30 days from its issue date. At that time, we will send copies to the Secretaries of State, Commerce, Energy, and the Treasury; the Administrator of the Agency for International Development; the U.S. Trade Representative; the Director of the Overseas Private Investment Corporation; the Director of the U.S. Export-Import Bank; the Director of the U.S. Trade and Development Program; and other interested parties. Copies will also be made available to others upon request.

Please contact me on (202) 275-4812 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix III.

Sincerely yours,

Allan I. Mendelowitz, Director
International Trade and Finance Issues

Executive Summary

Purpose

Albania has recently emerged from a long period of Communist rule and international isolation to embrace democratic and free market principles. The Albanian people elected a reform-oriented government in March 1992. The new leaders now face the economic chaos left behind by the former Communist system. With Albania's economic production plummeting and the country facing significant financial constraints, Albania's energy resources can play a major role in speeding its economic recovery.

The Chairman of the Senate Committee on Energy and Natural Resources asked GAO to provide information on (1) the trends in and problems related to Albania's energy production, imports, exports, and use; (2) the plans Albania has to address its energy problems; (3) the role of foreign trade and investment in Albania's energy sector and the factors that discourage them; and (4) the U.S. government and international organizations' efforts to assist Albania's energy sector and improve its business climate.

Background

When Congress first passed legislation to support Central and Eastern Europe's economic reforms, Albania had not yet made a commitment to a free market economy. Albania was the last of the Central and East European countries to emerge from Communist rule. Most experts agree that Albania, by far the poorest country in Europe, will have to attract massive foreign investment to ensure its economic recovery. However, foreign companies know little about Albania because it has been one of world's most isolated countries.

Results in Brief

Problems throughout Albania's energy sector threaten the country's economic recovery. The production of oil, gas, and coal has been declining due to outdated equipment and technology. In addition, Albania does not have the facilities to import oil and gas to offset the decline. Therefore, Albania is experiencing an energy shortage. Electricity production has been limited by drought, outdated technology, and the lack of spare parts. These factors and the upheavals in neighboring Yugoslavia have also limited electricity distribution and exports, a major source of hard currency earnings. Moreover, Albania uses its energy resources inefficiently and in a manner that pollutes the environment.

Albania plans to modernize and expand its energy infrastructure to increase production of oil, gas, coal, and electricity. For example, the government recently signed contracts with foreign companies to develop

potential offshore oil reserves. It has also started raising energy prices to encourage energy efficiency.

Albania is counting on foreign trade and investment to help address its energy needs, but its crippled economy and undeveloped business infrastructure present significant impediments to outside investors. To attract foreign business, Albania plans to break up the large state energy monopolies into smaller units and allow some of them to form joint ventures with foreign investors. Moreover, Albania's government has passed laws that will help attract foreign firms. Other legislation designed to increase foreign investment has yet to be enacted.

U.S. and international agencies are working to assist Albania's energy sector and improve the business climate. While the U.S. government has not yet extended energy assistance to Albania because humanitarian and agricultural assistance was deemed a higher priority, Agency for International Development (AID) officials want to provide energy assistance to Albania in the near future. In addition, the U.S. Trade and Development Program (TDP) and other U.S. agencies have programs available that can help Albania develop its energy sector. The World Bank and other international organizations are starting to provide financial and technical assistance for Albania's energy sector. In addition, the U.S. government and international organizations are giving Albania technical assistance to help create a legal and business infrastructure that is more attractive to foreign business.

Principal Findings

Energy Sector Problems Threaten the Economy

Albania's declining energy production threatens the country's economic development. In the past, Albania produced enough energy resources to be self-sufficient. However, the production of oil and refined products, natural gas, and coal has recently declined due to outdated production technologies, social upheaval, and other factors. Furthermore, Albania does not have the port facilities or pipeline connections needed to import oil or gas supplies. Shortages of oil and natural gas have affected industrial and agricultural production, and declining coal production has reduced supplies available for heating and power generation.

Electricity production, distribution, and exports have also declined. Albania historically generated sufficient electricity supplies for itself and

exported surplus electricity to earn hard currency. However, several years of drought severely reduced power production at hydroelectric plants, which supply over 90 percent of the country's electricity. Although water levels returned to normal in 1991, the conflict in Yugoslavia and the obsolescence of Albania's distribution systems have limited electricity exports. In addition, recent increases in household electricity use have overloaded the electrical system and caused widespread blackouts. Furthermore, spare parts are insufficient for repairs.

Albania's energy use is neither efficient nor environmentally sound. The industrial sector, the largest energy consumer, uses antiquated equipment, and the country uses more than twice the energy per unit of economic output than its neighbors. In addition, the lack of emission controls at power and industrial plants and the country's reliance on wood and coal for heating result in significant air pollution. These problems waste available energy, and correcting them will require scarce financial resources.

Albania Has Plans to Address Its Energy Problems

Albania plans to address its energy problems by expanding and modernizing its energy production and distribution systems and by raising energy prices. The government has already signed contracts with five foreign oil companies to explore for new oil reserves offshore. It hopes that advanced technology will help find new oil and gas reserves and raise the level of production at existing oil fields and refineries. The country also needs better equipment to increase the safety and productivity of its coal mines. To meet growing electricity demand and increase exports, Albania plans to modernize its electricity distribution infrastructure and to build a number of new hydroelectric and coal-fired power plants. The government has also started to raise energy prices to improve energy efficiency. Albania's ambitious plans to resolve its energy problems will require a significant investment.

Foreign Trade and Investment Are Wanted, but Major Impediments Remain

Albanian officials hope that foreign businesses will bring the technology and equipment needed to modernize and expand the energy sector. Albania's government has passed new laws to encourage foreign trade and investment and is working with foreign advisers to draft additional supporting legislation. Furthermore, Albania has created new organizations to assist trade and investment. Finally, Albania plans to break the large state-controlled energy monopolies into smaller enterprises and turn them over to local control. The smaller units will be available for joint ventures and have the autonomy to trade directly with foreign companies.

Although Albania has taken positive steps to foster trade and investment, a number of problems hinder private sector involvement there. Decentralizing and privatizing Albania's state enterprises will be slow and difficult. Domestic financial resources are insufficient, and few people have the skills to operate in a market economy. Implementing legislation designed to protect foreign investment has not been enacted. In addition, the banking system is not developed enough to support foreign business. U.S. officials expect the situation will improve, however.

**Assistance Available for
Albania's Energy Sector and
Business Climate**

While not yet active in Albania, several U.S. government programs can help Albania develop its energy sector. AID has two energy programs to help East European countries overcome energy supply and efficiency problems. The agency has not yet extended these programs to Albania because AID officials concluded in July 1991 that Albania's priority need was for food and agricultural assistance. However, AID officials said they want to make energy assistance available to Albania in the near future. TDP also expects to assist Albania's energy sector by funding feasibility studies.

Several international agencies have started to help Albania address its energy needs. The World Bank has provided a loan for Albania to finance electricity-related equipment imports. The European Bank for Reconstruction and Development is helping Albania determine how to manage its onshore oil resources and address problems that lead to oil spills.

Albania is also receiving technical assistance from the U.S. government and international organizations to develop a better business infrastructure. For example, the Commerce Department has given Albania advice on legal principles that can aid privatization and foreign investment, and the World Bank has provided technical assistance to restructure the banking system.

Recommendations

This report contains no recommendations.

Agency Comments

As requested, GAO did not obtain official agency comments on this report. However, GAO discussed information presented in the report with responsible officials from the Departments of State, Commerce, and Energy; AID; and the U.S. embassy in Tirana, Albania. Their comments have been incorporated in the report where appropriate.

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Abbreviations

AID	Agency for International Development
DOE	Department of Energy
EBRD	European Bank for Reconstruction and Development
EC	European Community
GAO	General Accounting Office
GDP	gross domestic product
IMF	International Monetary Fund
kwh	kilowatt hour
MIME	Ministry of Industry, Mining, and Energy
TDP	Trade and Development Program
UNDP	United Nations Development Program

Introduction

Background

Albania, a small country in the Balkan region, has a population of 3.3-million people. About 3 million more ethnic Albanians live in the former Yugoslavia,¹ where they represent about 90 percent of the population in Serbia's Kosovo province and a sizable minority in Macedonia. Albania shares a 302-mile border with Yugoslavia and a 175-mile border with Greece. Italy is less than 50 miles away across the Strait of Otranto. Albania is relatively homogeneous ethnically, and has a small Greek minority. About 65 percent of the population lives in rural areas, and about 50 percent of the work force is involved in farming.

Albania was staunchly Communist from 1944 to 1990. Enver Hoxha, installed as premier in 1944, developed close ties with the Soviet Union in 1948. In 1961 Albania broke relations with Moscow and aligned itself with China. It withdrew from the Warsaw Pact in 1968 and moved toward self-imposed isolation. China cut off assistance in 1978, leaving Albania without any allies. Hoxha ruled Albania until his death in 1985; he was replaced by his hand-picked successor, Ramiz Alia. After the country endured a series of short-lived governments, elections in March 1992 resulted in an overwhelming victory for pro-reform forces. President Alia resigned shortly thereafter and was replaced by Sali Berisha, the leader of the Democratic Party.

Albania has recently emerged from international isolation. Diplomatic relations between the United States and Albania, which were broken in 1939, were reestablished in March 1991. In June 1991 Albania started the process of political integration into the world community by becoming a member of the Conference on Security and Cooperation in Europe. Albania joined the International Monetary Fund (IMF), the European Bank for Reconstruction and Development (EBRD),² and the World Bank in October 1991, and was a signatory to the new European Energy Charter in December 1991. In June 1992 Albania was admitted to the North Atlantic Cooperation Council, an organization that includes members of the North Atlantic Treaty Organization and the former Warsaw Pact and that meets to discuss security issues.

Albania has also taken steps to improve its human rights record. In May 1990 Albania gave its citizens the right to travel abroad again. In April 1991 the government passed a transitional constitution making the country

¹References to Yugoslavia in this report refer to all of its former republics, including those that have recently become independent.

²The London-based EBRD opened in April 1991 and provides loans, equity investment, and technical assistance to Central and Eastern Europe and the former Soviet Union.

a parliamentary republic and guaranteeing fundamental human rights and freedoms. In September 1991 the government granted amnesty to all persons convicted of political dissent. The March 1992 election was free and fair, according to the State Department, unlike the election in the previous year.

Economic Conditions Are Poor

Albania was the last of the Central and East European countries to initiate economic reform. As the European Community (EC) and others have pointed out, Albania was a relatively pure example of a centrally planned economy until 1991. Personal income varied little, private property was outlawed, and the central government operated according to 5-year economic plans. Self-sufficiency was a national policy—a constitutional ban on foreign assistance and foreign debt cut Albania off from the rest of the world.

Albania is the poorest country in Central and Eastern Europe. Per capita gross domestic product (GDP) in 1990 was \$498, about 11 percent lower than in 1980, according to the World Bank. With the collapse of the centralized planning system in 1991, economic conditions became even worse. The Albanian Ministry of Economy reported in April 1992 that the per capita gross national product was \$470.

Albania's economy has virtually collapsed. Industrial production has plunged, with key industries operating at 20 percent or less of capacity due to a lack of money to buy needed inputs. Obsolete equipment has also lowered available capacity. In addition, the once self-sufficient agricultural economy has broken down. Many farmers decided not to plant their fields because of uncertainties regarding land ownership and because distribution systems have broken down. Consequently, nearly all basic foods are in short supply, and the country is dependent on foreign food assistance for its survival. Declining production has resulted in overall unemployment of about 28 percent as of July 1992. Unemployment in the industrial sector alone is estimated by EBRD to be about 80 percent.

The worsening economy has caused an exodus of Albanians to surrounding countries, and disorder at home. As a result of the decree allowing citizens the right to travel abroad, thousands of ethnic Greek Albanians went to Greece in December 1990. Over 20,000 Albanians fled to Yugoslavia and Italy in February and March 1991, and nearly as many took boats to Italy in August 1991, only to be turned back. Low wages and high unemployment stimulate the desire to seek employment abroad. Shortages of basic foods

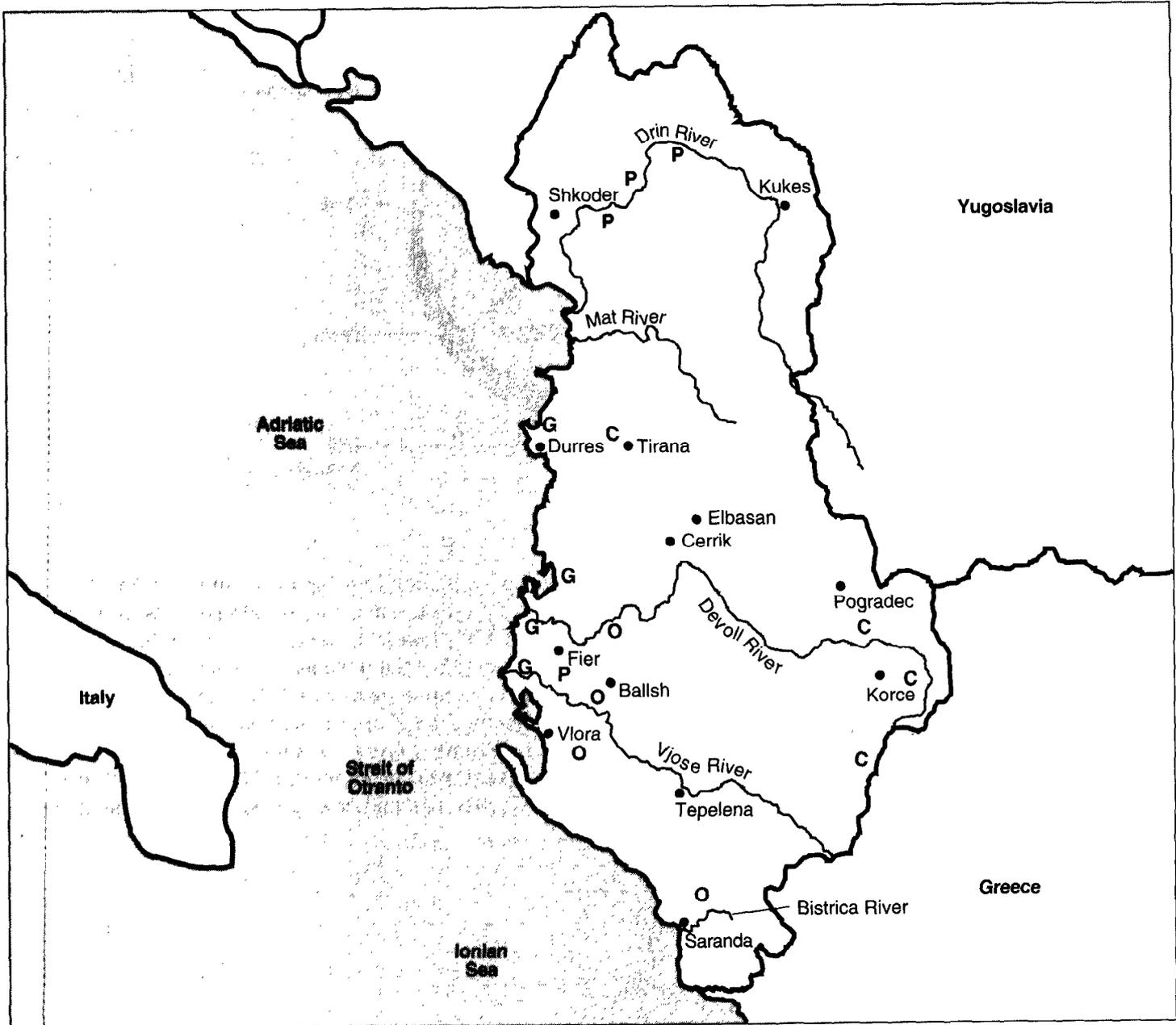
prompted breakdowns in public order as people looted storage warehouses and robbed travelers and relief convoys.

Albania's Energy Profile

Albania's primary energy production in 1990 was 2.42-million metric tons of oil equivalent,³ according to estimates by the World Bank and the Albanian Ministry of Industry, Mining, and Energy (MIME), the government agency responsible for oil, gas, refining, and coal sectors. Crude oil and coal production accounted for 70 percent of the total. Wood, hydropower, and natural gas accounted for the rest. Albania has no nuclear power generating capacity. Figure 1.1 shows Albania's major energy production areas, and figure 1.2 shows the level of energy production by each source. Chapter 2 provides more specific information on the production trends for oil, gas, coal, and electricity.

³Primary energy includes crude oil, natural gas, coal, wood, and hydroelectricity.

Figure 1.1: Major Energy Production Areas in Albania

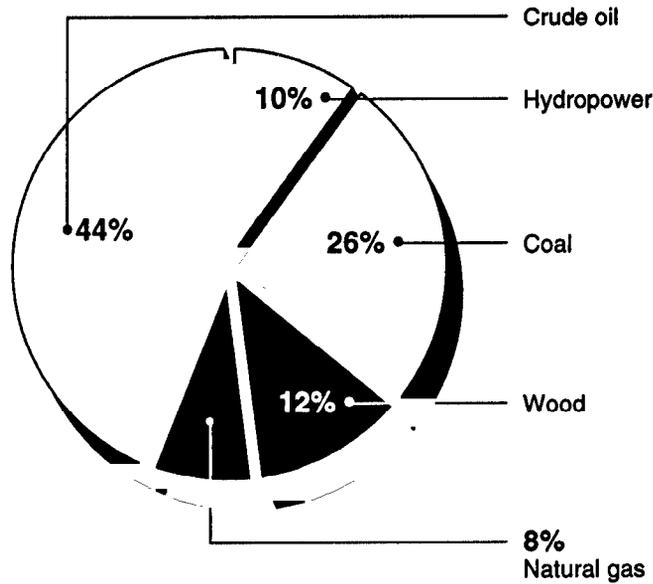


Legend

- C = Coal deposits
- G = Gas fields
- O = Oil fields
- P = Major electric power plant (over 100-megawatt capacity)

Sources: MIME; Albanian General Directorate of Power; U.S. Department of Commerce; U.S. Department of State.

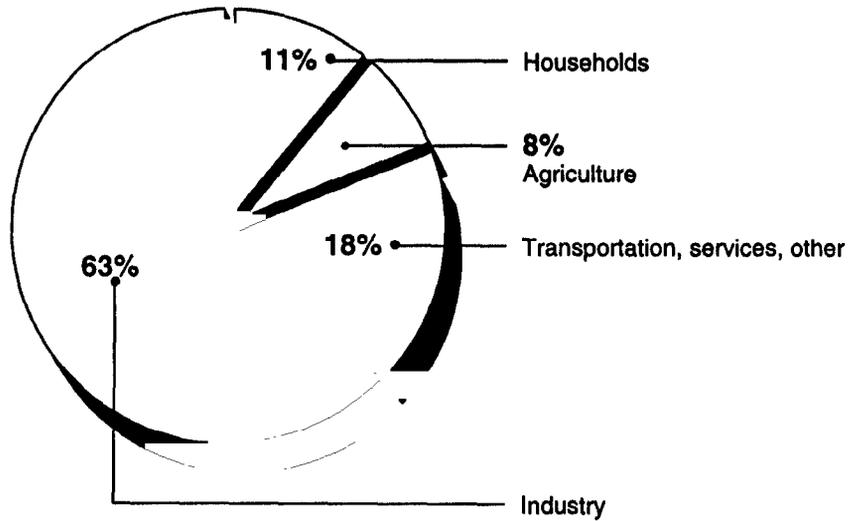
Figure 1.2: Albanian Energy Production,
by Energy Source, 1990



Source: World Bank.

Industry is the main energy consumer in Albania, accounting for 63 percent of the total. Industry uses the majority of oil products, followed by the agricultural sector. Most of Albania's coal is used to produce electricity as well as steam for heat and industrial purposes. Households also use coal for heating. Natural gas is consumed mainly by industrial plants that produce chemicals and cement. Small amounts of gas are also used for heating and generating electricity. Figure 1.3 shows the proportion of total energy consumed by each sector of the economy. Table 1.1 and figure 1.4 provide information on Albania's oil and coal consumption, respectively.

Figure 1.3: Albanian Energy Consumption by Sector, 1990



Source: World Bank.

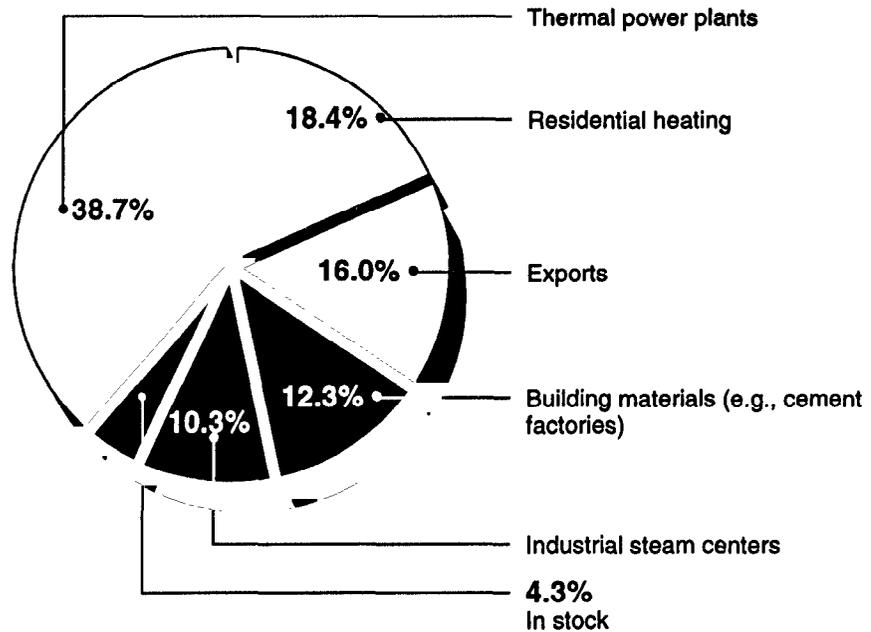
Table 1.1: Albanian Consumption of Oil Products, 1990

Metric tons of oil equivalent in thousands

Type of consumer	Gasoline	Diesel oil	Fuel oil	Kerosene	Other	Total	Percent of total
Industry	13.2	59.4	174.0	—	147.5	394.1	52
Agriculture	16.5	102.3	20.2	—	—	139.0	18
Transportation	5.5	77.0	20.2	—	—	102.7	14
Services/ other	31.9	26.4	6.4	6.6	—	71.3	9
Households	—	—	—	54.9	0.6	55.5	7
Total	67.1	265.1	220.8	61.5	148.1	762.6	100
Percent of total	9	35	29	8	19	100	—

Sources: MIME; World Bank.

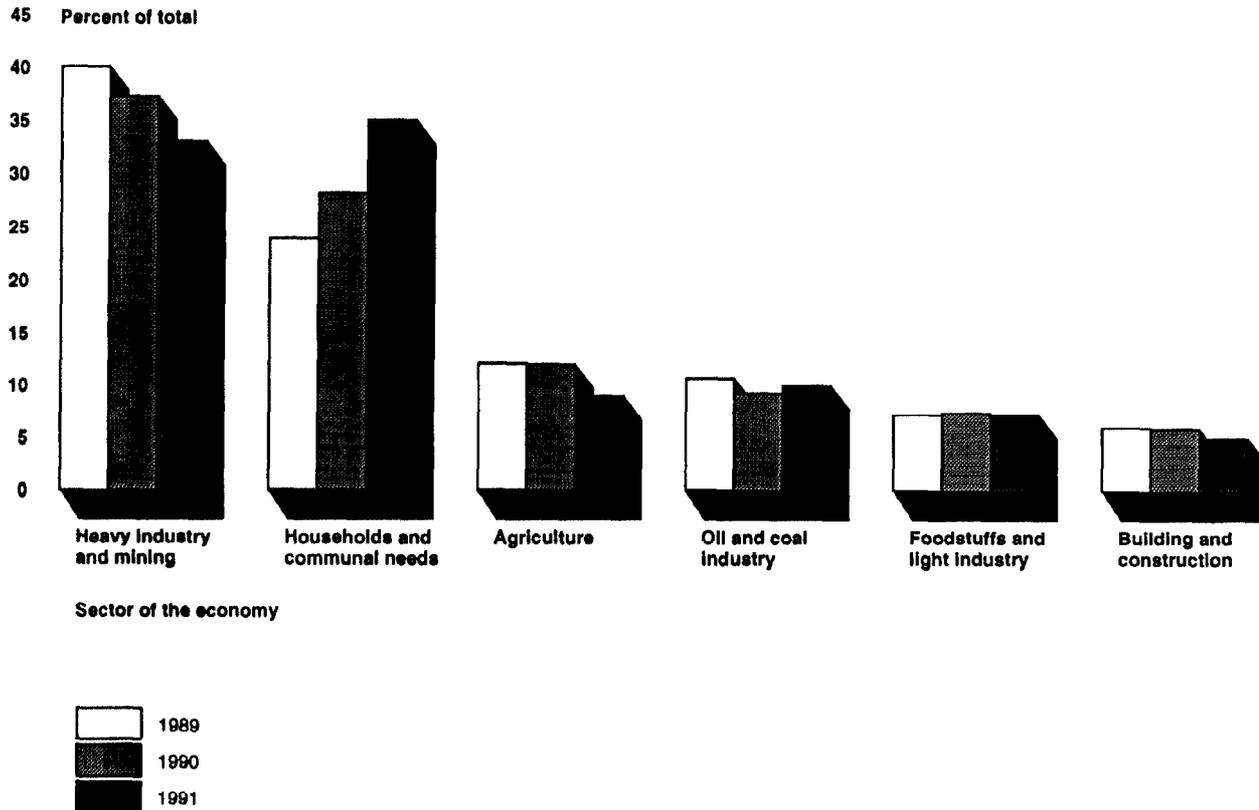
Figure 1.4: Albanian Coal Consumption
by Sector, 1990



Source: MIME.

Households and communities became the primary users of electricity in 1991. Heavy industry and mining had been the largest consumers, but their demand for electricity has gone down due to declining production. Household use of electrical appliances has risen since import restrictions have been lifted. Households are also using more electricity for heating because they lack wood, traditionally the principal heating resource. Figure 1.5 shows the proportion of electricity consumed by sector of the economy.

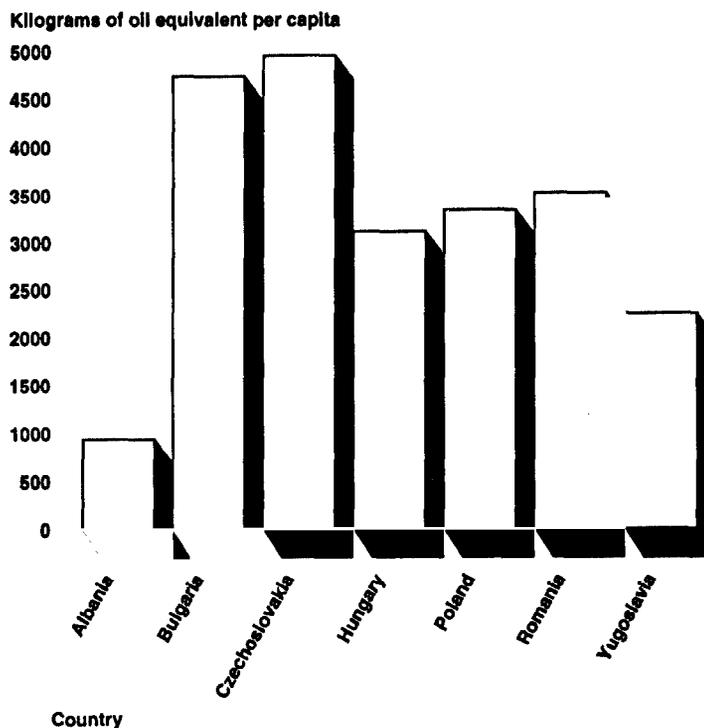
Figure 1.5: Albanian Electricity Consumption, 1989-1991



Source: Albanian General Directorate of Power.

Albania's per capita energy consumption is the lowest in Europe. As figure 1.6 shows, Albania's per capita energy consumption in 1989 was far lower than the other Central and East European countries. Energy use by the transportation sector is particularly low since private ownership of cars was prohibited until March 1991. Instead, Albanians walk or use animal-drawn carts, buses, or bicycles for transportation.

Figure 1.6: Central and East European Energy Consumption, 1989



Note: Energy provided by firewood is not included.

Source: World Development Report, 1991; World Bank estimates.

Objectives, Scope, and Methodology

The Chairman of the Senate Energy and Natural Resources Committee asked us to provide information on (1) the trends in and problems related to Albania's energy production, imports, exports, and use; (2) the plans Albania has to address its energy problems; (3) the role of foreign trade and investment in Albania's energy sector and the factors that discourage them; and (4) the efforts of the U.S. government and international organizations to assist Albania's energy sector and improve Albania's business climate.

To identify the trends in and problems related to Albania's energy production, trade, and use, and Albania's plans to address its energy problems, we interviewed officials of U.S., Albanian, and international agencies and obtained reports on Albania's energy sector. In the United States, we obtained information and records from the Departments of State, Commerce, and Energy; and the World Bank. We visited Tirana, Albania, in December 1991 and obtained data from eight government

ministries and agencies, including those responsible for managing oil, gas, coal, and electricity enterprises (see app. II). We also interviewed representatives of and obtained documents from the EC in Brussels, Belgium; the EBRD in London, England; and the International Energy Agency in Paris, France. Finally, we obtained documents on Albania's energy sector from the United Nations Economic Commission for Europe and the United Nations Industrial Development Organization.

To identify the role of foreign trade and investment in Albania's energy plans and the factors that discourage them, we contacted various Albanian government agencies; the U.S. Departments of Commerce, State, and the Treasury; the U.S. Export-Import Bank; and the Office of the U.S. Trade Representative. We also contacted seven U.S. private sector groups with business interests in Albania, and we attended two conferences on business opportunities in Central and Eastern Europe.

We collected information on the current status of U.S. and international agency programs to identify the efforts to assist Albania's energy sector and improve Albania's business climate. We obtained information from the U.S. Agency for International Development (AID); the Environmental Protection Agency; the U.S. Trade and Development Program (TDP); the Overseas Private Investment Corporation; and the Departments of State, Commerce, Energy (DOE), and the Treasury regarding their activities and plans to assist Albania. We also contacted various United Nations agencies, the World Bank, IMF, EBRD, EC, the International Energy Agency, and the Organization for Economic Cooperation and Development to determine the scope of their assistance efforts. (App. II lists the agencies and organizations we contacted.)

The Albanian officials we met openly described the conditions in their country and shared data that were previously considered state secrets. However, the officials sometimes provided conflicting data on past performance and future plans. In addition, officials from U.S. agencies sometimes provided information that conflicted with Albanian sources. While we did not independently confirm the information we received from the Albanian authorities, we reviewed a wide variety of data from different organizations. Information on Albanian legal matters in this report does not reflect our independent analysis of the matters but rather is a synopsis of information from secondary sources in the Albanian and U.S. governments. Unless otherwise noted, the statistics presented in this report have been converted from metric measurements.

We conducted our work between September 1991 and August 1992 in accordance with generally accepted government auditing standards.

As requested, we did not obtain official agency comments on this report. However, we discussed the information presented in this report with responsible officials from the Departments of State, Commerce, and Energy; AID; TDP; and the U.S. embassy in Tirana, Albania. Their comments have been incorporated in the report where appropriate.

Problems in Albania's Energy Sector Threaten the Overall Economy

Albania has abundant energy resources but is having problems producing, delivering, and using them. Outdated technology and other factors have led to declines in all types of primary energy production, and foreign energy resources are not readily accessible to make up for the shortages. Electricity production, most of which is generated at hydro plants, declined in the last few years due to an extended drought and shortages of other energy inputs. The electricity distribution system is underdeveloped and at current prices cannot meet domestic demand. As a result, electricity exports, which have produced hard currency earnings, have been cut. Moreover, the energy that is available is used inefficiently and pollutes the environment. These problems hinder Albania's economic development.

Shortages of Primary Energy Supplies Exist Due to Declining Production and Limited Imports

Albania has abundant reserves of primary energy resources but is having problems extracting them. Obsolete technology and equipment, poor mining conditions, and other factors have led to production declines in oil, natural gas, and coal. Imported energy resources are not easily accessible since Albania lacks suitable port facilities and is not connected to any outside oil and natural gas pipelines. The lack of financial resources also hinders Albania's ability to import sufficient energy supplies.

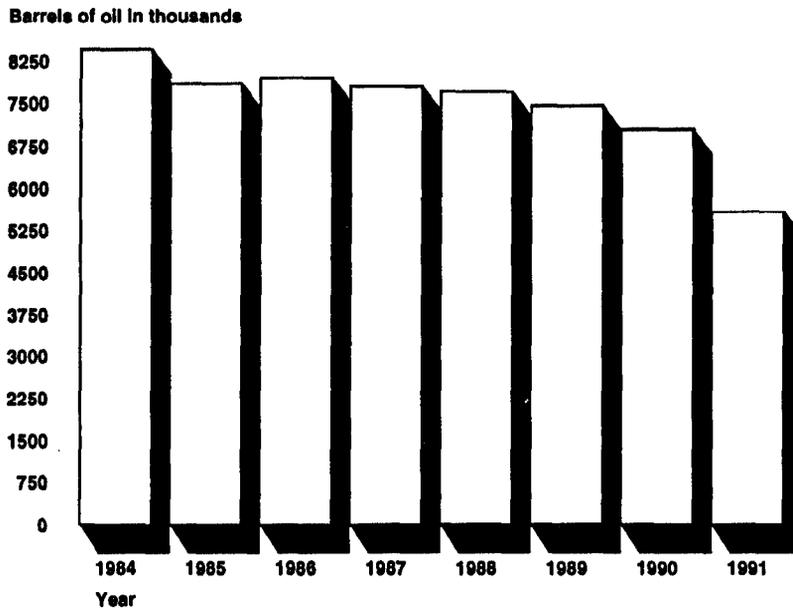
Oil

Experts believe that Albania has substantial oil resources, but existing extraction and survey technologies are so outdated that both recovering oil and finding new reserves are difficult. Albania has about 2-billion barrels of proven oil reserves¹ at existing production sites, according to MIME officials. But only about 12 percent of the proven reserves may be extracted using local technology, since much of the oil field equipment is over 50 years old.

Oil production in Albania has dropped in 9 of the last 11 years. By 1990 it was 53 percent lower than its 1974 peak of 14.8-million barrels. Production in 1991 dropped another 21 percent from the 1990 level. The long-term decline is due mainly to obsolete equipment and technology rather than a lack of oil, and recent social upheaval has exacerbated the decline. The resulting oil shortage has led to declines in both industry and agriculture. For example, the shortage of oil prevents the refining industry from making sufficient chemicals and fertilizer for the agricultural sector. Oil production levels for 1984 through 1991 are shown in figure 2.1.

¹Crude oil reserves are classified as "proven" if they are recoverable under existing economic and operating conditions.

Figure 2.1: Albanian Crude Oil
Production, 1984-1991



Source: MIME.

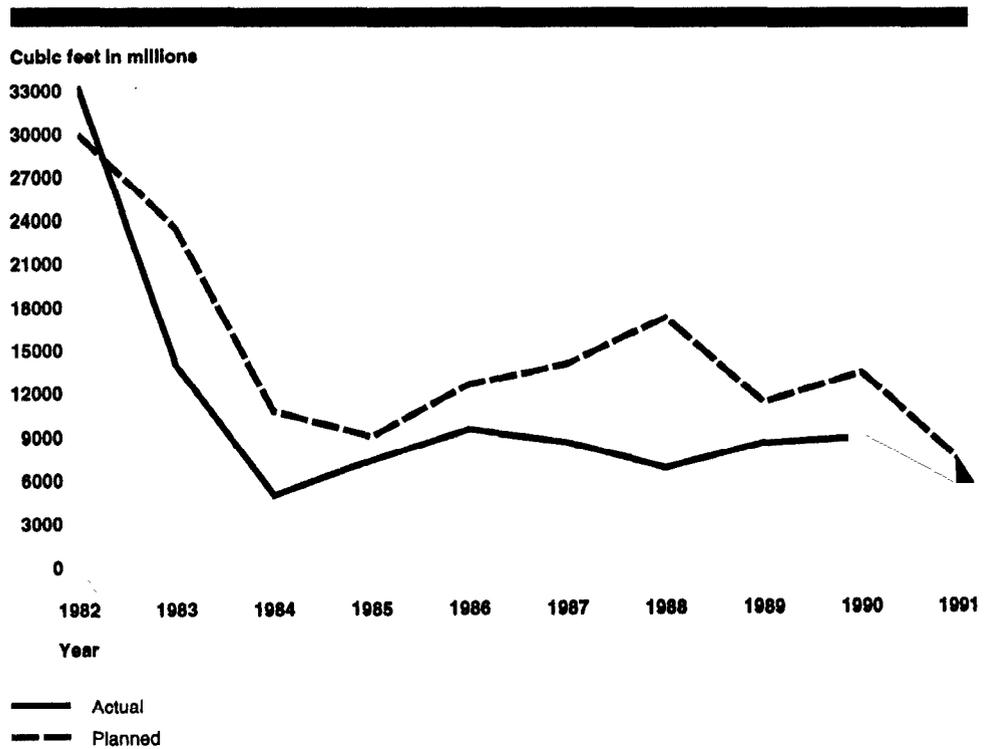
Albania has neither imported nor exported crude oil. Instead, it has relied totally on domestic crude to meet its oil demand. It imports some oil products, such as high-octane leaded gasoline from Italy and lubricating oils from Romania. It also exports small amounts of oil products, such as bitumen and gasoline, to neighboring countries. Albanian officials anticipate that total oil consumption will rise 12 percent by 1995 from its 1985-1990 average, and they expect to begin importing oil in 1992 because domestic production is not expected to keep pace with demand. However, the port infrastructure and storage facilities are limited.

Natural Gas

According to the Oil and Gas Journal, Albania has proven gas reserves of 670-billion cubic feet, more than either Bulgaria or the Czech and Slovak Federal Republic, two much larger East European countries. However, natural gas production had declined 74 percent by 1990 since reaching a peak of 33.2-billion cubic feet in 1982. Albanian oil officials said a large amount of gas was lost in a major oil field fire in the early 1980s when the field was allowed to burn itself out. As figure 2.2 shows, production fell short of planned levels after 1982. In 1991 actual production fell another 42 percent from the already low 1990 level of 8.6-billion cubic feet, and it

is expected to remain low for several years. Natural gas is present in oil fields, but the equipment currently used is not able to separate the associated gas produced jointly with crude oil. The lack of new oil and gas discoveries further limits gas production.

Figure 2.2: Actual Versus Planned Natural Gas Production in Albania, 1982-1991



Source: MIME.

At current prices, Albania's demand for natural gas exceeds the available supply. For example, low gas production restricts power generation and keeps the refining industry from making sufficient fuel, chemicals, and fertilizer for the economy. Albania does not have adequate access to outside gas supplies to meet its needs because, as in the case of oil, it has no pipeline connections to other countries.

Coal

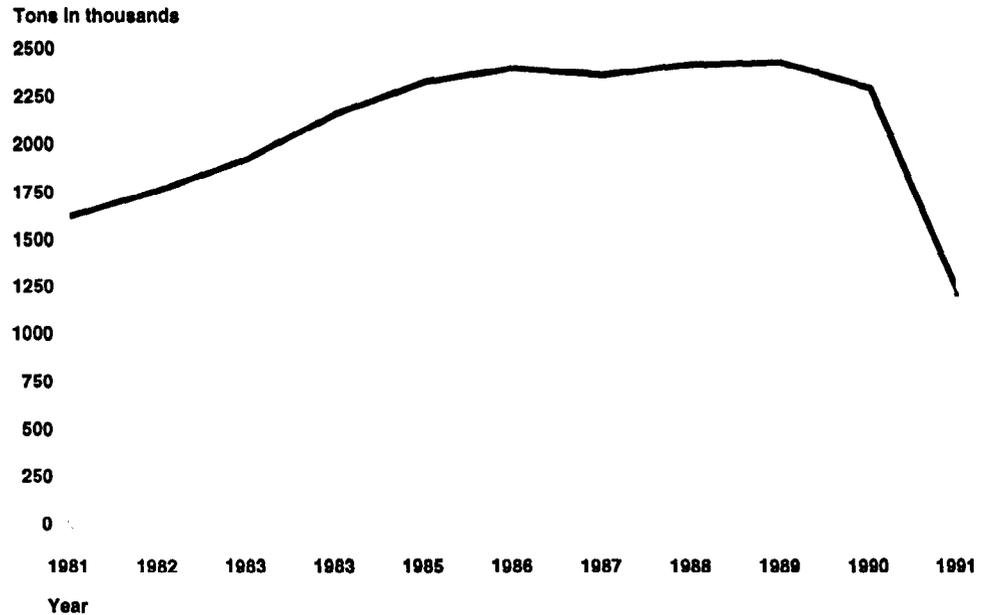
According to MIMÉ officials, Albania's proven coal reserves amount to 771-million tons, of which 551-million tons are recoverable. Most of the coal is low quality lignite; only about 15 percent of the coal is of higher quality.²

Albania's 10 coal enterprises run its 20 coal mines in four districts. Four mines in the Tirana district produce 80 percent of the coal. Albania produced over 2.2-million tons of lignite annually from 1985 to 1990. It also produces metallurgical coke, with about 320,000 tons produced in both 1988 and 1989.

As figure 2.3 shows, coal production rose steadily throughout most of the 1980s but has dropped by 50 percent between 1989 and 1991. Production is hampered by difficult geologic formations, low quality technology, unsafe working conditions, and the recent breakdown of the centrally planned economy. The state has subsidized the mines in order to ameliorate the high production costs, according to Albanian officials.

²The lignite has 2,000-3,800 calories per kilogram, 50-60 percent ash, and over 3 percent sulphur, a major pollutant. The higher quality coal has 12,000-14,000 calories per kilogram and a lower sulphur content.

Figure 2.3: Albanian Lignite Production,
1981-1991



Source: MIME.

Declining coal production has affected heat and power production. Lower coal production has cut household heating supplies needed to make up for the shortage of wood, the main household heating resource. Lower production has also limited power and heat generation at coal-fired plants.

Declining coal production has not only cut coal exports, but has also forced Albania to import more coal. Albanian coal exports to Romania dropped 83 percent between 1990 and 1991, from over 330,000 tons to about 55,000 tons. Albanian officials said they do not anticipate exporting any coal in the next 5-10 years, since all the coal will be needed for domestic use. Albania imported about 145,500 tons of coal from Greece in 1991, with Italy and Germany providing smaller amounts, according to the Ministry of Foreign Economic Relations. According to the U.S. Commerce

Department, the United States exported almost 102,000 metric tons of coking coal to Albania in 1991.³ Despite the need for additional coal supplies, the lack of money limits coal imports. As one consequence, a major steel plant has stopped working because the country cannot afford to import coking coal.

Electricity Sector Is Encountering Production, Distribution, and Export Problems

Albania is having problems producing, distributing, and exporting electricity. Hydroelectric plants generate most of Albania's electricity, but recent droughts have limited electricity production. The lack of modern equipment and spare parts also hinders production at these and other power plants. The distribution system is not equipped to meet electricity demand from household consumers at current prices. These factors, coupled with the political turmoil in neighboring Yugoslavia, have also cut electricity exports.

Electricity Production Is Constrained

Hydroelectric plants generate over 90 percent of Albania's electricity. An extended drought from 1987 to 1990 lowered water levels, and thus electricity production. By 1990, the year of Albania's worst drought this century, total production had fallen 37 percent from the 1986 level. Water levels returned to normal in 1991.

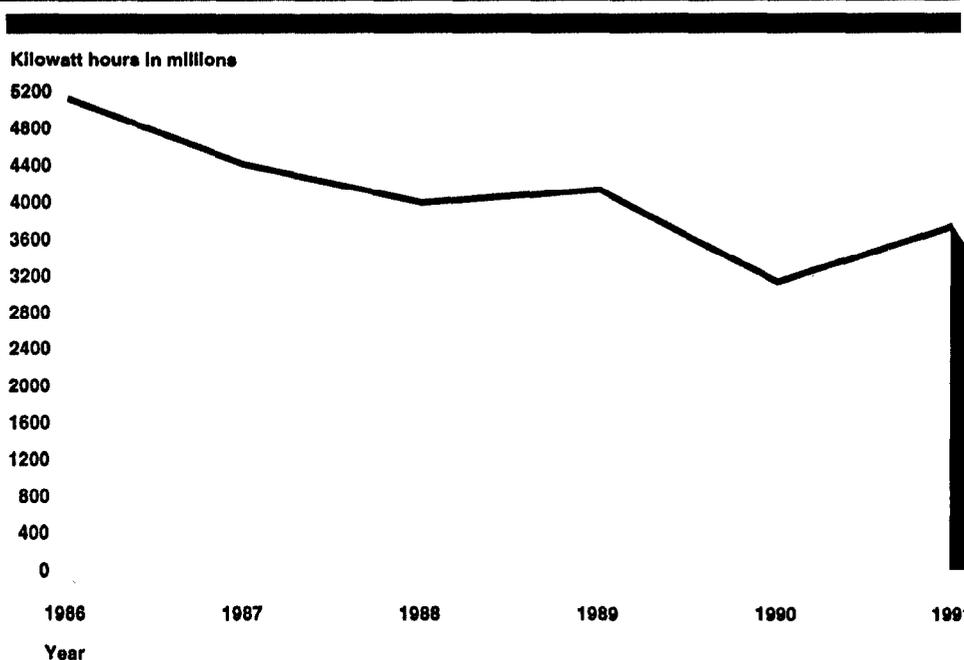
Shortages of oil, gas, and coal, which are used to produce the remaining amount of electricity, limited power production during the drought. For example, the oil- and gas-fired thermal power plants at Fier and Ballsh operated well below capacity during the drought due to the lack of inputs. Some industrial plants (e.g., refineries and chemical plants) use oil to generate power, and the shortages limited their power production as well.

Outdated technology and the lack of spare parts also hinder electricity production. Albania's past policies of international isolation and self-reliance limited access to modern technology and spare parts. As a result, the thermal plants are very inefficient. The technology at the hydro plants is better, but it is also old—many of the plants were built in the 1950s and 1960s using technology that was outdated even at the time. For example, the Vau Dejes dam near Shkoder, which transmits power to the

³According to Commerce Department statistics, coal accounted for about 95 percent of the total Albanian imports from the United States from 1987 to 1990. Coal imports dropped to 37 percent of the total in 1991 because Albania started to import more of other goods (primarily food aid) and because coal imports declined. Total imports of all items from the United States rose from \$10.4 million in 1990 to \$18 million in 1991.

European electricity grid through Yugoslavia, was completed in 1971 using obsolete Chinese technology. The equipment is now worn out, and obtaining spare parts is a problem. Figure 2.4 shows how electricity production has dropped since 1986.

Figure 2.4: Albanian Electricity Production, 1986-1991



Sources: Albanian General Directorate of Power and Ministry of Economy.

Distribution System Is Obsolete and Lacks Spare Parts

Although the electricity infrastructure can generate enough power to meet the current level of domestic demand, the outdated Chinese technology and the lack of spare parts limit distribution of that power to consumers. In the past, the government did not provide funding to improve the distribution network, according to Albanian power officials. As a result, the existing distribution equipment and lines are old and inefficient; they do not deliver electricity effectively to domestic and foreign consumers. For example, the central dispatching system cannot give or receive real-time data on the different power plants: Technicians have to use telephones to transmit the data.

The obsolete and poorly equipped distribution system cannot handle increased electricity demand. For example, at current electricity prices, households are using an increasing number of imported and home-made

electric heating devices due to firewood and coal shortages. The increased use has overloaded the circuits, burning out transformers and causing power blackouts nationwide. Replacement transformers and spare parts are generally unavailable. As a result, no building in the country has continuous electricity use. The Albanian press noted that even the emergency departments in Tirana's hospitals went days without lighting during the winter of 1992. Furthermore, the system's inability to handle increased electricity demand inhibits economic growth. For example, the Albanian coast is cited by U.S. and Albanian officials as having tourism potential, but according to World Bank consultants, the power distribution facilities in the area are inadequate to realize this potential.

Power Exports Have Declined

Albania is connected to the power grid of neighboring countries and has traditionally exported electricity for hard currency and as barter for consumer goods. Albania's grid was first connected to Yugoslavia in 1971, with an additional connection established in 1988. Grid connections to Greece were established in 1974 and 1985. Albania is connected indirectly to the larger West European electricity system through these grids.

However, Albania's electricity exports have declined significantly since 1986, as shown in table 2.1. The recent drop in exports is partly due to reduced availability of electricity during the 1987-1990 drought. Lower production levels not only cut exports, but also forced Albania to import electricity for the first time in 1989. Albanian electricity authorities said total imports rose to 560-million kilowatt hours (kwh) of power in 1990, representing about 17 percent of total domestic demand of 3,378-million kilowatt hours.

Table 2.1: Albanian Electricity Exports, 1985-1991

Kilowatt hours in millions

Country	1985	1986	1987	1988	1989	1990	1991	Total
Yugoslavia	583	1,259	931	402	72	11	168	3,426
Greece	69	879	492	333	—	—	129	1,902
Romania	—	—	—	—	335	22	25	382
Bulgaria	—	—	—	—	222	81	73	376
Italy	—	—	—	—	—	1	6	7
Switzerland	—	—	—	—	—	3	—	3
Total	652	2,138	1,423	735	629	118	401	6,096

Source: Albanian General Directorate of Power.

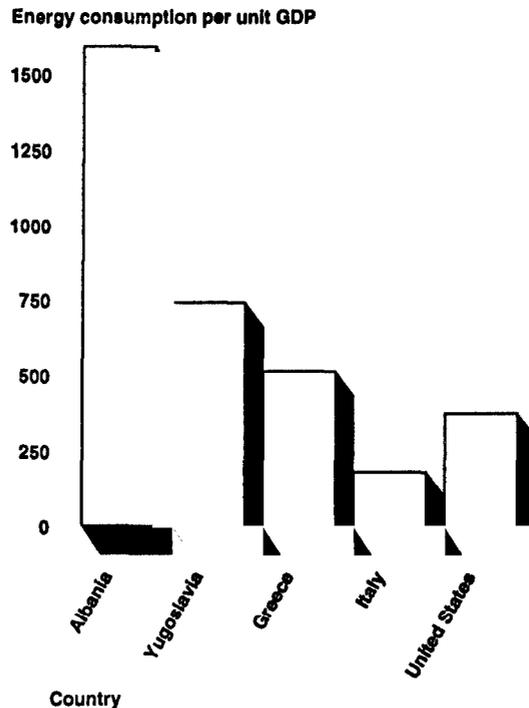
The political conflict in Yugoslavia has also hindered power exports. Now that water levels are back to normal and the declining economy demands less power, Albania wants to sell its excess power to foreign markets. According to Albanian officials, Yugoslavia has been the main recipient of Albanian power, but exports to Croatia, Albania's primary customer in the former Yugoslavia, have been cut. In addition, Yugoslavia levies high taxes and requires a portion of the power when Albania exports electricity through its territory to other countries.

The drought and disruptions in Yugoslavia, combined with Albania's inadequate distribution facilities, have limited Albania's ability to generate hard currency through electricity exports. For example, Greece was recently able to import Albanian electricity at a price well below market levels because it knew Albania had excess power that could not be exported through Yugoslavia. In addition, according to Albanian electricity officials, Albania could potentially export 800 megawatts, but the existing distribution system can only handle 300 megawatts.

Energy Use Is Inefficient and Polluting

Albania uses energy less efficiently than its neighboring countries, as shown in figure 2.5. Its industries use old equipment and technologies that are not energy efficient. Heat escapes easily from its many deteriorated buildings because they lack adequate insulation and glass in their windows. An estimated 500,000 square meters of glass are needed just for windows in schools and hospitals, according to the director of the United Nations Development Program (UNDP) in Tirana. According to World Bank consultants, inefficient energy use could force some industrial plants to fail financially.

Figure 2.5: Comparison of Energy Efficiency, 1989



Note: Energy consumption is in kilograms of oil equivalent per \$1,000 GDP.

Source: GAO analysis from data in the World Bank's World Development Report 1991 and its estimates of Albania's energy consumption.

Energy use in Albania also causes heavy environmental damage. Lacking adequate pollution controls, energy users and producers contaminate the land, water, and air. For example, power plants burning low quality coal pollute surrounding areas. While some technology is being used to reduce the coal ash emissions, electrofilters and precipitators are needed for further reductions, according to Albanian power officials. Oil-fired power plants and industrial plants lack the technology to control the pollutants they emit. In addition, the use of wood-burning stoves in households, which also generate significant amounts of air pollution, has led to heavy deforestation. Moreover, Albania's oil fields are heavily polluted with oil spillage—officials at MIME estimated that \$20 million is needed just to control pollution at the oil fields and refineries. Addressing these pollution problems would divert scarce financial resources from other areas of need.

Albania Plans to Address Energy Sector Problems

Albania plans to modernize and expand its oil, gas, coal, and electricity industries to increase production, according to Albanian energy officials. It also wants to import more primary energy supplies, since domestic production cannot cover energy requirements in the near term. Millions of dollars will be required to buy needed items, construct new energy-related facilities, develop energy linkages with other countries, and finance the needed imports. Some projects are expected to repay their investment from energy export earnings. In addition, energy prices are being raised to reduce state subsidies and help encourage energy efficiency.

Oil and Gas Production to Be Increased

Increasing oil production at existing onshore oil fields is a major part of Albania's economic development strategy, according to Albanian officials. All of Albania's oil has been produced from onshore wells since extraction began in 1927. Since it currently uses outdated extraction technology, Albania can probably recover three times the amount of oil at existing sites by using enhanced extraction technology from the West, according to Albanian and western oil experts. Albanian oil officials estimate \$110 million is needed for secondary recovery technology to increase existing onshore production by nearly 2-million barrels a year. To modernize the entire onshore oil infrastructure, PlanEcon, Inc., reported that \$1 billion is needed.¹ Albanian officials have held discussions with foreign oil companies about investment opportunities in these fields. The added oil production would enable Albania to meet growing domestic demand as well as export oil to help finance the investment.

New onshore exploration may increase oil reserves. Western oil experts say that Albania may have significant undiscovered oil reserves onshore. Foreign oil companies are interested in new onshore exploration, but Albania has not yet made such exploration available to foreign firms. However, MIMÉ is preparing geologic data and legislation that would allow this exploration to occur. Ministry officials said the legislation could be ready sometime in 1992.

Albanian officials hope new sources of oil will also be found offshore that could increase known reserves and production levels. The government recently signed contracts with five western oil companies, including Chevron and Occidental, for oil exploration and extraction in the Adriatic and Ionian seas. Firms that discover oil will be allowed to keep 19 percent

¹PlanEcon is a Washington-based business consulting and research firm specializing in economic assessments of Central and Eastern Europe and the former Soviet Union.

after-tax profit. Exploratory drilling is scheduled to begin in 1993, so it may take several years before any new oil reserves can be exploited.

Since oil production estimates from 1992 to 1995 fall short of expected demand, Albanian oil officials said they plan to import about 2.6-million barrels in both 1992 and 1993, with about 1.65-million and 0.66-million needed in 1994 and 1995, respectively. Imported oil will cover domestic needs until new fields using foreign technology start production. If domestic consumption remains relatively low, increased oil production could eventually allow Albania to export oil.

Albania plans to increase its natural gas supplies as foreign companies provide better extraction technologies and as pipeline linkages are made with other countries. Albanian officials expressed hope that foreign companies will increase gas production as the companies develop new oil fields. In addition, Albania is studying the possibility of importing gas from the former Soviet Union by connecting to an existing pipeline in Greece. MIME officials estimated it will cost about \$100 million to connect the Albanian pipeline network to the existing Greek gas pipeline.

The Refining Industry to Be Modernized and Expanded

Albania has four refineries, all of which use old technology.² The largest and newest of these refineries, Ballsh, was built in 1975 with outdated Chinese technology, and obtaining spare parts has been a problem. Western technology is needed to modernize this refinery, according to MIME officials. They said the other three refineries are very old and may not be worth modernizing. However, closing these refineries would cause unemployment, aggravating social unrest in their areas. Albanian oil officials told us that the refineries will not be closed until new employment opportunities exist. In the meantime, each refinery operates well below capacity because of the absence of oil for processing. Decreased refining activity limits exports of refined products, and thus hard currency earnings.³

Besides modernizing the Ballsh refinery, Albania wants to build a new refinery to process offshore and imported oil. Albanian officials have

²Albania's refineries have a total production capacity of 16.5-million barrels of oil per year. Ballsh provides 40 percent of the nation's capacity and produces 90 percent of Albania's high-octane gas and all of the country's low sulphur diesel. The Fier, Kucova, and Cerrik refineries account for 20-percent capacity each and make lower quality products.

³Albania exported 730,000 metric tons of oil products in 1986-1990, mostly gasoline (230,000 metric tons) and bitumen (411,000 metric tons).

identified several possible locations on the coast near Vlora for the new refinery. However, the port infrastructure, storage, and transport facilities would need to be expanded before the new refinery could be built. A private oil company official told us that it would be more cost-effective to use existing refineries in nearby countries to refine Albanian oil than to build another refinery in Albania.

Coal Production and Enrichment to Be Increased

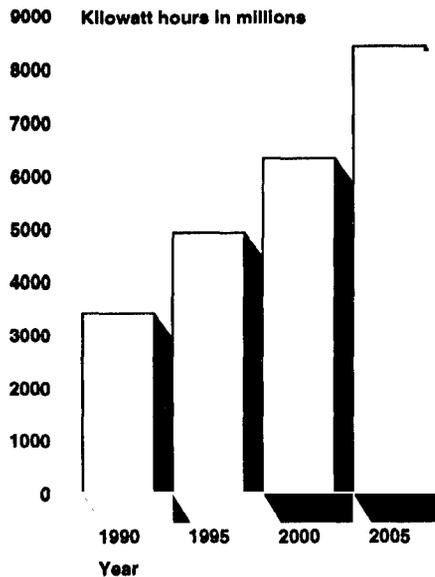
To raise coal production levels, Albania plans to acquire new extraction technology and open new coal mines, according to MIME officials. With new technology and new mines, total coal production is expected to rise by 45 percent from the 1990 level, to 3.3-million tons a year in 1997. Albania is also interested in importing coal from Europe and the United States to help meet domestic demand.

In addition, Albania plans to expand coal enrichment to improve the coal's quality. Albania currently enriches almost 1-million tons of coal a year at two enriching plants, and it may rehabilitate these plants to expand capacity. In addition, it plans to build a new enriching factory near Korce with a capacity of 881,600 tons a year. Foreign companies can help provide the needed enrichment technology, according to Albanian officials.

The Electricity Infrastructure to Be Updated and Expanded

Domestic demand for electricity is expected to gradually increase through the year 2005, as shown in figure 3.1. According to preliminary calculations by Albanian electricity sector officials, the average annual growth in demand will be 5.5 percent. This estimate assumes economic growth, a gradual increase in more efficient technology, and economic restructuring. However, it does not take into consideration higher electricity prices, which could decrease demand. The officials acknowledged that long-range projections may not be reliable in the absence of a stable economy.

Figure 3.1: Albania's Actual and
Projected Electricity Demand, 1990-2005



Source: Albanian General Directorate of Power.

Albania plans to modernize the electricity production system to meet anticipated demand. Albanian electricity officials said they know what types of equipment and spare parts are needed to modernize the power plants, and they have requested over \$8.1-million worth of these items from foreign donors. These imports will help keep the existing system operating as they move to a new system.

The power distribution system also needs to be modernized so it can deliver power effectively to domestic and foreign consumers. For example, computers are needed at dams and the central dispatching center to provide the required analysis to run the nation's system properly.

To meet power demand in the long term, Albania plans to build additional power plants. Albanian electricity officials estimated that the current installed capacity can provide Albania with the necessary power supplies until 1995. New plants will raise production levels and allow for additional power exports. (App. I provides detailed information on Albania's existing and planned power plants.)

Most of the new construction would be hydroelectric plants, since Albania has tapped only 35 percent of its potential hydropower resources,

according to Albanian power officials. One dam is already under construction at Banja on the Devoll River, and power officials said it needs to be completed by 1995 to meet projected demand.⁴ Construction of several other plants is planned for the Drin, Vjosa, and Sasaj rivers. No decision has been made regarding the specific location for some of these plants.

In anticipation of higher coal production, the government plans to build new coal-fired power and heating plants. Construction is planned in areas close to the coal resources. For example, three plants that would provide steam for industry, heating, and power are to be built close to coal reserves outside Tirana.

Other energy sources may also be developed to help meet future demand. For example, the General Directorate of Power is beginning to study the possibility of developing wind and solar power capabilities. There are no plans to use nuclear power, however.

Improvements Will Be Costly

Modernizing the distribution system will be costly. For example, World Bank consultants estimated that \$20 million is needed to upgrade the distribution facilities on the coast to develop the tourism potential. In addition, they estimated \$7 million-\$13 million is needed to upgrade control systems and \$2 million to complete distribution substations. General Directorate of Power officials estimated \$1 million is required for condensers to help reduce network losses. Another \$1 million is required to renovate the relay and control systems to improve system safety, since power surges can destroy electrical equipment. An estimated \$400,000 is needed for a new computerized dispatching system for better electricity regulation and export distribution.

Expanding the infrastructure will also be costly. For example, Albanian construction authorities estimated the Bushat hydroelectric plant on the Drin River in northern Albania will cost \$60 million-\$80 million to build. The Skavica plant on the Drin River will cost an estimated

⁴A French company has a contract to supply machinery for the dam, which was to be completed in 1993. However, construction has been halted due to the lack of money to pay for the machinery.

\$150 million-\$200 million and be difficult to build because it is in a remote and mountainous area.⁵ It would also overflow agricultural areas and back water into Yugoslavia. Albanian construction officials said these obstacles will have to be resolved before construction can take place. Furthermore, two coal-fired plants near Tirana will require \$35 million-\$40 million and \$80 million-\$90 million to build, respectively; the Korce coal plant is expected to require \$12 million.

Albanian officials anticipate that revenues from electricity exports will help pay for the necessary investment and construction costs. The level of future power exports is unknown, but the officials said Albania plans to continue exporting power to its traditional markets. Albania also wants to connect to the West European electricity grid to take advantage of this export potential. Power needs in Europe are high in winter, the time when Albania has its best power production, according to Albanian officials. To this end, the Italian national power company wants to study the possibility of laying power lines under the Adriatic Sea to tap Albanian power.

Energy Prices to Be Raised

The government has started to raise energy prices to reduce state subsidies and encourage efficiency. Gasoline prices for Albanians were increased 5-fold in October 1991 and doubled in July 1992. Coal prices have been raised to market levels for industry, although the government continues to subsidize household coal prices, which are half the market rate. Nevertheless, the government does plan to raise energy prices to market levels.

The government has also raised electricity prices because low prices provided no incentive to conserve. In October 1991 the government raised electricity prices for both nonhousehold users⁶ and for household

⁵Construction on the Skavica plant is planned to start in 5-7 years and be finished by 2004. The plant will regulate the water level for several other dams on the Drin River.

⁶The government raised electricity prices for nonhousehold users from 200 lek, the Albanian currency, to 600 lek (the equivalent of \$24 at the October 1991 official exchange rate of 25 lek per dollar) for each 1,000 kwh used. Nonhousehold users must also pay a service charge, with the amount depending on the type of installation and consumer.

Chapter 3
Albania Plans to Address Energy Sector
Problems

consumers using higher amounts of power.⁷ In addition, nonhousehold electricity prices were doubled in July 1992. Albanian officials hope that higher prices will improve efficiency and restrain growing demand.

⁷Household prices were raised from 0.5 lek to 0.6 lek for each kilowatt hour used over 250 a month. The price for amounts less than 250 kwh/month have declined somewhat—people now pay 0.3 lek/kwh for up to 250 kwh/month, whereas before October 1991, they paid the same price for only 100 kwh/month. Some areas are allowed only 70-150 kwh a month at the lower price due to the poor technical condition of the grid.

Albania Is Taking Steps to Attract Foreign Trade and Investment, but Major Barriers Remain

Albania is counting on foreign businesses to provide the necessary capital and investment to improve its energy sector, according to Albanian energy and government officials, but such businesses still face major obstacles. Since Albania lacks the money to buy the equipment and technology needed to address its energy needs, the government has started taking steps to help attract foreign business. It has reduced its central controls, allowing local enterprises to establish joint ventures and trade directly with foreign firms. It has also begun the process of privatizing various parts of the economy. Finally, it has established new laws and organizations that will help attract foreign trade and investment. Nevertheless, Albania's financial difficulties, risky business climate, and other factors still discourage foreign business involvement in Albania. In the long run, however, conditions in Albania are likely to improve, according to U.S. government officials.

Central Controls to Be Reduced

Albania is moving away from central government planning by transferring the operations of state enterprises from the central level to the local enterprise level. For example, MIME used to determine production and investment levels, set prices, and determine wages and other personnel policies for its various enterprises. Now, according to MIME officials, these decisions will be made by the individual enterprises themselves.

As central control is reduced, local enterprises will have the autonomy to trade freely and form joint ventures with foreign companies. Now that the government has released its tight control over the state trade monopoly, enterprises can import needed foreign items and export their products. According to Albanian officials, the freedom to form joint ventures is particularly important since the foreign partner can provide financial resources, technology, equipment, technical skills, and the know-how needed to operate in a market economy. To obtain preliminary approval for a joint venture, foreign companies need to work with the ministry with direct responsibility for the enterprise, such as MIME. The Ministry of Foreign Economic Relations gives the final approval.

The Economy to Be Privatized

The government plans to gradually privatize the economy to help attract foreign business through joint ventures. Privatizing the economy will also reduce the size of the public sector while building state revenues. Although the timing and methods for privatizing state enterprises had not been decided at the time of our review, the government will likely use a number

of methods, since Albanians do not have sufficient resources to buy all the state assets available.

The 1991 Land Law guarantees private land ownership for the first time in about 40 years, and land distribution in the countryside is nearly complete. Foreigners can lease land but not own it. State enterprises, which range from single-function production units to huge conglomerates, will also be privatized. The large state monopolies, including those under MIME, will first be broken into smaller units. The resulting enterprises can then be privatized and will be responsible for their own survival. These enterprises will be available for joint ventures.

For strategic reasons, some energy-related enterprises will not be privatized. However, they will be expected to determine their own production levels and investment requirements as if they were a private company. For example, MIME is thinking of creating three independent public coal companies, one in each of the three main coal-producing regions. These companies would be free to negotiate joint ventures directly with foreign investors. The same strategy is envisioned for enterprises in the oil and gas sectors, according to MIME officials.

Several new organizations have been created to help with the privatization process. The National Agency of Privatization was established in August 1991 and is responsible for managing and coordinating the privatization process. This function includes approving the sale of state property. A new commission for privatization will determine the value of the enterprises before sale. In addition, each ministry of the government will have commissions on privatization to assist these two groups.

New Laws and Agencies Established

The Albanian government has passed a number of laws to help attract foreign business. According to the U.S. Department of Commerce, these laws (1) protect investments from expropriation without compensation, (2) regulate joint venture activities, (3) exempt from customs duties materials or equipment imported for the production of exports, and (4) give foreigners the right to repatriate part of their profits. The Albanian government has identified additional legislation that will be required to attract foreign investment. Advisers from the United States, Western Europe, and several international agencies are helping develop legislation for the government's approval.

In addition, new organizations have been formed to help facilitate foreign trade with and investment in Albania. The new Ministry of Foreign Economic Relations is responsible for approving commercial agreements related to foreign investment and trade. It also oversees the newly created Foreign Investment Agency, which provides foreign investors with data on local enterprises. Finally, the government is working with the new Albanian-American Trade Association in Washington, D.C., to organize trade missions and provide information on trade and investment opportunities in Albania.

Major Impediments Remain to Foreign Trade and Investment

Although Albania is taking positive steps to foster foreign trade and investment, a number of problems hinder U.S. firms' involvement there. The decentralization and privatization processes will be difficult to implement, and few financial resources are available to finance trade or investment. In addition, legislation needed to protect foreign investment has not been granted, the political situation remains unsettled, and few people are familiar with a market economy. Finally, the supporting business infrastructure is underdeveloped.

Decentralization and Privatization to Be Difficult

Implementing the planned decentralization will cause hardships, according to Albanian officials. When the government releases central control, the officials expect many enterprises will not be able to survive on their own. As the government establishes new taxes and removes subsidies, enterprises will initially have less revenue with which to operate. The officials expect much pain and suffering will result when unprofitable enterprises close or are forced to lay workers off to become competitive and finance modernization. A study by the Ministry of Economy concluded that 25 percent of the enterprises are expected to operate at a loss in the future. The Albanian government recently established a monetary "safety net," but the amount of compensation will provide only the barest minimum standard of living, according to U.S. embassy officials.

Privatizing the economy will also be difficult. People do not have money to buy or operate their own shops, let alone the larger industrial enterprises. Most large state enterprises are dying, and their assets have little worth. According to the Director of Albania's privatization agency, the valuation process is going slowly because of a lack of personnel and expertise, and representatives at the enterprise level are delaying privatization to protect their jobs. To hasten the privatization process and postpone the problem of valuing the enterprises, the government is privatizing only the activity of

the enterprise, not its assets, which the state will continue to own. Albania hopes the sale of state assets will finance much of the safety net expenses, but the delays in the privatization process and the low net worth of the assets will hinder its ability to do so. According to a senior Albanian official, full economic reorganization will take at least 3-5 years.

Financial Resources Limited

For a number of reasons, Albania does not have the financial resources needed to revive or modernize its economy. Albania has few trading partners due to its past isolation. Exports have been further restricted by the recession in the West, the breakdown of trade patterns in the East, and the conflict in Yugoslavia. Since Albanian-made products are not competitive on the international market, electricity and abundant natural resources provide the only major sources of hard currency exports.¹ Decreased exports and increased imports have resulted in major balance-of-payments problems. In addition, declining production and high unemployment compensation have resulted in massive budget deficits.

Individuals also have little money, limiting their ability to purchase foreign equipment or invest in the state enterprises available for privatization. According to the Ministry of Economy, the average net worth of an Albanian family is \$400, and the average annual per capita income in 1990 was about \$240.² Although most wages were raised by 50 percent in 1991, most prices were liberalized as well, more than offsetting the higher wages. Inflation is high and expected to rise as more prices are liberalized, further limiting the population's purchasing power.³

Lacking domestic capital, Albania is looking to the international community to finance modernization efforts. However, Albania is not creditworthy, according to western banking officials. While Albania's foreign debt of about \$550 million is relatively small compared to most other countries in Central and Eastern Europe, foreign currency reserves are virtually exhausted, forcing the suspension of payments to commercial banks. Banking and U.S. officials told us that foreign commercial banks are

¹Albania is the world's third largest chrome producer, and its reserves are said to be the world's second largest. Albania also possesses significant copper and iron-nickel resources.

²This estimate is based on the average 1990 per capita income of 6,000 leks at the September 1991 official exchange rate of 25 leks per dollar. However, the official rate had risen to 86 leks per dollar by September 1992, and the black market rate is typically more than double the official rate.

³In April 1992 the Ministries of Economy and Finance said the inflation rate was 12 percent a month. Some western and Albanian officials said the rate is higher, while others said inflation cannot be accurately determined.

waiting for the World Bank and IMF to provide credit before they extend any more.

Business Climate Risky

Albania lacks the political stability that is important to attract foreign investment. Having endured decades of a Marxist-Leninist system, Albania experienced five different governments since March 1991. Multiparty elections held in March 1991 left the Communists in power, but their government fell in less than 3 months. The coalition government established in its place collapsed less than 6 months later when the Democratic Party, frustrated by Communist resistance to reform, pulled out of the government in December 1991. Another temporary government took charge until elections were held in March 1992. Those elections resulted in an overwhelming victory for the pro-reform Democratic Party, but the situation is still somewhat tense and uncertain. The new leaders lack experience, and difficult economic conditions put a strain on the new political leaders. Increased tensions with neighboring Yugoslavia also concern the new leaders.

The frequent political changes have hindered Albania's ability to develop legislation that fosters foreign investment. While Albania has passed a number of general laws that demonstrate its commitment to a market economy, much of the legislation required to implement the transition, such as a law on large-scale privatization, has not been enacted. The former Parliament, which was dominated by Communists until the recent elections, was slow to pass much of the supporting legislation. In addition, the legal profession was abolished in 1967 since it was thought that a genuine communist society would not need lawyers. This situation hinders Albania's ability to draft needed legislation. Occidental and Chevron, two U.S. energy companies that have started doing business in Albania, had to include protective language in their contracts that would normally have been provided through legislation.

Due to its international isolation, Albania does not have professionals who are familiar with the legal and economic principles practiced in market economies. As one Albanian economist told us, Albanians studied how to change a capitalist system to communism, not the reverse. Albanians are well trained in technical fields like engineering, according to international agency officials, but most have no experience taking risks or making decisions. In addition, basic management skills, such as budgeting and accounting, need to be acquired. Technical assistance is required for all

segments of the work force, from policymakers to factory managers to the workers themselves.

Other factors create a difficult business climate. The large and changing government bureaucracy causes confusion regarding who has responsibility and decision-making authority. Further, local management may be reluctant to take the drastic measures needed to make the enterprise competitive, such as eliminating excess labor. The lek is not convertible outside Albania, and converting the lek to hard currency is difficult inside the country. As a result, barter arrangements are often used to finance business deals. Moreover, one foreign firm has reportedly suspended delivery of equipment because money deposited in the State Bank to finance its purchase was used for other purposes.

Business Infrastructure **Underdeveloped**

Albania lacks a sufficient infrastructure to support the needs of the business community. For example, the banking system is not adequate to facilitate foreign trade and investment. In 1991 several government commercial banks were established out of the State Bank and given clean balance sheets. But the law to organize a western-style banking system was just passed in April 1992. Until the system is fully established, the central bank, which can only provide very basic services, will function as the primary commercial bank. The absence of a financial sector is one of the most serious obstacles to trade with and investment in Albania, according to AID.

Albania's telecommunications system is also too outdated and limited to support the needs of foreign businesses. Albania's telephone switching and transmission equipment is up to 50 years old, and the supply of telephones has not kept pace with internal demand. In addition, making and receiving national and international calls is difficult. According to the World Bank, adequate international telecommunications services are important to attract foreign business to Albania.

Additionally, Albania's transportation system is underdeveloped. Trucks are old and cars are scarce. The mountainous terrain makes internal transportation difficult and road construction and maintenance expensive. Roads to neighboring countries are limited, the ports cannot handle large shipments, and the air and rail transportation systems are not well developed. These factors will likely hinder foreign company efforts to import needed supplies and equipment.

Albania's Long-Run Prospects Are Promising

While Albania's short-term economic prospects are not good, U.S. officials we contacted were generally optimistic about its long-term potential. U.S. officials believe the economic situation will be much better in several years. Many sources cited Albania's low-wage and educated labor force as an asset to future development. Since Albania is a small country, the total investment required to revitalize it is relatively low. Moreover, the country has good tourism potential because of its mountains and beaches. Tourism could help generate hard currency earnings and stimulate economic development.

The political situation is also likely to improve in the future, according to U.S. embassy officials. The elections held in March 1992 resulted in a wide majority for the pro-reform parties that want to stabilize the political situation and speed the economic reform process. Furthermore, U.S. officials said that ethnic strife with the Greek minority is minimal, and there are no religious tensions in the country.

Albanians are eager to attract U.S. investment to help their economy, although the Albanian officials we contacted had little knowledge of U.S. companies. Albanians have a high regard for the United States—President Woodrow Wilson is still much admired by Albanians since he intervened to prevent the partition of the country after World War I. According to a recent survey commissioned by the U.S. Information Agency, the average Albanian views the United States more positively than any other country in the world.

U.S. and International Assistance Will Help Albania's Energy Sector and Business Infrastructure

U.S. and international organizations are interested in helping Albania develop its energy sector and improve its business climate. Although U.S. energy-related programs for Central and Eastern Europe have not included Albania, various U.S. financing programs are now available to support energy projects there. Also, international agencies like the World Bank and the United Nations are beginning to address Albania's energy-related problems. In addition, Albania is receiving both U.S. and international assistance to help improve the business climate and lay the foundation for foreign trade and investment.

U.S. Energy Assistance and Financing Programs Not Yet Active in Albania

The United States has not yet included Albania in its Central and East European energy assistance efforts. AID has two energy-related programs that provide assistance to all the other Central and East European countries.¹ However, AID decided not to include Albania in its energy activities because it concluded that humanitarian food and medical assistance was a higher priority and that the lack of additional funding for assistance to Central and Eastern Europe hindered any expansion of existing programs. The Department of Energy is not providing any assistance to Albania. An official at DOE said it is following AID's lead on assistance issues for Albania and, without direction and additional funding, it does not plan to provide energy assistance to Albania in the future.

U.S. officials at the embassy in Albania believe that assistance for the energy sector is important to both Albania's short- and long-term economic stability. Embassy officials believe the energy sector will eventually be self-sufficient, but will require some initial outside assistance. AID officials are aware of the energy-related problems in Albania, and they told us they would like to extend assistance to Albania's energy sector in the near future. Albanian energy officials expressed a desire to receive energy-related assistance from the United States.

While not yet active in Albania, the U.S. government has several programs that can help U.S. firms address Albania's energy problems. The U.S. Trade and Development Program has funded a number of energy-related feasibility studies in other Central and East European countries, and a TDP official said the first feasibility study in Albania would likely focus on the

¹AID's Emergency Energy Program is designed to help countries in the region identify and implement low-cost energy efficiency measures, reduce refinery losses, adjust refinery operations to changing market conditions, and improve their ability to purchase energy supplies on the international market. AID's Regional Energy Efficiency project encourages energy efficiency and seeks to reduce energy-related environmental damage. The project also aims to promote private energy investment and trade in the region.

energy or mining sectors. In addition, U.S. firms wanting to do business in Albania can take advantage of another U.S. financing program available for Central and Eastern Europe and other parts of the world. TDP, AID, and DOE formed the joint program to support energy trade opportunities for U.S. industries.² TDP provides no-interest loans for energy feasibility studies, AID funds energy or power generation projects, and DOE funds advanced coal technology projects. Moreover, the Overseas Private Investment Corporation—which provides financing and insurance to U.S. businesses operating overseas—has signed an agreement with Albania and is preparing to assist U.S. private firms that operate there.

International Agencies Beginning to Address Albania's Energy Needs

Various international agencies are providing assistance that could lead to foreign trade and investment opportunities in Albania's energy sector. EBRD has begun several energy-related studies to help Albania organize and manage its onshore oil fields before making them available to foreign investors and to help resolve problems that lead to oil spills and gas leaks. EBRD is also conducting a feasibility study for a coal mining, processing, and distribution project that would help reduce households' need for firewood.

The World Bank is providing Albania with a \$12.1-million loan on generous terms to pay for critical electricity-related equipment imports. The loan will pay for foreign equipment and spare parts needed by the power production, transmission, and distribution systems. The Bank may also conduct a major study of Albania's energy sector in the fall of 1992.

Various United Nations agencies are also giving energy-related assistance to Albania. The United Nations Economic Commission for Europe is providing a number of energy-related training opportunities and projects to its members, including Albania. Its Energy Efficiency 2000 project aims to improve energy efficiency in Central and Eastern Europe through trade with and cooperation among the former centrally planned economies and the established market economies. The United Nations Industrial Development Organization is providing assistance to improve oil extraction and has joined with UNDP to propose a \$4.6-million training and reorganization program for MIME. A UNDP official noted that the agency also conducted studies on hydroelectric investment needs and may provide training on how to improve Albania's coal-burning furnaces.

²The U.S. Federal International Energy Trade and Development Opportunities Program was established in August 1990.

Technical Assistance to Improve the Business Climate

Recognizing that it cannot implement the transition to a market economy without outside help, Albania has asked the international community for technical assistance. U.S. government advisers are providing such assistance to various Albanian institutions to help improve the business climate. For example, the U.S. Department of Commerce led a team of legal experts to Albania to provide advice on legal principles that can facilitate privatization and foreign investment. Also, advisers from the U.S. Department of the Treasury have helped Albanian institutions with macroeconomic policy, budgeting systems, tax laws, and unemployment insurance.

Additionally, international organizations are providing assistance to help improve Albania's business climate. For example, the following groups are involved in various projects:

- The World Bank and IMF have provided technical assistance to restructure Albania's banking system.
- The IMF approved an Albanian reform plan in August 1992 that will make IMF financial resources available. Banking officials said Albania's creditworthiness will increase and commercial banks will be more willing to make loans for private investment when IMF starts to provide financial help.
- The EBRD has provided assistance to help develop the commercial banking sector and will study how to develop the telecommunications sector. It may also provide technical assistance to the National Agency of Privatization and the Foreign Investment Agency.
- The EC has provided technical assistance for the privatization process, and it plans to send advisers to help devise economic policies and legal reform. The EC has also agreed to provide a grant for about half the funds needed for balance-of-payment support in 1992.
- The Organization for Economic Cooperation and Development has provided training on banking and tax issues for Albanian officials and has identified other areas in which it can provide technical assistance, although funding constraints have so far prevented it from doing so.
- The EBRD, EC, and UNDP are working to identify a core of long-term advisers that can provide a range of expertise and continuity for other, more focused, short-term advisers.

Language limitations, inadequate housing, and office shortages have limited Albania's ability to absorb much foreign technical assistance, however.

Albania's Existing and Planned Power Plants

Albania's current power system began operating in 1951, since almost all of its power infrastructure was damaged in World War II. The system has a total installed electricity production capacity of 1,663.5 megawatts. Ten hydroelectric plants account for 87 percent of the capacity, with thermal plants (fired by coal, oil, and gas) accounting for another 12 percent.¹ Table I.1 provides information on Albania's existing electricity infrastructure. Table I.2 lists the power facilities planned for construction from 1993 to 2004.

Table I.1: Existing Power Plants in Albania

Power plant	Type of plant	Installed capacity ^a	Avg. annual production ^b	Avg. 1990 operating level	Avg. 1991 operating level ^c
Koman	Hydro	600.0	2,220	57%	63%
Fierze	Hydro	500.0	1,700	38	61
Vau Dejes	Hydro	250.0	1,100	57	62
Bistrica ^d	Hydro	27.5	180	74	89
Ulza	Hydro	25.0	120	48	92
Shkopet	Hydro	24.0	110	45	85
Smokthina	Hydro	9.0	30	47	83
Tirana	Hydro	5.0	40	90	100
Bogova	Hydro	2.5	6	8	88
Gjanc	Hydro	2.5	4	5	58
Fier	Oil/gas	159.0	1,100	16	7
Ballsh	Oil/gas	24.0	168	55	52
Cerrik	Coal	7.0	40	57	0
Maliq	Coal	7.0	40	30	5
Korce	Coal	6.0	42	60	24

^aIn megawatts. The installed capacity at the 15 plants listed is 1,648.5 megawatts. An additional 15-megawatt capacity exists at three plants that currently produce only steam, bringing Albania's total installed capacity to 1,663.5 megawatts.

^bIn millions of kilowatt hours.

^cEstimated level.

^dConsists of two plants with 22.5- and 5-megawatt capacity, respectively.

Source: Albanian General Directorate of Power.

¹An additional 1 percent is represented by the 15-megawatt capacity found at the coal-fired steam plants at Tirana and Vlora and the oil- and gas-fired steam plant at Kucova. However, these plants are not producing power.

**Appendix I
Albania's Existing and Planned Power Plants**

Table I.2: Planned Power Plants in Albania

Power plant	Type of plant	Installed capacity^a	Estimated average annual production^b
Banja	Hydro	62	250
Bushat	Hydro	80	330
Tepelena or Dragoti ^c	Hydro	120 150	500 600
Pocem	Hydro	150	650
Skavica	Hydro	300	1,300
Korce	Coal	6	30-40
Pogradec 1	Coal	50	350
Pogradec 2	Coal	6	30-40
Tirana 1	Coal	12	80
Tirana 2	Coal	12	60-80
Tirana 3	Coal	100	700

^aIn megawatts.

^bIn millions of kilowatt hours.

^cAlbania plans to build only one of these plants.

Source: Albanian General Directorate of Power.

Agencies GAO Contacted

U.S. government

Agency for International Development
 Department of Commerce
 Department of Energy
 Department of State
 Department of the Treasury
 Environmental Protection Agency
 Export-Import Bank of the United States
 Office of the U.S. Trade Representative
 Overseas Private Investment Corporation
 U.S. Trade and Development Program

Albanian contacts

General Directorate of Power
 Ministry of Construction
 Ministry of Economy
 Ministry of Finance
 Ministry of Foreign Economic Relations
 Ministry of Industry, Mining, and Energy
 National Agency of Privatization
 Vau Dejes Hydropower Plant

International organizations

Commission of the European Communities
 European Bank for Reconstruction and Development
 International Energy Agency
 International Monetary Fund
 Organization for Economic Cooperation and Development
 United Nations Development Program
 United Nations Economic Commission for Europe
 United Nations Industrial Development Organization
 World Bank

Private sector

Albanian-American Trade Association
 Chevron Corporation
 Exxon International
 Manufacturers Hanover Trust
 Occidental Oil and Gas
 PlanEcon, Inc.
 Westinghouse Electric Corporation

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