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**Kazakhstan Power Sector Reform**

Energy Regulatory Reform and  
Restructuring  
Republic of Kazakhstan

*Prepared for*

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## CHAPTER 1 INTRODUCTION

### 1.1 BACKGROUND

The Republic of Kazakhstan emerged as a sovereign nation after the collapse of the Former Soviet Union (FSU) and declared its independence on December 16, 1991. Nursultan Nazarbayev, a former communist party official, has been president of Kazakhstan since August 1990, when he was elected president by the Supreme Council. He resigned from the communist party after August 1991 coup in Moscow and has maintained much of the administrative bureaucracy left over from the FSU period.

Kazakhstan is the largest of the five Central Asian Republics and the second-largest country within the FSU. Its territory of over 1,048,800 square miles is bordered by Russia (Siberia) in the north, Kyrgyzstan, Turkmenistan and Uzbekistan in the south, the Caspian Sea in the west, and China in the east. The topography is varied, with a predominance of lowland and upland plains and rolling hill country. High mountains are found in the northeast (the Altai Mountains) and the southeast (the Tien Shan Mountains).

Approximately 15 million of the country's total population of over 16.7 million reside in Almaty, the capital city. The Kazakhs, the largest ethnic group, constitute about 42% of the population. Formerly a nomadic group of Muslim religion and Turkic language, they live principally in rural areas. The ethnic Russians (38% of the population) and Ukrainians (5%) provide most of the industrial labor force and are concentrated in the northern region and the cities.

The economy is linked closely with the other Central Asian Republics and Russia. Russia is Kazakhstan's largest trading partner, and accounts for about 60% of its exports and over 65% of its imports. Goskomstat reports show an inflation rate of 670% over the December 1993-July 1994 period.

Kazakhstan has the highest standard of living among the Central Asian Republics. The country is a rich depository of exportable mineral resources and industrial raw materials. Its resources include two large coal basins (one at Karaganda and other at Ekibastuz), from which coal is exported. Coal also provides the primary fuel to the electric power industry. The largest single employer in Kazakhstan is the Karaganda Ugol Coal Mine, with over 65,200 workers. Kazakhstan is also a major producer of iron ore, nonferrous metals, bauxite and other metals including uranium and chromium. Its recoverable oil reserves are estimated at 12 billion barrels. Oil production is located in the western region. Two refineries are located in the eastern region, and crude for the refineries is imported from Russia (central Siberia).

The Government of Kazakhstan (GOK) reorganized the energy sector in January 1994. It split the Ministry of Energy and Fuel Resources into two ministries: the Ministry of Energy & Coal Industry (MOE&CI) and the Ministry of Oil and Gas Industries under the same deputy prime minister. Kazakhstanenergo (KE), a corporation created by the GOK under the MOE&CI in February 1992, is responsible for the production and distribution of heat, steam and hot water throughout Kazakhstan.

KE's electric power system has 64 power stations with an installed capacity of about 16,000 MW and employs over 103,000 workers. Of the total capacity, 87% is thermal (which is predominately coal-fired), 12% is hydro and 1% is nuclear (from the Aktao Nuclear Power Plant (Aktao) on the Caspian Sea with a research reactor located at Semipalatinsk). It is reported that the Aktao has serious staff and fuel problems. Most of Aktao's staff migrated from Russia about twenty-five years ago when the plant was constructed. Due to the declining standard of living in Kazakhstan relative to Russia and the new emphasis on Kazakh as the official language, a majority of the Aktao's employees are leaving for Russia. In addition, despite the fact that Kazakhstan is the largest producer of uranium in the FSU, it does not have processing facilities and must purchase its nuclear fuel from Russia. Due to lack of hard currency, fuel purchases are uncertain.

KE plans to privatize the following entities in the near-term:

- ▶ South Energy Construction Company: a joint-stock company constructing electric transmission and distribution facilities in the southern region.
- ▶ a holding company consisting of two joint-stock construction companies: one company constructs and erects electric distribution facilities and the other constructs and erects transmission facilities.

KE plans to privatize the following in the long-term:

- ▶ ten *energos* (energy unions) serving nineteen *oblast* (administrative regions).
- ▶ a holding company consisting of eight entities for the maintenance and repair and minor manufacturing of electrical and mechanical equipment, transportation equipment and construction/erection equipment.

KE plans on retaining the following monopolies:

- ▶ an energy research institute (the only one in Kazakhstan)
- ▶ ten administrative functions such as training, labor, legal, purchasing, human resources, planning, design, and computer operations
- ▶ generation dispatch and operation of the transmission interconnection system (500 kV and above)
- ▶ the six largest thermal power plants, all of the largest hydro-electric projects, and the nuclear power plant

The electric power system is subdivided into three regional power grids which are isolated due to low power transfer capacity of the transmission interconnecting facilities. The north, the largest, consists of six *energos*, the west consists of two *energos* and is connected to Russia, and the south consist of two *energos* and is connected to Kyrgyzstan. Each *energo* is semi-autonomous, headed by a president appointed by KE (and thus subject to the control of KE), and is responsible for the generation, transmission and distribution of electricity and heat within its respective service area.

Electric tariff structures and rates are the same in each regions. KE reviews its revenue and cost structures quarterly, and submits tariff suggestions to the State Committee on Pricing Policy (STOPP). STOPP decides what the tariff structures and rates will be, and issues a decree accordingly. All *energo* profits are deposited in a Fund for Price Regulation, which redistributes profits to the non-profitable *energos* in an attempt to stabilize low electric and heating prices through the country. Three of the *energos* (Altay, Ekibastuz and Pavlodar) are profitable. The remaining seven *energos* operate at a loss, and thus need to be subsidized.

Under the FSU regime, the production of industrial goods was more important than the amount of energy consumed in their production, energy was supplied in unlimited quantities and at heavily subsidized prices to support both the industrial and domestic sectors. As a result, electric tariffs do not reflect the fixed and variable costs of supply to the various classes of service. For example, electric revenues are estimated to be less than 30% of marginal cost, although it is not entirely clear that electric energy producers actually know what their costs are. The domestic electric tariff is only US \$0.002/kWh, approximately 75% less than the industrial tariff (US \$0.005/kWh). Cross-border electricity prices (export and import prices are equal) are approximately US \$0.024/kWh with Russia, US \$ 0.032/kWh with Kyrgyzstan, US \$ 0.0396k/Wh with Turkmenistan, and US \$ 0.0416/kWh with Uzbekistan. Cross-border fuel prices are at market prices.

With respect to district heating, heat tariffs are set at the local *energo* level and vary among regions. Domestic customers are charged from US \$0.40 to 0.90/Gcal, whereas industrial customers are charged from US \$ 6.5 to 12.00/Gcal. The average revenue from district heating sales is below costs.

## 1.2 OBJECTIVES OF USAID ASSISTANCE

The future of *energos* as commercially viable entities will require changing the corporate culture from one of a provider of social services to one that is profit and customer service-driven. This will require a different approach to management and organization, and a change in their commercial, accounting and financial policies,

The GOK is now in the process of revising its overall energy policies to attract private investment and reduce energy vulnerability in the near future and energy independence in the long run. Implementing the GOK's plans will require significant effort in the areas of restructuring and privatization.

Working through KE, a USAID-financed team of consultants will provide technical assistance, advice, and training in support of KE's privatization, restructuring and investment promotion plans.

The Kazakhstan-American effort is expected to result in

- ▶ a power sector reorganization and privatization plan
- ▶ a legal and regulatory framework for the sector
- ▶ a strategy for moving electricity and district water heating prices from their present subsidized levels to a level required to attract and maintain private, non-government investment
- ▶ a strategy to access the power sector to both domestic and foreign financial markets
- ▶ the design of a preliminary implementation action plan for the promotion of early domestic and foreign private, non-government investments

The Work Plan described here covers the organization, approach, objectives, scope of work, tasks, staffing, level of effort, schedule and budget for 14 months of cooperative USAID technical assistance consulting activities through January 1996.

### 1 3 ORGANIZATION OF ASSISTANCE

Four (4) separate working groups will be established to implement the project. Each working group will be headed by a US and a Kazakhstan Co-Chairman and will have its own membership, objectives and work plan. The Private Investment Working Group (PIWG) will work to create a basic framework that supports and encourages private investment in the power sector. The Legal and Regulatory Working Group (LRWG) will be charged with assisting the GOK and the MOE&CI in formulating energy-related regulations and legislation, and will also draft model project agreement to facilitate transactions with independent developers and multilateral lending agencies. The objective of the Restructuring and Privatization Working Group (RPWG) will be to assist the GOK and the MOE&CI in developing an implementation plan for restructuring and privatizing of KE. The Public Health Working Group (PHWG) will submit a plan for assessing working conditions and environmental impacts resulting from the privatization efforts.

While working separately to achieve their objectives, the working groups will cooperate with each other and exchange information freely and on a timely basis. The overall activities of this cooperative effort will be managed by the RCG/Hagler Bailly Project Director from the United States who will be a resident in Almaty, Kazakhstan. The Project Director will be the manager of the US contribution to this activity. He will be responsible for the content of work plan proposals submitted to USAID, for the selection of the US working group consultants, for scheduling of work, and for quality control under the guidance of a Joint US-Kazakhstan Coordinating Committee.

The Coordinating Committee (CC) will be comprised of members from MOE&CI, Ministry of Economy, Ministry of Finance, Ministry of Public Health, State Anti-Monopoly Committee and the State Property Management Committee and will be chaired by the Project Director. The CC will be the decision-making body regarding the privatization strategies developed by the working groups. It will also determine the relationship between the activities of the working groups and related projects being performed by other USAID contractors (Burns & Roe, PIER, USEA and IIE) and by other donor organizations (such as the World Bank, the European Community's Technical Assistance to the CIS State Program (TACIS), the European Bank for Reconstruction and Development (EBRD) etc.)

The overall activities of this cooperative effort will be managed by the ECG/Hagler Bailly project director from the United States, who will be a resident in Almaty. The project director will manage the US contribution to this activity. He will be responsible for the content of work plan proposals submitted to USAID and the Kazakhstan members, for the selection of the US working group consultants, for scheduling work, and for quality control.

The following work is currently underway or proposed by others

- ▶ Accounting and Auditing Standards-Price Waterhouse (under a USAID contract) is developing a framework system of standards that will be consistent with international standards for all sectors
- ▶ Tax and Import/Export Duty Laws and Regulations-KPMG/Peat Marwick (under a USAID contract) is revising and drafting new laws and regulations

### **Energy Laws and Regulations**

- ▶ Oil & Gas Legislation-The American Bar Association (ABA) (under a USAID contract) assisted the GOK in the development of an Oil Law. The ABA's scope of work has been redirected from drafting legislation to developing a standard legal practice framework
- ▶ Energy Law-The MOE&CI, without technical assistance, has, based on the Oil Law, prepared a preliminary draft of an Energy Law for the electric sector which must be vetted
- ▶ Energy Savings-Burns and Roe (B&R) (under a USAID contract) will assist the GOK in identifying and developing energy savings programs including the installation of energy savings technologies and equipment in high energy consuming industries
- ▶ Coal Sector-Partners in Economic reform (PIER) (under a USAID contract) is expected to 1) identify specific legal concerns relating to the restructuring of the regulatory/operating relationship between the GOK and the coal mining industry, 2) make recommendations for a redraft of existing codes such as the Code of Mining and Mineral Resources and the Underground Minerals Code, and 3) develop a training program on modern coal mining safety and health technology and practices
- ▶ Oil & Gas Sector-The World Bank will be funding a US \$15.7 million technical assistance effort
- ▶ Hard Minerals Sector-The EBRD and World Bank will be funding a technical assistance effort

### **Privatization**

- ▶ In the non-energy sectors, a very active USAID-funded privatization effort is underway and includes mass privatization (Ernst & Young, Deloitte & Touche and Price Waterhouse), small privatizations (Deloitte & Touche) and case-by case privatization (Ernst & Young, J P Morgan and Price Waterhouse)
- ▶ In the energy sector, it is reported that Cincinnati Gas and Electric (CG&E) has signed a mutual exchange program with MOE&CI under which CG&E plans to assist KE to 1) understand the integrated resource planning process, 2) implement cost-based tariff structures, and 3) understand the process of stock issuance as a financing mechanism
- ▶ Capital Market-Under separate USAID contracts, Price Waterhouse is developing the framework for the capital markets non-energy sector, FMI is assisting in the development of a Securities and Exchange Commission, Intrados is assisting in the development of a stock exchange, and KPMG is developing a trading infrastructure

#### **1 4 APPROACH TO THE ASSISTANCE**

USAID's cooperative program is intended to enhance the success of Kazakhstan's restructuring and privatization of its power sector and its overall economic reform by providing access to the strong and diverse domestic and international experience of U S experts, by intense and substantive Kazakhstan participation in the work assignments, and by ensuring that all USAID-funded advisors and consultant are exceptionally well qualified and available when needed

#### **Restructuring and Privatization Working Group**

The primary objectives of the RPWG are to assist the GOK in developing a overall strategy for restructuring, regulating and privatizing KE to ensure that it can function efficiently and effectively in Kazakhstan's developing market economy Initially, the U S members of this working group will familiarize themselves with Kazakhstan's overall program for converting to a market economy and privatizing its enterprises, including the power sector, and the status of related USAID-funded projects and projects being performed by other donor organizations (such as the World Bank, the European Community's TACIS and EBRD)

Following this review, the RPWG will develop and screen a comprehensive set of structural model to identify two or three alternative restructuring options that are suited for Kazakh conditions The options will be evaluated for their effect on the efficiency and effectiveness of the day-to-day operations of the Kazakh power system and its market reform and privatization program A closely

related issue is that of ownership forms, i.e., private sector, independent power ownership of new generation facilities, and the entities of KE that are to be retained by the State and the entities to be privatized

The next issue to be examined is the regulatory and market-based alternatives for pricing electricity and district water heating at the wholesale level. Two parallel efforts will be undertaken, focusing on the establishment of a cost-of-service regulated generation market, the establishment of avoided prices to facilitate private sector, independent power developer participation in the development of generation projects, and the longer-term development of a competitive generation market. Three efforts will assess the incentives for economic efficiency offered by each approach along with other evaluation criteria. By the end of May 1995, it is expected that a regulatory and wholesale pricing framework will be selected by the MOE&CI and KE for adoption during the transition period.

Retail pricing will also be addressed. By the end of May 1995, the RPWG should prepare a report describing alternative retail pricing methodologies and will recommend one that is consistent with, and supportive of, the wholesale market approach adopted earlier. Related issues include the degree of regulatory oversight over retail rates that will be exercised at the national level and the cross-subsidization and subsidization of rates during the transition period. The RPWG will coordinate its efforts with Cincinnati Gas and Electric (CG&E), who reportedly will assist KE in understanding the integrated resource planning process and the development and implementation of cost-based tariff structures.

The RPWG, in coordination with USEA, will also identify executives, managers and specialists to visit the United States and other countries to become familiar with and to gain experience in the ownership, organization, planning and operation of the power sector in market economies in the third quarter of 1995.

The RPWG, with the assistance of the other working groups, will prepare a comprehensive proposal for reorganizing, regulating and privatizing KE. This proposal will integrate the earlier decision of the GOK, MOE&CI and KE. In May 1995, RPWG will present a workshop on "Kazakhstan Power Sector Organization and Privatization Plans" to GOK, MOE&CI and KE officials to make them aware of the important economic role that the power sector plays in a market economy and to assist them in making decisions regarding the restructuring, corporatization and privatization of the energy and electric power sectors.

RPWG, in conjunction with USAID consultants engaged in case-by-case privatization of the non-energy sector, will advise MOE&CI in its divesting of its three joint stock companies in the fourth quarter of 1995.

With the assistance of the LRWG and RPWG will also assist the GOK, MOE&CI and KE in developing a framework for attracting private sector, independent power developer participation in the development of power projects. An early draft of the framework with generic document/agreements (implementation, power purchase and fuel supply agreements) will be distributed by July 1995.

The RPWG, with the assistance of the LRWG and PIWG, will also prepare a draft implementation action plan for privatizing KE to its final form over a multi-year transition period for review and comment by the MOE&CI and KE by the end of October 1995.

Over the balance of 1995, the RPWG will provide assistance in 1) revising and refining the draft privatization plan, assessing its impacts on the Kazakh economy and promoting its adoption, 2) supporting the LRWG in its efforts to draft the legislation necessary to create the legal framework for privatizing KE, and 3) supporting the LRWG and PIWG in assisting the GOK's independent power initiative.

#### **Legal and Regulatory Working Group**

The primary objective of the LRWG will be to provide guidance and support to meet a fundamental goal of the GOK: attracting private investment to the energy sector. Given this core principle, the basic objective of the LRWG will be to review the current legal framework of Kazakhstan from the perspective of power sector restructuring and privatization and the attraction of private investment, to identify the specific laws, regulations and ordinances required to supply the restructuring and privatization of KE and private investment objectives, and, to the extent allowed by its allocated budget, produce drafts of the basic legislative needed to facilitate the restructuring and privatization of KE and draft generic project agreements, such as implementation, power purchase and fuel supply agreements, to facilitate the GOK's relations with foreign developers and private investors.

Initially, the U.S. members of this working group will familiarize themselves with Kazakhstan's legal system, the policies and plans for converting to a market economy and privatizing its enterprises, including the power sector, and reviewing the information collected by the RPWG and the status of related USAID-funded programs and projects being performed by other donor organizations (such as the World Bank, TACIS, and EBRD).

The LRWG will, to the extent necessary and as requested, produce a summary report by mid-February of the key elements of the energy and regulatory laws governing the existence and operation of the power sector in the United States and the United Kingdom, and what has been recently proposed with respect to the Russian power sector. It will also assist the feasibility of their

respective adaptations to the Kazakhstan legal system

The LRWG will next identify the key laws, regulations and ordinances required to promptly restructure and privatize KE and to attract investment in the first quarter of 1995 and, on the extent feasible, assist the GOK in developing such laws, regulations and ordinances (including and Energy Savings Act, National Energy Act and National Coal Act) over the balance of the year

In May 1995, the LRWG will participate in discussion on structural models and ownership forms. It will describe and assess both legislative and regulatory alternatives for the Kazakhstan energy sector, and submit recommendations to MOE&CI and KE as to which should be adopted. Following the selection of the regulatory alternative, the LRWG will begin to draft the laws and regulations needed to support the market form selected, including the establishment of a national regulatory authority to oversee wholesale pricing and commercial trading arrangements.

In July 1995, the LRWG will review the report addressing retail price regulation and identify the legal and regulatory changes that are necessary to implement the retail price regulation to the MOE&CI, KE and CG&E.

To assist the GOK, MOE&CI and KE in attracting and developing independent power projects and negotiating the associated project agreements, the LGWR will prepare and distribute drafts of generic implementation, power purchase, and fuel supply agreements by the third quarter of 1995.

The LRWG will, to the extent necessary and as requested, advise and assist the GOK and MOE&CI in the preparation of requests for proposals and tender documents for the purpose of encouraging private investors and multilateral financial institutions (such as the World Bank, IBRD, EBRD and ABRD) to invest and/or lend funds to the energy sector in Kazakhstan.

During the second quarter of 1995, the KRWG will support RPWG and PIWG in developing a draft implementation action plan for privatization of KE to its final form over a multi-year transition period. The LRWG will also identify the laws and regulations required to facilitate the transition.

Over the balance of 1995, the LRWG will provide assistance in supporting the GOK in its efforts to draft the legislative necessary to create the legal framework for privatizing KE and in the development/implementation of its independent power initiative.

#### **Private Investment Working Group**

PIWG's basic function and objectives will be to recommend specific actions required to prepare and

effectively integrate the power sector of Kazakhstan into national and international securities markets. An important complementary responsibility of this group will be to influence the formation of financial markets in Kazakhstan to assure that they serve the needs of the power sector. The PIWG's analyses will focus on the advantages/disadvantages of attracting domestic and foreign investment into the Kazakh power sector and how best to incorporate investment decision-making into a corporate organization that functions in a market-based economy.

The initial four tasks will begin in February 1995 when the PIWG will provide background materials on private investment in the power sector in other developing countries and the United States. The materials will include information on the structure of private power projects, investment incentives and government guarantees. PIWG will also assist the LRWG in the preparation of recommendations for legal and regulatory changes that may be required to facilitate private domestic and foreign investment, and to attract and maintain an adequate supply of capital in the first quarter of 1995.

With respect to the energy sector, PIWG will review the present and planned (by Price Waterhouse) securities (financial) markets in Kazakhstan and the GOK's plans to access international markets. It will also suggest specific measures designed to integrate the Kazakhstan power sector into both national and international financial markets.

One of the major activities will be the formulation of a policy framework for the development of power projects by the private sector. Thus, PIWG will develop recommendations for the GOK, MOE&CI and KE with respect to alternative strategic approaches to financing investments in the energy sector and evaluate the opportunities, obstacles and risks associated with different mixes of potential foreign and domestic investment sources. It will also develop the framework for the early integration of Kazakhstan's power sector into both national and international financial markets.

This effort will include the following activities. First, the U.S. members will, in coordination with USEA, identify the need for select MOE&CI and KE executives and managers to visit the United States and other countries to become familiar with and gain experience in financial operations and financial market aspects of the electric power sector in market economies. Second, in coordination with the International Institute for Education (IIE), they will provide reference materials on existing investment policies and planning techniques currently used by MOE&CI and KE, and develop recommendations for modifications to such policies and techniques.

Concurrent with the above tasks, PIWG will assist MOE&CI and KE in devising a strategy for attracting capital for the planned construction of the Aktyubinsk Power Station and Almaty Thermal Power Plant no. 2. PIWG will focus on issues that will include recommendations on how to eliminate barriers to investment including taxes and duties, guarantees and warranties, how to present

investment projects to the investment community, and the development of a strategy for attracting investment for each project

### **Public Health Working Group**

The basic function and objective of PHEG will be to identify issues relating to working conditions and environmental limitations to be considered in developing the framework for privatization of the electric power sector

Following the selection of the restructuring and privatization plan for KE, PIWG will develop and submit a plan for assessing the working conditions and environmental impacts on the electric power sector resulting from the restructuring, privatization, regulatory and legislative activities and submit a report to the MOE&CI on issues that need to be addressed in order to resolve major health and related environmental problems, while at the same time facilitating the restructuring and privatization process during the fourth quarter of 1995

## CHAPTER 2 WORKING GROUP ACTIVITIES

### 2.1 RESTRUCTURING AND PRIVATIZATION WORKING GROUP

#### 2.1.1 Objectives and Scope of Work

**Objectives** The primary objectives of the Restructuring and Privatization Working Group (RPWG) will be to assist the GOK and MOE&CI in developing an overall strategy and implementation plan for restructuring, regulating and privatizing KE to ensure that it can function efficiently and effectively in Kazakhstan's developing market economy

#### Scope of Work

- 1 Undertake a comprehensive review and assessment of the current and planned organization of the power sector and of the existing plans for its restructuring, corporatization and privatization
- 2 With respect to the energy sector, review GOK's current accounting and auditing standards, which are now being revised and reformulated by PW, and submit recommendations to PW to include specific standards that are required in the energy sector in the short-term to facilitate the privatization of the MOE&CI entities and the development of independent power projects
- 3 Review and assess MOE&CI's and KE's current financial management practices and submit recommendations for financial management organization charges to MOE&CI and KE for review and adoption to facilitate the privatization process
- 4 Develop two of three alternative restructuring options for the power sector, describe the advantages and disadvantages of each, the transitional stages required, and make recommendations regarding which should be adopted
- 5 Describe the regulatory and market-based alternatives for pricing electricity at the wholesale level, including development of a competitive wholesale power market, and recommend which should be adopted by MOE&CI and to include in their proposed pricing/rate structure development effort
- 6 Identify modifications to existing and proposed electricity tariff methodologies and structures to establish an economic energy system attractive to foreign capital investment, and submit recommendations to KE and CG&E to aid in their development of a

pricing/rate structure

- 7 Assist the GOK, MOE&CI and KE in developing the framework for attracting private sector, independent power developer participation in the development of power projects
- 8 With respect to the alternatives and key decisions that must precede the privatization of KE, conduct workshop on "The Kazakhstan Power Sector Organization and Privatization Plans" for the MOE&CI, KE and other GOK officials
- 9 Assist MOE&CI officials in developing a implementation action plan for the transition from its current state to its long-term objectives

**2 1 2 Tasks, Responsible Parties and Delivery Schedule**

The activities of the RPWG are subdivided into seven major tasks. These tasks, and their respective sub-tasks, are described in the table below along with organizational responsibilities and completion dates

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
1 0	Undertake a comprehensive review and assessment of the current and planned organization of the power sector and of the existing plans for its restructuring, corporatization and privatization		
1 1	Review materials, documents and existing plans and interview Kazakhs officials to understand Kazakhstan's power sector (including its physical characteristics and organizational, regulatory and managerial aspects) and market reform and privatization programs. Produce a summary report	US	31 Jan 1995
2 0	Develop two to three alternative restructuring options for the power sector, describe the advantages and disadvantages of each, the transitional stages required, and make recommendations regarding which should be adopted		
2 1	Prepare a generic report describing the advantages and disadvantages of the alternative structural models and ownership forms	US	28 Feb 1995

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WORKING GROUP ACTIVITIES ▶ 2-3

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
2 2	Review comments of LRWG regarding the legal issues and constraints affecting the choices of the alternative structure and ownership forms	US & MOE&CI	30 Apr 1995
2 3	With respect to the alternatives and key decisions that must precede the privatization of KE, organize and sponsor a seminar/workshop on "The Kazakhstan Power Sector Organization and Privatization Plans" for the MOE&CI, KE and other GOK officials. Present the basic options and assist them in making decisions regarding the restructuring, corporatization and privatization of the energy and electric power sectors	US & MOE&CI	15 Mar 1995
2 4	Produce a final report incorporating the results of the workshop discussions and decisions	US & MOE&CI	31 Jul 1995
3 0	Assist MOE&CI in choosing an approach to organizing and regulating Kazakhstan's wholesale power market		
3 1	Describe the regulatory and market-based alternatives for pricing electricity at the wholesale level, including the development of a competitive wholesale power market, and make recommendations on which should be adopted by MOE&CI and included in their proposed pricing/rate structure development effort	US & MOE&CI	15 Mar 1995
3 2	Identify modifications to existing and proposed electricity tariff methodologies and structures to establish an economic energy system attractive to foreign capital investment, and submit recommendations to KE and CG&E to aid in their development of a pricing/rate structure	US	31 Mar 1995
3 3	Meet with Kazakhstan officials (LRWG included) to exchange views on regulatory policy	US & MOE&CI	15 Apr 1995
3 4	Prepare a report describing the regulatory alternatives for setting wholesale power prices in Kazakhstan based on generation cost of service	US	30 May 1995
3 5	Conduct a workshop in Almaty to discuss the alternatives for organizing the wholesale power market and publish the results of the workshop	US & MOE&CI	31 May 1995
4 0	Assist the MOE&CI in choosing a retail pricing methodology		
4 1	Prepare a report on retail pricing options	US	30 Apr 1995

WORKING GROUP ACTIVITIES ▶ 2-4

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
4 2	Conduct a workshop in Almaty to discuss retail pricing and to choose one or more regulatory methodologies for further development	US & MOE&CI	31 May 1995
4 3	Produce a final report incorporating the results of the workshop discussions and decisions	US & MOE&CI	30 Jun 1995
5 0	Produce a comprehensive description of the proposal for reorganizing and privatizing Kazakhstan's power sector		
5 1	Produce a comprehensive description of the long-term organization with support from other working groups	US & MOE&CI	15 Jun 1995
6 0	Assist MOE&CI and KE officials with developing and implementation action plan for the transition from its current state to its long-term objective		
6 1	Prepare an implementation action plan (with support from the LRWG) for the transition to the long-term solution for review by the GOK	US & MOE&CI	15 Sep 1995
6 2	Prepare and distribute the proposed implementation action plan to key Kazakhtsan officials for comment	MOE&CI	15 Oct 1995
6 3	Conduct a workshop in Almaty to modify the proposed implementation action plan in response to comments received	US & MOE&CI	31 Oct 1995
6 4	Produce a modified implementation action plan	US	30 Nov 1995
7 0	Provide analytical support as needed to further revise the privatization proposal, estimate its impacts on various parties, and support the drafting of legislation	US & MOE&CI	15 Dec 1995

**2 1 3 Staffing and Professional Level of Effort (Excludes KE-Designated Staff)**

Consultants	Number of Days
US/Expatriate Consultants	
Senior Business Administrative Specialist	50
Senior Energy Policy Specialist	87
Senior Financial Analyst	15
Senior Privatization Specialist	80
<b>Total</b>	<b>232</b>
Kazakh Consultants	
Senior Energy Policy Specialist	96
<b>Total</b>	<b>96</b>

**2 2 LEGAL AND REGULATORY WORKING GROUP**

**2 2 1 Objectives and Scope of Work**

**Objectives** All legal and regulatory guidance given to the GOK by the legal and Regulatory Working Group (LRGW) will be supportive of GOK's fundamental goal namely, attracting private investment to the energy sector. Given this core principle, the basic objectives of the LRWG are to review the current legal framework of Kazakhstan from the perspective of power sector restructuring and privatization and the attraction of private investment, to identify the specific laws, regulations and ordinances required to support the restructuring, privatization and private investment objectives, to produce drafts of the basic legislation needed to facilitate the restructuring and privatization of the power sector, and to produce draft project agreements necessary to facilitate the GOK's relations with foreign developers and private investors.

**Scope of Work**

- 1 Undertake a comprehensive review and assessment of Kazakhstan's existing legal and regulatory framework and associated energy policies and assess the likely impact of such legislation on the privatization of the energy sector
- 2 To the extent necessary and as requested, summarize the key elements of the energy and regulatory laws governing the existence and operation of the power sector in the United States and the United Kingdom, and what has been recently proposed with respect to the Russian power sector, and assess the feasibility of their respective adaptations to the Kazakhstan legal system
- 3 Describe and assess both legislative and regulatory alternatives for the Kazakhstan energy sector, and submit recommendations to MOE&CI and KE as to which should be adopted

- 4 Identify the key laws, regulations and ordinances required to promptly restructure and privatize KE and to attract private investment and, to the extent feasible, assist the GOK in developing such laws, regulations and ordinances (including an Energy Savings Act, National Energy Act and National Coal Act)
- 5 In order to assist the GOK, MOE&CI and KE in attracting and developing independent power projects draft model request for proposals, implementation agreement, power purchase agreements and fuel supply agreement
- 6 Draft reports and other documents and organize special meetings, workshop and/or seminars as required to disseminate the results of the LRWG's efforts and to achieve the GOK's objectives with respect to the energy sector

### 2 2 2 Tasks, Responsible Parties and Delivery Schedule

The activities of the LRWG are subdivided into six major tasks. These tasks, and their respective sub-tasks, are described in the table below along with organizational responsibilities and completion dates

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
1 0	Conduct background research		
1 1	Become familiar with the Kazakhstan legal system and plans for transition to a market economy	US	31 Jan 1995
1 2	Review the Oil Law and draft Electricity Act and Energy Savings Law	US & MOE&CI	15 Mar 1995
1 3	Produce a report summarizing the legal and regulatory environment of the power sector, including the identification of problems and opportunities	US	15 Mar 1995
2 0	Provide the legal support needed to facilitate the restructuring of the power sector		
2 1	Review the structure/ownership report produced by RPWG and provide comments regarding legal issues and constraints	US & MOE&CI	15 Apr 1995
2 2	Participate in a workshop on choosing the power sector structure/ownership	US & MOE&CI	31 May 1995
2 3	Assist in drafting laws and decrees needed to establish required by the new power sector structure/ownership	US	1 Oct 1995

WORKING GROUP ACTIVITIES ▶ 2-7

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
3 2	Review reports produced by RPWG on wholesale power market options and provide comments on legal issues and constraints	US & MOE&CI	15 May 1995
3 3	Draft laws, regulations and decrees needed to establish and regulate the wholesale power market	US & MOE&CI	1 Sep 1995
4 0	Provide the legal support to facilitate retail price regulation		
4 1	Review reports produced by RPWG on retail price regulation and provide comments on legal issues and constraints	US & MOE&CI	15 May 1995
4 2	Draft laws, regulations and decrees needed to establish and regulate the retail power market	US	1 Sep 1995
5 0	Assist with a comprehensive description of the restructuring/privatization proposal		
5 1	Review and comment on the initial draft of a comprehensive description of the proposal	US & MOE&CI	30 Sep 1995
5 2	Participate in a workshop on incorporating outside reviewers' comments into the restructuring/privatization proposal	US & MOE&CI	31 Oct 1995
5 3	Assist RPWG in preparing the final implementation plan	US & MOE&CI	30 Nov 1995
6 0	Provide legal assistance to MOE&CI with negotiating the final form of the restructuring proposal	US & MOE&CI	31 Dec 1995

2 2 3 Staffing and Professional Level of Effort (Excludes MOE&CI and KE-Designated Staff)

Consultants	Number of Days
US/Expatriate Consultants	
Senior Energy Policy Specialist	97
Senior lawyer	72
Senior Lawyer	14
<b>Total</b>	<b>183</b>
Kazakh Consultants	
Senior Energy Policy Specialist	175
<b>Total</b>	<b>175</b>

2 3 PRIVATE INVESTMENT WORKING GROUP

2 2 1 Objectives and Scope of Work

**Objectives** The basic function and objective of Private Investment (PIWG) will be to recommend specific actions required to prepare and effectively integrate the power sector of Kazakhstan into national and international securities market. An important complementary responsibility of this group will be to influence the formation of financial markets in Kazakhstan to assure that they serve the needs of the power sector.

### Scope of Work

- 1 With respect to the energy sector, review 1) the present and planned (by Price Waterhouse) securities (financial) markets in Kazakhstan and 2) the GOK's plans to access international markets. Suggest specific measures designed to integrate the Kazakhstan power sector into both national and international markets.
- 2 In conjunction with the LRWG, recommend the appropriate legal and regulatory framework required to assure the electric power sector's ability to attract and maintain an adequate supply of capital.
- 3 Assist MOE&CI and KE in devising a strategy for attracting capital for the planned construction of the Aktyubinsk Power Station and Almaty Thermal Power Plant No 2.
- 4 Develop recommendations for the GOK, MOE&CI and KE with respect to alternative strategic approaches to financing investments in the energy sector and evaluate the opportunities, obstacles and risks associated with different mixes of potential foreign and domestic investment sources.
- 5 Develop the framework for the early integration of Kazakhstan's power sector into both national and international financial markets.
- 6 In coordination with the International Institute for Education (IIE), identify reference materials on existing investment policies and planning techniques currently used by MOE&CI and KE, and develop recommendations for modifications to such policies and techniques.

### 2.3.2 Tasks, Responsible Parties and Delivery Schedule

The activities of the PIWG are subdivided into three major tasks. These tasks, and their respective sub-tasks, are described in the table below along with organizational responsibilities and completion dates.

WORKING GROUP ACTIVITIES ▶ 2-9

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
1 1	Undertake a review of the present and planned financial market in Kazakhstan	US & MOE&CI	30 Apr 1995
1 2	Recommend a strategy for securities management in a market economy	US & MOE&CI	15 May 1995
1 3	Based upon all of the above, make recommendations to LRWG on the legal and regulatory framework required to attract and maintain and adequate supply of capital	US & MOE&CI	31 May 1995
1 4	Recommend a program for integrating Kazakhstan's power sector into both national and international financial markets, including steps, a schedule and budget for implementation	US & MOE&CI	30 Jun 1995
2 0	Assist the GOK, MOE&CI and KE in developing the framework for attracting private sector, independent power developer participation in the development of power projects		
2 1	Review existing information on the Aktyubinsk Power Station and Almaty Thermal Power Plant No 2 and recommend a strategy for attracting foreign capital	US & MOE&CI	31 Jul 1995
3 1	Recommend a library of appropriate financial literature for KE	US	ongoing

**2 3 3 Staffing and Professional Level of Effort (Excludes MOE&CI and KE-Designated Staff)**

Consultants	Number of Days
US/Expatriate Consultants	
Senior Investment Banker	15
Senior Financial Analyst	84
Senior Privatization Specialist	30
<b>Total</b>	<b>129</b>

**2 4 PUBLIC HEALTH WORKING GROUP**

**2 2 1 Objectives and Scope of Work**

**Objectives** The basic function and objective of Public Health Working Group (PHWG) will be to identify issues relating to working conditions and environmental limitations to be considered in developing the framework for the privatization of the electric power sector

**Scope of Work**

- 1 Submit a plan assessing the working conditions and environmental impacts on the electric power sector resulting from the restructuring, privatization, regulatory and legislative activities
- 2 Submit a report to the MOE&CI on issues which need to be addressed in order to resolve major health and related environmental problems, while at the same time facilitating the restructuring and privatization process

**2 4 2 Tasks, Responsibility and Delivery Schedule**

The activities of the PHWG are subdivided into two major tasks. These tasks, and their respective sub-tasks, are described in the table below along with organizational responsibilities and completion dates.

Tasks & Sub-tasks	Description	Responsible Parties	Completion Date
1 1	Become familiar with the Kazakhstan legal system and plans for transition to a market economy	US	
1 2	Review reports produced by the RPWG and LRWG on restructuring, Privatization, regulatory and legislative activities	US	31 Jul 1995
2 1	Prepare and submit a plan for assessing the working conditions and environmental impacts on the electric power sector resulting from the restructuring, privatization, regulatory and legislative activities	US	15 Aug 1995
2 2	Prepare and submit a report to the MOE&CI on issues that need to be addressed in order to resolve major health and related environmental problems, while at the same time facilitating the restructuring and privatization process	US	30 Nov 1995

**2 4 3 Staffing and Professional Level of Effort (Excludes MOE&CI and KE-Designated Staff)**

Consultants	Number of Days
US/Expatriate Consultants	
Senior Energy Policy Specialist	22
<b>Total</b>	<b>22</b>
Kazakhs Consultants	
Senior Energy Policy Specialist	11
<b>Total</b>	<b>11</b>

**CHAPTER 3**  
**SCHEDULE AND MILESTONES**

	<b>Milestones</b>	<b>Date</b>
▶	Report on assessment of the current and planned organization of the power sector and of the existing plans for its restructuring, corporatization and privatization	31 Jan 1995
▶	Report describing the advantages and disadvantages of the alternative structural models and ownership forms of the power sector	31 Jan 1995
▶	Report recommending specific accounting and auditing standards that are required in the energy sector in the short-term to facilitate the privatization of the MOE&CI entities and the development of independent power projects	15 Feb 1995
▶	Drafts of Electricity Act and Energy Savings Law	15 Mar 1995
▶	Report summarizing the Kazakh legislative and regulatory environment of the power sector including the identification of problems and opportunities	15 Mar 1995
▶	Workshop on "The Kazakhstan Power Sector Organization and Privatization Plans"	15 Mar 1995
▶	Report recommending modifications to existing and proposed electricity tariff methodologies and structures	31 Mar 1995
▶	Report recommending changes in MOE&CI 's and KE's current financial management practices	31 Mar 1995
▶	Report describing the regulatory alternatives for setting wholesale power prices in Kazakhstan based on generation cost of service	30 Apr 1995
▶	Workshop on selection of the form of the wholesale power market	31 May 1995
▶	Proposed strategy for securities management in a market economy	15 May 1995
▶	Workshop on retail pricing in the power market	31 May 1995
▶	Draft model implementation, power supply and fuel supply agreements for private sector power projects	30 Jun 1995
▶	Proposal for integrating Kazakhstan's power sector into both national and international financial markets	30 Jun 1995
▶	Strategy for attracting foreign capital for financing the Aktyubinsk Power Station and Almaty Thermal Power Plant No 2	30 Jun 1995
▶	Proposal for assessing the working conditions and environmental impacts on the electric power sector resulting from the restructuring privatization, regulatory and legislative activities	15 Aug 1995
▶	Draft laws, regulations and decrees needed to establish and regulate the wholesale and retail power market	01 Sep 1995
▶	Workshop on proposal for restructuring and privatization of the power sector	31 Oct 1995

SCHEDULE AND MILESTONES ▶ 3-2

	<b>Milestones</b>	<b>Date</b>
▶	Action plan for implementing restructuring privatization of the power sector	30 Nov 1995
▶	Report on issues which need to be addressed in order to resolve major health and related environmental problems	30 Nov 1995
▶	Final report summarizing the activities completed, identification of tasks remaining and to be accomplished, the status of the overall restructuring and privatization effort and on major issues that need to be addressed	