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**KYRGYZSTAN  
Final Report**

**NIS Institutional Based Services Under the Energy  
Efficiency and Market Reform Project  
Contract No CCN-Q-00-93-00152-00**

**Kyrgyzstan Energy Sector Regulatory  
Reform and Restructuring  
Delivery Order No 6**

*Final Report*

*Prepared for*

U S Agency for International Development  
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# CONTENTS

## DO 6: Final Report

### Table of Contents

- Section 1 History and Results of the Delivery Order**
- Section 2 Legal and Regulatory Reform**
- Part 1** Passage of the Energy and Electricity Laws
  - Part 2** Creation of the Regulatory Agency
  - Part 3** Technical Assistance to the State Energy Agency
    - Customer Service Standard Contracts and Regulations
    - Licensing
    - Tariffs
    - Performance Agreement
  - Part 4** Special Analysis Requested by the Government
    - Metering, Billing, and Collection
    - Media Campaign
    - Financial Analysis/Model of Kyrgyzenergo
    - Overcoming Supply Problems
- Section 3 Restructuring and Privatization of the Power Sector**
- Part 1** Privatization Assistance to Kyrgyzenergo
  - Part 2** Studies of Restructuring and Privatization Options for Kyrgyzenergo
  - Part 3** Restructuring Implementation Plan
  - Part 4** The Government's Privatization Program for Kyrgyzenergo
  - Part 5** Privatization through Open, Transparent Tendering
  - Part 6** Unbundling
- Section 4 Timeline of Reform of the Kyrgyz Power Sector**
- Section 5 Tasks and Deliverables**

## SECTION 1 HISTORY AND RESULTS OF THE DELIVERY ORDER

The Work Plan for Delivery Order 6 was negotiated with the Kyrgyz National Electric Holding Company (KNEHC) and approved and signed on February 20, 1995 by Mr. Talaibek Koichumanov, then Chairman of the State Committee on Economy and later Minister of Finance

The Government-approved Work Plan for Task 2 called for USAID/ Hagler Bailly to

- Review the current drafts of the Energy and Electricity Laws prepared by Price Waterhouse-Paris under the TACIS program of assistance to the Kyrgyz Energy Sector,
- Provide advice on the design of an appropriate regulatory framework for the Kyrgyz Republic based on review of international experience,
- Assist in drafting decrees to create a regulatory agency,
- Provide support for obtaining passage of the laws,
- Provide technical assistance in implementing the regulatory agency, and
- Provide information and technical assistance on various tariff mechanisms and policy options

The expected results of these activities and technical assistance were to be

- Adoption of a regulatory framework for the reform and privatization of the power sector,
- Choice of a policy framework for tariff setting,
- Implementation of an operating Regulatory Agency, and
- Inauguration of tariff reform

All of these results were accomplished

The State Energy Agency was initially created by Government Decree (#74) on April 30, 1996 and is fully operational with an authorized staff of 16 professionals and equipment provided by USAID

Against strong opposition from KNEHC during an intense, 8-month legislative struggle, the Parliament (the Jogorku Kenesh) passed the Energy Law and the President signed it on October 30, 1996. This law created the State Energy Agency (SEA) as a quasi-independent, permanent regulatory body and vested it with full licensing and tariff-setting authority, the first such agency in the NIS.

Parliament passed the Electricity Law and the President signed it on January 28, 1997, establishing the legal framework for unbundling and privatizing the electric sector, subject to approval by both Houses of Parliament of a Government Program for restructuring and privatizing Kyrgyzenergo.

On February 6, 1997 the Government officially transferred tariff-setting authority to the State Energy Agency from the Ministry of Finance. A little over a year later, the State Energy Agency restructured and raised tariffs. And on April 27, 1998 the Government adopted the SEA's multi-year Tariff Policy that sets forth a framework for steadily increasing tariffs to reach cost-covering levels by the year 2000. On May 15, 1998 the Government adopted a Decree creating a "Social Safety Net" mechanism to assist low income consumers pay for the higher tariffs.

The Work Plan for Task 3 called for USAID/Hagler Bailly to

- Develop alternative restructuring and privatization options, outlining their various advantages and disadvantages,
- Provide technical assistance in developing the Government's chosen structure and management strategies,
- Assess the current situation of the operating companies and help prepare implementation plans for the restructuring, and
- Provide technical assistance in attracting private investment in the electric sector

The results of these activities and technical assistance included

- Government adoption of a Program for the Privatization of KNEHC on April 23, 1997 and its submission to Parliament for approval,
- Incorporation of KNEHC (renamed Kyrgyzenergo) as an open joint stock company on June 16, 1997 and divestiture of some of its non-core assets,
- Distribution of about 20% of Kyrgyzenergo's shares to the public (4 5%), employees (2%), socially vulnerable individuals (8%), and the Social Fund (5%),
- Privatization of the first small hydro plant through an "affermage lease" on July 3, 1997

## **SECTION 2      LEGAL AND REGULATORY REFORM**

There were two major results from this task first, the passage of the Energy Law and the Electricity Law creating the legal framework for reforming, restructuring and privatizing the electric sector, and second, the launch of an independent regulatory agency to oversee the sector's transition and to regulate energy enterprises, regardless of ownership

Passage of the Energy and Electricity Laws and creation of the regulatory agency enabled the Kyrgyz Republic to meet the conditionality requirements of a World Bank-led donor consortium loan of (eventually) \$85 million for rehabilitation of the Bishkek thermal plant and transmission networks

### **Part 1              Passage of The Energy and Electricity Laws**

A history of the development and passage of these laws is contained in Deliverable 2.2 As the first set of energy and electricity framework laws to be passed by a Parliament in the NIS, these laws broke new ground, containing the minimum basic requirements for an independent regulatory agency vested with full legal authority to issue licenses and set tariffs

Passage of these laws was intensely opposed by the President of Kyrgyz National Energy Holding Company (KNEHC), who maintained that the sector did not need any regulatory authority supervising it He also steadfastly maintained that the sector's transition to market principles should take at least seven years and that the only kind of restructuring that should be allowed would be to put the distribution entities on a self-financing basis and perhaps turn them over to local governments

Passage of the laws in a form acceptable to the World Bank required President Akaev to exercise his veto and write in certain changes, which were not overridden and so went into effect Shortly after the laws passed, President Akaev fired the President of KNEHC, ordered the introduction of corporate management at KNEHC, and set forth by Decree a framework for restructuring and privatization that would have the State retaining ownership of the large hydro plants and the National Grid

### **Part 2              Creation of the Regulatory Agency**

First created by Government Decree on April 30, 1996 as a result of push from the World Bank and pull from on-the-ground assistance from USAID/Hagler Bailly, the State Energy Agency began operating in May, 1996 with three appointed Executive Members and a skeletal staff In those early days, USAID/Hagler Bailly provided advice and equipment, and the SEA steadily established its role as the new player in the energy sector, although always under the shadow of the powerful Kyrgyz National Energy Holding Company and its dynamic President

It was not until Parliament passed the Energy Law on October 30, 1996, clearly giving the Agency full legal authority to regulate the energy sector and set tariffs, that the Agency and its Executive Members began to exercise their prerogatives more fully

During this development stage, USAID/Hagler Bailly advised the Executive Members and their staff about functions and procedures of regulatory agencies in the U S and Europe, organizational options, how to fund its budget from licensing and regulatory fees This included arranging three training/study tours to Washington, D C , Budapest, and Kiev The Executive Members also went on a study tour to Washington state, sponsored by USAID/USEA, where they spent three days discussing collegial decision making, rate cases, and licensing procedures with counterparts

During spring, 1997, TACIS sent in a management consultant to assist the Agency over several weeks to provide general management advice and training to the Members and the staff, to make recommendations about certain organizational issues and to develop job descriptions USAID/Hagler Bailly cooperated in this effort, providing sample job descriptions from U S regulatory agencies and other related materials

Samples of advice provided to the Government, draft provisions for the Agency, and the Conceptual Framework and explanatory materials used with Government officials and Members of Parliament to explain the idea and need for independent regulation of a monopoly energy sector in transition are included in Deliverable 2 3

### **Part 3                    Technical Assistance to the State Energy Agency**

USAID/Hagler Bailly provided technical assistance to the State Energy Agency in developing and implementing its policies and procedures for its most immediate and highest priority needs, as defined by the Executive Director This assistance fell into the major categories described below The tangible work products from this assistance and documents closely related thereto are produced in the four volumes of Deliverable 2 4

#### **Customer Service Standard Contracts and Regulations**

USAID/Hagler Bailly assisted the State Energy Agency prepare standard service contracts for both residential and non-residential consumers of electricity and thermal energy These brief contracts explain in plain language (both in Russian and Kyrgyz) the reciprocal rights and responsibilities of energy suppliers and energy consumers Attached to each contract is a simplified statement called "Your Rights and Responsibilities " On July 27, 1998 the SEA Executive Board formally approved these Standard Service Contracts, obligating energy companies to provide every consumer with a copy of it and a statement of the Consumers Rights

The State Energy Agency also drafted several other rules and regulations with USAID/Hagler Bailly assistance These included two sets of rules on outages and disconnections one for normal conditions and the second for times when there are supply shortages This became a high priority for the SEA after it received numerous complaints and read the afternoon papers that were full of stories about Kyrgyzenergo's arbitrary and discriminatory implementation of load shedding to cope with last winter's supply shortages

The SEA also requested USAID/Hagler Bailly assistance to design and draft rules for a dispute resolution procedure, which was completed and registered by the Ministry of Justice on MAY 22, 1998

USAID/Hagler Bailly's local engineers also worked closely with SEA staff to redraft the Rules for Use of Electricity and the Rules for Use of Thermal Energy to help make them less prescriptive and more market oriented through incentives and customer choice

## Licensing

The USAID/Hagler Bailly assistance included drafting seven types of model licenses in the summer of 1997 and providing legal analysis and arguments to support the SEA as it worked diligently to wear down several stumbling blocks put in its way by the Parliament's Committee on Licensing and by the Ministry of Justice

The Parliament's Committee first wanted to restrict the SEA's ability to issue licenses in the energy sector, despite its specific authority to do so as set forth in the Law on Energy. Several Committee Members wanted to create a new, single Licensing Authority that would be responsible for all licensing in the Republic. After heated discussions in the Parliament spanning several months, the SEA successfully prevailed on this issue. Then the Committee pressed for a Government requirement that no license issued by any government entity could be more than one page long, sufficient to simply "permit/register" a legal entity doing business in the Republic.

It was an alien notion that an agency could use the ability to issue licenses and attach conditions as its central regulatory tool. Upholding the Committee's one-page requirement, the Ministry of Justice refused to approve the Agency's draft regulations on licensing. After weeks of discussions, the Ministry and the Agency finally reached agreement that the Agency would issue a one-page license, to which would be attached a document of any length that specified the conditions of the License.

The SEA is now revising the seven model licenses, now over a year old, with the combined assistance of USAID/Hagler Bailly and the TACIS program of assistance to the State Energy Agency. The SEA plans to issue Generation and Transmission Licenses to Kyrgyzenergo no later than October 30, 1998. The SEA will also begin to issue standard "Temporary Licenses for the Sale of Electricity" to the more than 200 wholesale resellers of electricity now operating in the Kyrgyz power market. Upon receiving the information about their corporate structure, facilities, loads and customers that the Temporary License requires these resellers to submit, the SEA will begin issuing them longer term licenses if they are still in business after sector restructuring and privatization.

## Tariffs

Electricity held a special place in the politics and ideology of former times, and the consequence has been that electric prices have seriously lagged behind both inflation and price increases in other essentials. The government can no longer afford to subsidize the price of electricity, but there is still a large difference between the real cost to the producer and the price the consumer pays. This difference is being "paid" by liquidating the system's assets -- by deferring maintenance, disinvesting in existing facilities, and not investing in new ones.

And, tariffs have also been the subject of a large array of special discounts and privileges, also an important carry over from former times. Due to the combination of the myriad discounts, the huge rate of theft and non-payment, only 15 % of kwh produced for the domestic market in 1997 were priced at and paid for at full tariff. And, full tariff only covers about two-thirds of full costs yet.

Raising tariffs is, of course, the most politically sensitive and therefore the most difficult task the State Energy Agency has on its reform agenda. However, they have begun.

In late 1997, the Agency developed a multi-year tariff policy that set the goal of reaching cost-covering tariffs by the year 2000 in a series of small, gradual steps. In February, 1998 the Agency raised tariffs and also dropped the size of the "life-line" block down from an astounding 1200 kwh/month to a more reasonable 150 kwh/month. And, the Government began to reform the system of privileges and discounts, adopting in May, 1998 a program to husband scarce resources by targeting social benefits on the most needy.

USAID/Hagler Bailly assisted the State Energy Agency with cost of service analysis on which it based its Tariff Policy, helped draft Agency regulations on tariff-setting, provided "PR" support for the 1998 rate increase, developed a model for calculating the revenue impact of changes in tariffs, provided analysis of the applicability of Time Of Use Rates in Kyrgyzstan and on new methods of allocating costs of the thermal plant between electric and heat operations

### **Performance Agreement**

USAID/Hagler Bailly worked for over a year to train SEA staff on the theory and practice of using Performance Agreements as a regulatory tool, to draft a model Performance Agreement, and to assist the State Energy Agency negotiate and execute a Performance Agreement with Kyrgyzenergo on behalf of the Government

Performance-based regulation can be an effective way to exert near-term, leveraged influence over a regulated entity when the principal regulatory tool in use is a long-term license, which is difficult to amend or adapt frequently as an entire electric sector in transition evolves and new problems emerge

The three-year Performance Agreement set a variety of performance indicators, but focused primarily on the most crucial problems besetting Kyrgyzenergo high system losses, high theft, large accounts receivable, low cash collections, slowness in adopting international accounting standards and financial management practices, and the absence of any reliable data or information about its customer base or customer service levels

Key indicators in the Performance Agreement are tied to attention-getting incentives For example, a few specific measures are to be used to determine whether Kyrgyzenergo has, over a two year period, increased its productivity sufficiently to award 1% of its stock to its employees at the end of 1999, in accord with the Government's Privatization Program for Kyrgyzenergo

The World Bank reviewed the draft Performance Agreement during its development and made its adoption in an acceptable form a condition of a \$15 million credit supplemental Unfortunately, pressure to execute the Performance Agreement at the last moment in time to meet the World Bank's deadline gave Kyrgyzenergo sufficient leverage to demand that several key measures should be eliminated or "loosened " Nevertheless, the SEA considers its development and negotiation of this first Performance Agreement to be a significant learning experience It succeeded in fulfilling its main intents, which were to

- clarify the Government's policy goals and objectives for Kyrgyzenergo'S improved financial and technical performance,
- to set forth reciprocal obligations and responsibilities,
- to forge a clear agreement between the SEA and Kyrgyzenergo on specific performance measures, and
- to tie success to specific incentives and rewards

## Part 4 Special Analysis Requested by the Government

At the request of both the State Energy Agency and the State Property Fund, USAID/Hagler Bailly conducted an assessment of the deteriorating financial condition of Kyrgyzenergo, its causes, and possible solutions, which included recommendations for some fast, cheap, "good-enough" changes in its metering, billing and collection system. The Prime Minister also specifically requested USAID/Hagler Bailly's assistance in launching a media campaign to focus on combating the extraordinarily fast growing theft problem as well as the large and continuing non-payment and accounts receivable problems. The Minister of Finance and Economics also requested that USAID/Hagler Bailly construct a financial model of Kyrgyzenergo to better understand the current situation and prospects for solutions through unbundling the distribution sector. The results of these special analyses are included in the two volumes of Deliverable 2.5 and in Deliverable 2.5, and are discussed below as well.

In addition, during the 1997-98 heating season, Kyrgyzenergo was forced to introduce wide-spread load shedding in order to keep the water level at the Toktogul Reservoir above the "dead point," below which it would be unable to produce any electricity from the Naryn Cascade with devastating economic consequences for the Republic. This situation came about as the cumulative result of dry weather, excessive draw downs of the Reservoir over the last three years to meet the Government's own policy of increasing the Republic's heating load by switching from coal boilers to electricity, and no cash to buy coal to step up the Bishkek Thermal Plant to compensate for reduced hydro production. The State Energy Agency and the Minister of Finance requested our analysis of the situation and recommended solutions. Documents related to this problem are included in Task Report 2.3.6.

### **Metering, Billing, and Collection**

The fundamental reason for Kyrgyzenergo's deteriorating technical and financial performance is no cash. The fundamental reason there is no cash is that Kyrgyzenergo doesn't meter all that is consumed, doesn't bill all that is metered, and doesn't collect much of what's billed. And, about 70% what's collected is in barter goods.

Analysis by USAID/Hagler Bailly showed that it costs Kyrgyzenergo about \$74 million every year it delays the adoption of commercial management practices (primarily systematic metering, billing, and collection).

Total system losses were 40% of domestic production in 1996, increasing to 45% in 1997 despite a series of Government Decrees ordering Kyrgyzenergo to reduce its losses. About 50% of small consumer usage was stolen in 1996, growing to 60% in 1997 despite a series of Kyrgyzenergo's internal initiatives, including experimental programs with village based "volunteer" meter readers.

A year-long TACIS-sponsored technical assistance program in 1996-1997 to help Kyrgyzenergo improve metering, billing and collection resulted in a very good report that assessed the problem and a recommendation for a \$10-16 million dollar expenditure for a completely new customer information and billing system that would take 2-3 years to implement. The recommendation could not be implemented because of its cost.

USAID/Hagler Bailly then sent in a metering and billing system expert whose task was to design a cheap, fast, effective way to start closing the gaps. In December 1997, he recommended a program that would cost about \$1 million to implement, could be in place within by the end of 1998, and would pay back about \$17 million in the first year and over \$75 million in the first three years.

Instead, Kyrgyzenergo launched a bizarre program in January 1998 to purchase and install 170,000 load limiters on houses in suburbs and rural areas by September, just before the winter heating season begins. These crude fuses, called "nuts" for their resemblance to walnuts, will blow out a customer's house if he

plugs in an "unauthorized" heater Kyrgyzenergo justifies this program with their argument that it is the only cost-effective way to stop theft, reduce losses, and limit the overload on the distribution system Its most likely result will be an increase in graft rather than a decrease theft

USAID/Hagler Bailly also drafted a more complete program to "Improve Reliability and Restore Full Service" (i.e. reduce losses) for the State Energy to present to the Government as part of its decree on "Improving the Financial Condition of Kyrgyzenergo "

### **Media Campaign**

While planning for the incorporation of Kyrgyzenergo and its first-step privatization through the Coupon Auction, the State Property Fund decided that the public needed to know the facts about Kyrgyzenergo's financial condition Most people in Kyrgyzstan think of Kyrgyzenergo as the country's "crown jewel," as the press often calls it, a highly profitable company that would pay handsome dividends to those who acquired its shares in the Auction

The State Property Fund asked USAID/Hagler Bailly to assist in drafting a series of articles to dispel the four key "myths" about the energy sector 1) that Kyrgyzenergo is in good shape and very profitable, 2) that state ownership is the best way to protect customers from monopoly abuse, 3) that the price of electricity won't have to go up because most of Kyrgyzstan's electricity comes from "free" hydropower, and 4) that the sector can be developed without having to privatize it The State Property Fund and the State Energy Agency signed the articles which ran once a week for a month in Russian and Kyrgyz newspapers under the title, "Reform It to Save It "

Two TV talk shows about the Coupon Auction and unbundling and privatization of Kyrgyzenergo followed closely after the articles, which broke new ground by explicitly mentioning the huge and growing problem of electricity theft

Within a few weeks the press started running stories about outages, theft, and other problems in the electric sector This was new

In October, 1997, the Prime Minister personally asked for USAID assistance to launch a media campaign against theft of electricity USAID/Hagler Bailly, working with USAID/Counterpart Consortium, helped organize a Media Task Force and put the efforts of a grass-roots consumer advocacy group called "Aikyn" on center stage

The results of the campaign, which specifically avoided the old style slogan-based methods, are that electricity theft is now commonly talked about in the media, and there is significantly heightened awareness of the link between the increasingly noticeable service interruptions and Kyrgyzenergo's deteriorating financial performance, mostly due to the high rate of theft that was allowed to develop as a matter of informal social policy

While waiting for the T V cameras to start rolling one night, the Director of the State Energy Agency said, "I can't believe this Theft used to be a taboo word, and here we are devoting an entire TV program to it!" And, one afternoon while waiting for multicolor charts about the technical degradation of the system and the high theft rates to come off the printer, our local engineer said, "We would have been killed in former times if we'd done charts like these " USAID programs making a difference in more ways than one

### **Financial Analysis / Model of Kyrgyzenergo**

The Minister of Finance and Economics requested USAID/Hagler Bailly to assist in developing a financial model of Kyrgyzenergo as it is currently structured and as it would be structured after

unbundling its distribution assets. The Government intended to submit the results to Parliament in support of the Government's approved Program for Denationalization and Privatization of Kyrgyzenergo. The various Committees of Parliament had refused to consider the Program until the Government provided such financial analysis, expressing their concern, in essence, that unbundling would unravel all the various cross-subsidies and result in high tariff levels for high cost regions.

In essence, the USAID/Hagler Bailly model showed that although Kyrgyzenergo reports an average tariff of 11.4 tyyn and profits of 1.7 tyyn under old accounting methods, under international accounting standards, the average tariff actually collected on kwh actually consumed would be only 7 tyyn, and Kyrgyzenergo would show losses of 2 tyyn per kwh (20 tyyn = 1 cent US). The primary reason for the large difference is the fact that the old methods do not (or Kyrgyzenergo will not) take adequate account of the huge theft and non-payments problems. During the data collection phase of this task, one member of Kyrgyzenergo's accounting staff said to us, "Why should we consider the losses? They are not our fault. If we considered the losses, we would not show profits." And, presumably, the employees would not receive their bonuses of 25% of annual salary.

The model also showed that just as Kyrgyzenergo as a whole is actually unprofitable, so are all its distribution components, except Bishkek. However, based on a model run that assumed operating under commercial business practices (system losses go down to 12% and collections would go up to 95%), all but two distribution entities would show real profit under current tariff levels. (That profit level, however, would not be enough to pay for repairs, rehabilitation and extension of the system. Profit enough to sustain the distribution enterprise as a self-financing business would require a tariff increase.) The conclusion to be drawn is that, except for two distribution entities with very low population densities and extreme weather conditions, the distribution enterprises are unprofitable not because of high costs but because of low collections and high theft.

The State Energy Agency used the results of the USAID/Hagler Bailly model when preparing a more lengthy analysis of financial parameters of Kyrgyzenergo's operations that the Government sent to the Parliament when it resubmitted its Program on Privatization of Kyrgyzenergo on June 5, 1998.

In the meantime, Kyrgyzenergo produced its own financial analysis to show that unbundling would result in a fourfold worsening of financial results, alleging that unbundling would cause collections to decrease and losses to increase.

The results of the USAID/Hagler Bailly model are frequently used in briefings on the financial reasons for the deteriorating technical state of the energy sector and, in particular, for the load shedding of last winter, as shown on the following charts.

## Overcoming Supply Problems

During the summer of 1997 it became obvious that the combination of dry years and heavy use of hydroresources to serve winter load had resulted in a serious draw down of the Toktogul Reservoir. This created a crisis for the electric system. Continued use of the hydroresources through fall and the heating season at the same rate would result in the Reservoir hitting the "dead zone" by April 1998, the point at which it would no longer be possible to generate any power from the Naryn Cascade, 80% of the Republic's power source.

Consequently, the Government ordered a regime of load shedding (both rolling blackouts and brownouts) which would cut power consumption by an average of about 30% from the previous year's actual use.

Although there was no question that the precipitating factor of this supply crisis was the water level, it was less obvious that the real cause of the supply shortage was the fact that Kyrgyzenergo just didn't have enough cash to buy the coal and gas needed to step up the thermal plant to compensate for reduced hydroproduction. Even though Kyrgyzenergo management stood in Parliament and quite literally blamed Allah for the supply crisis, the knowledgeable finger pointed, once again, at Kyrgyzenergo's lack of progress in metering, billing, and collecting. The strategic solution, once again, being unbundling and privatizing the distribution sector.

Several reports describing the crisis as it evolved, and several suggested action steps for a strategic solution to the supply (though really cash) shortfall, are included in Task Report 2.3.6. Also included in that report is a memo on the root culprit -- the drive up of the electric heating load as a result of deliberate Government policy pursuing the idea that Kyrgyzstan should be a 100% electric country because of its abundant, cheap hydroresources.

The Toktogul Reservoir was drawn down primarily to meet new winter heating load. Two wet years in a row helped camouflage the problem until a dry year and no cash combined to show just how thin the margin of reliability is, despite abundant, cheap hydroresources if an electric system is not operated on a commercial basis.

## SECTION 3      RESTRUCTURING AND PRIVATIZATION OF THE POWER SECTOR

### Part 1            Privatization Assistance to Kyrgyzenergo

As the State Property Fund's successful mass privatization program was coming to an end, focus shifted to privatizing the largest state enterprises including the electric company, the airline, and the phone company, among others. Of the state's nine largest companies, Kyrgyzenergo is the largest. Its assets alone represent about 75% of the book value of all these nine companies together.

The central issue was whether to unbundle the electric company before or after offering a portion of its shares to the public through the Coupon Auction, the same mechanism that had been used to privatize several hundred small state enterprises. Driving the decision was the expiration of the voucher coupons that the state has distributed free of charge to the population at the beginning of the mass privatization program. Most people had, it was said, been saving their coupons in order to buy shares in Kyrgyzstan's "crown jewels," especially Kyrgyz National Energy Holding Company (KNEHC). The State Property Fund, facing rigid opposition from KNEHC's leadership to unbundling and under intense political pressure to put KNEHC through the Coupon Auction before the coupons expired, decided to proceed with the Coupon Auction and postpone unbundling, even though this put the Government in conflict with donors who advocated rapidly unbundling KNEHC and putting shares in all the newly created companies through the Coupon Auction.

The next issue was what percent of shares to offer to the public. Originally, 10% was to be distributed to the public through the Coupon Auction. However, the Government reduced this to 3.5% but then raised it to 4.5% after receiving letters from the World Bank and the U.S. Ambassador expressing concern about the low percent offered to the people.

Then the whole program of privatization came under fire from the Minister of Internal Affairs. In response, the President issued a decree to halt all privatization except the Coupon Auction pending investigation of alleged irregularities. He also issued a decree to transfer 8% of the shares in the nine largest companies for the benefit of the "socially vulnerable" individuals.

The State Property Fund asked USAID/Hagler Bailly to assist in drafting a new Charter for KNEHC that would meet international standards, getting it registered, putting its shares through the Coupon Auction, and eventually, getting it listed on the Kyrgyz Stock Exchange. Documents related to all these activities are included in Deliverable 3.2.

The end results were that

- KNEHC was incorporated on May 31, 1997 and renamed "Kyrgyzenergo,"
- Its Charter both accords with Kyrgyz law and with international standards for shareholder protection and was registered by the Ministry of Justice in June, 1997,
- The State Property Fund used the Charter drafted for Kyrgyzenergo as the model for the other of the large state companies incorporated at the same time,
- Kyrgyzenergo's shares offered through the Coupon Auction sold for about 1.5 som/share and reached a high of about 14 som/share several months later, about 60% of them estimated to be owned now by foreign portfolio investors, and
- Almost 20% of Kyrgyzenergo's shares have been "denationalized," of which
  - 4.5% were offered to the public through the Coupon Auction and are now traded on the Kyrgyz Stock Exchange,
  - 1% were given to employees and 1% were put in escrow for distribution to employees upon a showing of improved productivity by 1999,
  - 5% were transferred for management by the Social Fund, and

- 8% are earmarked to be transferred to an investment fund, along with 8% of the shares of the other eight companies, to be managed by professional investment managers for the benefit of the Republic's most socially vulnerable individuals

## **Part 2 Studies of Restructuring and Privatization Options for Kyrgyzenergo**

Two key USAID-funded activities directly affected the development of the Government's strategy and program for restructuring and privatizing Kyrgyzenergo. The first was a seminar organized by Hagler Bailly and held in December, 1996, the proceedings of which are Deliverable 3.3. The second was Price Waterhouse's diagnostic study of Kyrgyzenergo which included financial analysis of five options for its restructuring and privatization. This study was presented at the December seminar and is Deliverable 3.4.

The Government's Program for Denationalization and Privatization of Kyrgyzenergo was prepared by the State Property Fund after extensive debate that spanned two years and climaxed in a seminar sponsored by USAID/Hagler Bailly and chaired by the State Property Fund in December, 1996. That seminar brought together all the interested parties, including the Donor community and representative of former socialist countries that had restructured and privatized their energy sectors, to debate several specific options for Kyrgyzenergo. These options ranged from unbundling the distribution sector and transferring it to local government's (KNEHC's proposal) to a lease/concession of the unbundled sector (favored by TACIS consultants), to unbundling and selective privatization using various mechanisms (favored by USAID/Hagler Bailly and the World Bank).

The results of the Price Waterhouse study presented at this seminar showed that the worst possible option was to unbundle the distribution sector and turn it over to the local governments, as the President of KNEHC was intently advocating, and still is persistently advocating, now as a member of Parliament. The Price Waterhouse study also showed that the best option was to unbundle the sector and privatize it in stages, beginning with the distribution system. The next best option would be the lease advocated by the TACIS consultants.

Immediately after this seminar, the State Property Fund's Deputy Chairman determined that the SPF would advocate unbundling and staged privatization, beginning with the distribution system, and thus began to draft the Government's Program accordingly. Shortly thereafter President Akaev issued a Decree that paved the way for corporatization of Kyrgyzenergo, unbundling, and staged privatization.

## **Part 3 Restructuring Implementation Plan**

During development of the Government's Program for Denationalization and Privatization of Kyrgyzenergo during the first few months of 1997, the most intense controversy surrounded the timeframe for unbundling. Kyrgyzenergo argued that it would take 6 years to unbundle, and the State Property Fund argued that it should take no more than 6 months to a year. In an ironic twist, Kyrgyzenergo continued to maintain this view under its new General Director, Mr. Sartkaziev, even though in his previous position as Director of the State Energy Agency he had argued that the sector could be unbundled rapidly, and had issued regulations requiring the creation of the National Grid by October 1, 1997.

The controversy was resolved under the leadership of first Vice Prime Minister Nanaev, who called a large meeting of all the senior managers of Kyrgyzenergo and the leading energy experts from the Republic's technical universities and research centers. The decision was to incorporate and unbundle five distribution companies in a little over a year -- by August, 1998, and then to incorporate the National Grid Company the following year -- by April, 1999 -- and create the Generation Company at

that time as well

USAID/Hagler Bailly drafted a Restructuring Implementation Plan for the Nanaev Commission, provided supporting analysis of alternatives and international experience during these discussions, and prepared briefing papers about restructuring and unbundling which were discussed with the Kyrgyzenergo managers and Government officials involved, as well as with every Member of Parliament. These documents are included in Deliverable 3.5. USAID/Hagler Bailly also presented these papers at the special Anniversary Conference of the Engineering Faculty at the Republic's leading Technical University.

#### **Part 4                    The Government's Privatization Program for Kyrgyzenergo**

On June 5, 1998 the Government of the Kyrgyz Republic resubmitted its approved "Program of Denationalization and Privatization of Kyrgyz State Joint Stock Holding Energy Company." The Program differed only in the timeframe from the one approved over a year earlier, in April, 1997, and submitted to the Parliament shortly thereafter.

The Government's Denationalization and Privatization Program specifies the objectives, conditions and sequence for the restructuring and privatization of the electric sector, which currently has an installed capacity of 3590 MW and annually produces about 13 billion kwh.

The major objectives of the program are to

- increase efficiency through structural reorganization and development of a competitive environment,
- attract domestic and foreign investment in the sector,
- create conditions conducive to the development of the Republic's significant hydro-power resources.

The Program recognizes that the electric sector needs significant investment to repair and rehabilitate the seriously overloaded distribution system, that both technical and commercial losses are extraordinarily high, and that operation of the sector is currently unprofitable.

The Program calls for the introduction of corporate governance and unbundling of Kyrgyzenergo into separate distribution, transmission and generation companies, each of which would be subject to a different type of privatization in an orderly sequence of steps.

In general, the key features of the Program are to

- retain the Naryn Cascade (2870 MW) in state ownership because of its unique strategic importance to the Republic and its role in interstate water/energy use agreements,
- retain high voltage lines and substations (110 kv and up) in state ownership,
- incorporate "Kyrgyzenergo" as a Joint Stock Company and offer 4.5% of its shares to the public in a coupon auction, transfer 3.5% to the Social Fund, and give 1% to the employees and an additional 1% tied to increased productivity,
- develop new generation and transmission facilities through loans from international donors, direct foreign investment, and reinvestment of fees received for concessions and proceeds from the possible sale of up to 20% of the state's block of Kyrgyzenergo shares, and
- sale of up to 70% of five distribution companies created during the unbundling of the sector.

The Program sets forth a sequence of four stages for the orderly restructuring and privatization of the electric sector. These are

#### STEP 1

- Incorporate "Kyrgyzenergo" as a new Joint Stock Company (successor to "Kyrgyzosenergoholding,") and adopt a new Charter consistent with the Kyrgyz Republic's new law on partnerships and corporations,
- Distribute 10% of shares to the public, employees and the Social Fund,
- Adopt an economic tariff policy,
- Establish consortia for constructing Kambarata 1 and 2 hydro-power stations (1900 and 360 MW)

#### STEP 2

- Spin off non-core businesses and institutes and transfer social assets to local authorities,
- Begin privatization of small (under 30 MW) hydro plants

#### STEP 3

- Incorporate five separate distribution companies and one heating company,
- Incorporate a generation company consisting initially of the Naryn Cascade, the Bishkek and Osh thermal plants and the hydro power stations under construction, (Later, the thermal plants may be separated, and the hydro plants under construction may be separated and offered for concession, joint-venture, or management contract )
- Incorporate a National Grid company (legal successor to "Kyrgyzenergo") including the Dispatch Center, all 110 kv and higher transmission lines and substations and 35 kv lines of significance to the Republic

#### STEP 4

- Call for tenders for
  - the sale of up to 70% of the shares of the distribution companies to strategic investors,
  - transfer of management rights for the generation companies and the transmission company, with the state retaining the controlling block of shares

Kyrgyzenergo was incorporated as an open joint stock company, and its Charter was registered with the Ministry of Justice on June 16, 1997

To date, 45% of the shares were distributed to the public in the coupon auction, 5% have been earmarked for the Social Fund, 1% was given to the employees and 1% was put in escrow for distribution to employees in 1999 contingent on Kyrgyzenergo's reduction of technical and commercial losses

Also in 1997, President Akaev issued a decree that an additional 8% of Kyrgyzenergo shares would be used for the benefit of the "socially vulnerable population "

The first privatization of a small hydro plant (1MW) took place in summer of 1997 under an "affermage" lease

The Government submitted the Program for approval by both houses of the Parliament, as required under both the Energy and Electricity Laws. However, the Parliament refused to consider the Government's Program until the Government prepared and submitted a financial model of the unbundled Kyrgyzenergo.

Unfortunately, this stymied other significant steps toward restructuring and privatization in the interim. Meanwhile, the technical and financial performance of Kyrgyzenergo continued to deteriorate. Losses as a percent of total domestic production reached 45% in 1997. Significant load shedding was necessary during the winter months because Kyrgyzenergo couldn't afford to buy the coal needed to step up the thermal plant in order to compensate for reduced hydro-production due to dry weather.

The financial model of the unbundled Kyrgyzenergo was developed in the last quarter of 1997. The Government approved it on March 13, 1998, paving the way for resubmission of the Program to Parliament as well as the resumption of activities related to Kyrgyzenergo's restructuring, commercialization, and privatization.

In June, however, the Parliament clearly demonstrated its continuing resistance to the Government's Privatization Program by refusing to approve the Government's Guarantee of the EBRD's \$25 million loan for the Talas high voltage transmission line because it contained a condition requiring at least one distribution company to be unbundled and turned over for private management during 1999. Nevertheless, the Parliament changed its mind in July and ratified the Guarantee, giving this document the status of an international treaty, which would take precedence over local law.

Thus, the Government now has the legal authority, should it choose to use it despite potential political opposition, to proceed with unbundling and privatizing the distribution sector even if the Parliament never approves the Government's Privatization Program in whole or in part.

## **Part 5                    Privatization through Open, Transparent Tendering**

For many years now, the Kyrgyz Republic has considered the development of its hydropower resources for the export market to be the central foundation for its overall economic development. And so there is keen interest in attracting foreign investors as joint venture partners to complete the construction of several large hydropower plants that were started or planned in former times.

These plants include

- Tash Kumyr and Shamaldysai, two plants in the middle of the Naryn Cascade that are currently operating under adverse conditions while the dams are being raised to reach design capacity of 450 MW and 240 MW respectively,
- Kambarata 2, a 360 MW plant started several years ago, and
- Kambarata 1, a 1900 MW plant that at \$4 billion (including transmission over some of the highest mountains in the world) would be one of the largest and most expensive non-government financed hydropower plant in the world

While Kambarata 1 is of continuing futuristic interest, the two plants on the Naryn Cascade and Kambarata 2 have recently been the subject of intense investor interest

During the summer of 1997, several investors expressed interest in a concession on Tash Kumyr and Shamaldysai with off-take to Kazakhstan. There was no open, competitive tender. And even though Kyrgyzenergo had originally supported the proposal of one firm in particular (called "Asia Center"), Kyrgyzenergo suddenly revised its estimate of the costs to complete and announced that it could afford to finish the plants themselves.

Then the local Parliament where the plants are located passed a resolution "appropriating" the hydroplants (and all other Kyrgyzenergo assets within its territory) and offering to concede them to Asia Center. The Government soon stepped in to clarify the situation, with the net result that the President announced that there would be no concession given on the two plants. The other result was that the Prime Minister personally requested assistance from USAID/Hagler Bailly with the preparation of an open, competitive international tender for Kambarata 2.

USAID/Hagler Bailly provided advice to Kyrgyzenergo and the State Energy Agency, as well as model tender documents that met international standards and also some that had been used elsewhere in the CIS in tenders for hydropower plants. Against USAID/Hagler Bailly advice, Kyrgyzenergo insisted on structuring the invitation as a "Call for Tender" rather than as a "Solicitation of Interest," even though no financing had been secured for the project.

USAID/Hagler Bailly also drafted an Addendum for the Tender, attempting to correct some of the major deficiencies in Kyrgyzenergo's documents and provide adequate protection for the Government. This was especially important given that it was clear that one potential investor (offering a very low cost loan to the Government on exceptionally favorable terms) appears on the U.S. Treasury's list of Designated Terrorists, Narcotics Traffickers, and Other Special Nationals.

It was not surprising that after a two month process the Tender was cancelled, Kyrgyzenergo finding that none of the "bids" had been responsive.

USAID/Hagler Bailly has also provided comments on two proposed "affermage" concessions for small hydropower plants, one of which was executed and one of which is still being negotiated. These comments and memos and comments and work products associated with all these "tenders" are included in Deliverable 3.7, as are proposed Regulations on Tenders in the Energy Sector and a model tender document for small hydropower plants that have been drafted by USAID/Hagler Bailly to accord with both international standards and Kyrgyz law.

The proposed Regulations on Tenders would apply not only to individual projects such as hydro plants, they would also apply to any privatization whether by sale of a block of shares to passive investors, sale of shares, assets, or entire companies to strategic investors, or privatization of management through concession even if the Government decides to retain ownership of the underlying asset because of its

assessment of its political and/or strategic interests

## **Part 6                    Unbundling**

The Government approved the State Property Fund's version of the Program for Denationalization and Privatization of Kyrgyzenergo on April 23, 1997 and submitted it to Parliament for approval as required under the Law on Electricity. The Program called for the incorporation and unbundling of five distribution companies by August 1998.

After preliminary discussions in committee, Parliament refused to consider the Program until the Government submitted a "financial model" to show the implications of unbundling on tariffs and profitability. The Government withdrew the Program from Parliament on June 5, 1997, ordering the State Energy Agency and Kyrgyzenergo to prepare such a model. There ensued several months of disagreement -- Kyrgyzenergo arguing that unbundling would reduce profitability because it would result in lower collections and higher theft, and the State Energy Agency arguing that it would increase profitability because it would result in higher collections and lower theft. The Government approved the SEA's model and resubmitted the Program, along with the model, on June 5, 1998 -- a year to the day after withdrawing it.

In the meantime, EBRD required, as a condition of its \$25 million loan for the construction of a high voltage line in Talas oblast, that the Government and Kyrgyzenergo incorporate no more than five distribution companies on the basis of long-term financial viability and technical consistency and in accord with the Government's Program. At least one of them is to be unbundled by April 30, 1999 and then turned over by May 31, 1999 to a private manager for at least three years.

The Parliament balked at this condition and on April 30, 1998 refused to ratify the Government's guarantee of the EBRD loan because of this condition. However, Parliament was convinced to reconsider its position, and by July 10, 1998 both Houses of Parliament had approved the Law on Ratification of the Guarantee, thus opening the way to begin unbundling the sector.

Saying it wanted to proceed immediately, Kyrgyzenergo requested USAID/Hagler Bailly to prepare a comprehensive list of the tasks needed to be undertaken in order to unbundle at least one distribution entity. However, Kyrgyzenergo also wanted to keep the 35kv lines and the industrial customers for itself. This would leave the unbundled distribution company with just residential customers and impair its long term financial viability. The issue of the 35 kv lines had surfaced the year before when the State Property Fund was developing the Government's Program. After extensive debate on the issue at that time, the Government had decided that the 35 kv lines (except for some with "Republican significance") would transfer with the distribution companies signed. Nevertheless, the issue is being fought again, and how it is settled is likely to be a key factor in how fast unbundling proceeds.

USAID/Hagler Bailly prepared the list of specific implementation tasks (which is characterized here as a "business plan") for unbundling distribution companies. USAID/Hagler Bailly also prepared draft charters for the incorporation of the first distribution company ("Northelectro"), for the National Grid Company and for the Generation Company. All these documents are included in Deliverable 3.8.

As for unbundling generation, an attempt was made in summer, 1998 to create a "Small Hydro Company" by transferring assets out of Kyrgyzenergo without Shareholder approval USAID/ Hagler Bailly questioned the legality of this with the State Property Fund, which managed to delay implementation of the Government's decree pending review by the Ministry of Justice The influential backers of the Small Hydro Company next attempted to have the company created through Presidential Decree USAID/Hagler Bailly provided legal analysis of the draft Presidential decree to the President's Administration, the State Property Fund and the State Energy Agency Documents related to "Small Hydro Company" are included in Deliverable 3 8

#### SECTION 4 TIMELINE OF REFORM OF THE KYRGYZ POWER SECTOR

March 1, 1995	Minister of Economy approves USAID work plan negotiated with KNEHC
September 20, 1995	GOKR agrees to submit legislation (as drafted by Government Working Group assisted by USAID) to the Parliament as a condition of \$70 million World Bank/ADB Loan for rehabilitation of the Bishkek thermal plant and heating network
February 24, 1996	Government submits redrafted Energy and Electricity Laws to Parliament (GOKR Decree #74, "On the Energy and Electricity Draft Laws")
April 30, 1996	Government creates an independent regulatory agency ("the State Energy Agency") and the President appoints three members to its Executive Board (GOKR Decree #192)
October 30, 1996	Parliament passes and the President signs the Energy Law
December 17-18, 1996	State Property Fund chairs a USAID-sponsored international seminar on restructuring and privatization options for the electric sector
January 8, 1997	President fires the President of KNEHC, orders KNEHC to adopt corporate management, and outlines the key parameters for an unbundled and partially privatized electric sector (Presidential Decree #5 "Improvement of the Management System of the Electricity Sector")
January 28, 1997	Parliament passes and the President signs the Electricity Law
February 6, 1997	Government transfers tariff setting authority from the Ministry of Finance to the State Energy Agency (GOKR #59, "On Delegation of the Right to Set Tariffs for Electric, Thermal Energy, Hot Water Supply and Natural Gas")
March 4, 1997	Government adopts Provisions on the State Energy Agency (GOKR Decree #124, "On Issues of the State Energy Agency under the Government of the Kyrgyz Republic") and issues decree implementing the Energy Law and the Electricity Law (GOKR Decree #123, "On Implementation of "the Energy Law" and "the Electricity Law" of the Kyrgyz Republic")

April 23, 1997	Government approves a restructuring and privatization program for KNEHC (GOKR Decree #239, "On the Program of Denationalization and Privatization of Kyrgyz State Energy Holding Company")
May 21, 1997	President suspends (until December, 1997) all privatization except the Coupon Auction, pending investigation of alleged irregularities (Presidential Decree #166)
June 5, 1997	Government by letter recalls the Privatization Program from the Jogorku Kenesh submitted earlier for approval
June 7, 1997	President decrees that 8% of the block of state shares in Kyrgyzenergo and other large companies will be given to the socially vulnerable (Presidential Decree "On Additional Measures to Assure Participation of the Socially Vulnerable People in the Privatization of the Strategic Enterprises of the Kyrgyz Republic")
June 16, 1997	Ministry of Justice registers Charter for "Kyrgyzenergo," which is incorporated as a Joint Stock Company
July 3, 1997	Kyrgyzenergo executes an "Affermage Lease" with a private investor for the 1 MW Kara-Balta hydroplant (1 <sup>st</sup> privatization in electric sector)
July 4, 1997	The State Property Fund holds "Coupon Auction" and transfers 45% of Kyrgyzenergo stock to the public through a coupon auction, 1% transferred to employees, 35% earmarked for the Social Fund, and another 1% earmarked for distribution to employees in 1999 contingent on productivity gains
August 20, 1997	The 18 <sup>th</sup> Extraordinary Meeting of Jalal-Abad Council appropriates all of Kyrgyzenergo's assets located in Jalal-Abad (including the Naryn Cascade, which is 80% of the Republic's electricity supply), and grants a concession on Tash-Kumyr and Shamaldy-Sai HPS to a small Kazak-Korean Venture named Asia Center
September 16, 1997	The Government by its letter cancels the Jalal-Abad Council's the decision on the concession of Task-Kumyr and Shamaldy-Sai HPSs
November 21, 1997	The Government authorizes a tender for Kambarata II and Tash-Kumyr and Shamaldy-Sai (GOKR Decree #677, "On Tender Procedures for Investment in Hydro-Power Stations Construction")
December 26, 1997	Kyrgyzenergo offers Tender Documents for Kambarata II for sale (GOKR Decree #670, "On Making Amendments to Decree #677 of Government of the Kyrgyz Republic Issued on November 21, 1997 on "Tender Procedures for Investment in Hydro-Power

Stations Construction”)

- January 9, 1998 SEA issues Regulations on Licensing (SEA Resolution #12)
- January 15 1998 Kyrgyzenergo adopts Loss Reduction Program
- April 14, 1998 Kyrgyzenergo holds its First General Meeting of Shareholders
- April 27, 1998 Government approves SEA’s Tariff Policy setting forth a “rate path” of steady increases between March 1, 1998 and 2000 (GOKR Decree # 222, “On Principles of the Tariff Policy for Electric and Thermal Energy for 1998-2000)
- May 15, 1998 Government creates Social Safety Net mechanism for low income electric consumers (GOKR Decree #281, “On the Improvement of the Social Protection System for Low Income Families and Individuals”)
- May 22, 1998 Government raises the amount of shares of Kyrgyzenergo and other large companies to be transferred to the Social Fund from 3.5% to 5% (GOKR Decree #290, “On Transfer of State Blocks of Shares (Reserved Earlier to Be Exchanged for Unsold Privatization Coupons) to the Social Fund”)
- June 5, 1998 Government submits its revised privatization program to the Parliament for approval by both houses, as required by the Energy and Electricity Laws (GOKR Decree #333, “On Amendments and Revisions to the April 23, 1997 Resolution of the Kyrgyz Republic on the Program of Denationalization and Privatization of the Kyrgyz State Joint Stock Holding Company”)
- June 9, 1998 Government cancels the tender for Kambarata II on the basis that no bids were responsive to the requirements) (GOKR Decree #337, “On Canceling the Tender for Kambarata II”)
- June 11, 1998 The SEA and Kyrgyzenergo negotiate and sign Performance Agreement
- July 10, 1998 Parliament ratifies EBRD Loan Guarantee, opening way to unbundling and privatizing distribution enterprises
- July 27, 1998 SEA approves Standard Service Contract and Consumer Bill of Rights (SEA Resolution #11)

## TARIFF INCREASES AND DECREASES AND RELATED ACTIONS

- April 8, 1996 Prime Minister approves Lists of Discount customers and a 50% discount on the first 150 kWh/month  
(Decree #150 "On Approval of the List of Customers Who Have the Right for Electrical and Thermal Energy Consumption at a Discount Tariff")
- July 5, 1996 Tariff Commission of the Ministry of Economy of the Kyrgyz Republic, grants a 50% discount on the first 300 kWh/month  
(Resolution #3, "On Setting Tariffs for Electric and Thermal Energy and Hot Water Supply")
- October 16, 1996 Tariff Commission of the Ministry of Economy of the Kyrgyz Republic, grants a 50% discount on the first 700 kWh/month during winter (Resolution #6, "On Electricity Tariffs")
- December 27, 1996 Jogorku Kenesh instructs the Government to raise the consumption limit for the 50% discount to 1200 kWh/month in winter  
(Resolution #521-1, "On the Information of the Government of the Kyrgyz Republic about the Substantiation of the Last Raise in Tariffs on Electricity")
- January 28, 1997 The State Energy Agency issues its first resolution setting tariffs, keeping July 5, 1996 rates in effect including a 50% discount on winter consumption up to 700 kWh/month  
(SEA Resolution #1, "On Electricity, Thermal Energy and Hot Water Tariffs")
- February 6, 1997 Government transfers tariff setting authority from the Ministry of Finance to the State Energy Agency  
(GOKR Decree #59, "On Delegation of the Right to Set Tariffs for Electric and Thermal Energy, Hot Water and Natural Gas")
- October 29, 1997 SEA raises tariffs on thermal energy and hot water  
(SEA Resolution #8, "On Tariff on Thermal Energy and Hot Water Supply")
- February 7, 1997 Government approves list of discounts and special privileges, 65% of consumers receive 25%, 50%, or 100% discounts (GOKR #70, "On Setting Privileged Norms for Gas and Utility Services for Veterans of the Great Patriotic War and Armed Forces")
- March 27, 1997 Government grants 50% discount on first 1200 kWh /month during winter (GOKR #166, "On Limits of Electricity Consumption for Residential Customers during the Heating Season")
- May 15, 1997 Government grants 50% discount on tariff for pump stations  
(GOKR Order #157, "On Electricity Tariffs for Pump Stations")
- May 15, 1997 Government grants 50% discounts for military  
(GOKR Decree # 282, "On Measures to Assure Social Protection

of Military Servicemen of the Kyrgyz Republic”)

February 16, 1998

SEA raises tariffs for electricity and reduces size of discount block to the first 150 kWh consumption in summer and the first 300 kWh consumption in winter (SEA Resolution # 3, "On Electricity Tariffs")

April 27, 1998

Government approves SEA Tariff Policy for Electric and Thermal Energy for 1998 - 2000 (GOKR Decree #222, "On Principles of the Tariff Policy for Electric and Thermal Energy for 1998 - 2000")

August 6, 1998

SEA raises tariffs on natural gas (SEA Resolution # 14, "On Tariffs for Natural Gas Consumption")

August 28, 1998

SEA again raises tariffs on heat and hot water (SEA Resolution # 15, "Tariff for Thermal Energy and Hot Water Supply")

## **SECTION 5      TASKS AND DELIVERABLES**

Following is a summary of the objectives and of the tasks and deliverables completed under the original contract (signed 27 September 1994) and its six modifications (signed 30 August 1996, 17 September 1996, 26 June 1997, 25 September 1997, 6 February 1998 and 9 April 1998)

### **Contract Objectives**

Objectives of the work to be done under the original contract included

- assist the GoKR in formulating energy-related regulations and legislation,
- assist in restructuring and corporatization of the power sector,
- assist in establishing a framework for sporting private investment in the power sector,
- assist with the development of tariff methodologies for electricity and heat

In Modification 3 the contract clarified that "The Primary Objective of this DO is to promote the development of legal, regulatory and institutional infrastructure in the electric power sector conducive to private capital including foreign investment which is environmentally sound, regionally and operationally efficient, where possible, and market-oriented "

### **Statement of Work   Tasks and Deliverables**

#### **TASK 1            Establish Resident Advisor**

- 1    Develop detailed work plans with energy sector authorities

This was done formally at the beginning of the project and thereafter informally in a series of requests from various government officials for assistance with specific issues and projects. The original Work Plan is in Deliverable 1.1

- 2    Identify reference materials and counterpart studies

A bibliography of studies and other materials reviewed as part of work on this DO is included in an Annex to Deliverable 1.1

- 3    The contract specifically required that specialists reside in the Kyrgyz Republic for the periods needed to accomplish their work, and that the specialists must closely coordinate their work with and support the entire USAID efforts in Central Asia and other donor activity

Both these requirements were met. Hagler Bailly's non-resident Country Manager for Kyrgyzstan spent over 600 days in-country. She developed close working relationships with the World Bank and later with other donors and was looked to by the donor community as a primary source of objective and accurate analysis and information about the power sector in Kyrgyzstan. She maintained good working relationships with other donor-financed consultants and adjusted levels of effort on various tasks based on the work and success of these other consultants in the field.

#### **TASK 1 DELIVERABLES**

1 Work Plan See Deliverable 1.1

## **TASK 2      Legal, Regulatory and Tariff Reform**

### **2 1      Legal Reform**

- 2 1 1    Identify and assess existing and proposed policies and legal reforms, including any draft legislation, and assess its impact on creation of a market oriented power system which includes private sector participation
- 2 1 2    Support development of framework energy policies and laws, as appropriate, drawing upon existing or proposed energy laws in other countries and preparing drafts as necessary
- 2 1 3    Provide limited technical assistance (including focused seminars) to Kyrgyz authorities in applying proposed policies and model legislation

All these tasks were completed and resulted in the passage of a framework Energy Law and an Electricity Law that allows for the restructuring and privatization of the Kyrgyz power sector. All documents relating to this task are included in Deliverable 2 2

### **2 2      Regulatory Reform**

- 2 2 1    Assess organizational options under consideration for administering the regulatory function and identify pros and cons of the options
- 2 2 2    Identify regulatory organizational arrangements consistent with a market-oriented power sector, including economic tariffs and the role for private investment
- 2 2 3    Define broadly the organizational requirements and timetable for institutional development of a regulatory body
- 2 2 4    Identify regulations and procedures required to implement framework energy legislation and the regulatory body,

All four of these tasks were completed and resulted in the creation, implementation and full functioning of the first independent regulatory agency created by law and vested with full licensing and tariff-setting authorities in the NIS. Documents related to this are included in Deliverable 2 3

- 2 2 5    Identify power sector planning requirements, identify investment requirements considering international power transactions, policies on energy self sufficiency and other national interests, and identify a plan and schedule for development of energy planning capability in the context of restructuring and privatization

Sector Planning was a task that TACIS invested in heavily and the USAID level of effort under this task was modified accordingly. Documents related to this task are included in Task Report 2 2 5

- 2 2 6    Assist the SEA develop and implement policies and methodologies in, for example, licensing, tariffs, filing requirements and other regulatory practices to ensure efficient operation, including market competition and opportunities to enhance investments in the power sector

These tasks were accomplished and documentation is included in the four volumes of Deliverable 2 4

- 2 2 7    Arrange two regulatory visits for Kyrgyz officials to other countries to promote exposure to other regulators and progress and problems of electricity regulation

Members of the State Energy Agency and staff visited, under Hagler Bailly's arrangements, the new regulatory commissions in Hungary and the Ukraine, and, under the auspices of USEA, they also visited the Washington State Public Utilities Commission in Olympia

2.2.8 Assist SEA draft and negotiate Performance Agreement setting out specific measurable targets for improvement in financial and operational performance for generation, transmission and distribution components

This task was accomplished and the Performance Agreement was executed between the SEA (on behalf of the Government) and Kyrgyzenergo in June, 1998. Documents related to this are included in the fourth volume of Deliverable 2.4

2.2.9 Assist the SEA draft a Standard Service Contract for residential and industrial customers, and a Statement of Consumer Rights

This task was accomplished and the related documents are included in the first volume of Deliverable 2.4

2.2.10 Assist the SEA draft a Tariff Policy and regulations that will bring tariffs up to cost-covering levels. Provide analysis to the SEA that will assist it in arriving at and issuing appropriate market-based Tariff Decisions in 1998

This task was accomplished and the related documents are included in the third volume of Deliverable 2.4

2.2.11 Assist SEA draft and negotiate interim licenses

Hagler Bailly drafted model licenses with the SEA for their use. However, as of September 30, 1998, the SEA had yet to issue an interim license to Kyrgyzenergo or any other power sector enterprise. The model licenses and related documents are included in the second volume of Deliverable 2.4

2.2.12 Assist SEA draft regulations related to tendering for new construction and privatization of energy facilities

This task was completed and the draft regulations, model tender documents, and the history of two "tenders" are included in Deliverable 3.7

2.2.13 Assist SEA draft regulations on load shedding

This task was completed for both the situation of energy supply shortages and "normal" conditions. The regulations are included in the first volume of Deliverable 2.4

## **2.3 Tariff Reform**

2.3.1 Assess previous tariff analysis and current tariff issues with emphasis on electricity and heat tariffs

2.3.2 Identify appropriate existing or proposed tariff methodologies required to establish economic energy systems

2.3.3 Identify future analysis and modifications necessary to establish on-going basis for electricity

tariff reform including consideration of scheduling of reforms

These three tasks were accomplished and documentation is included in the third volume of Deliverable 2 4

2 3 4 Develop the regulatory capability including development and training of key personnel on regulatory structure, procedures, staffing and financing of operations

This has been an on-going task since the first day the Agency was created TACIS also invested in this task, devoting three person-months in intensive management/organizational training Documents related to this task are included in Deliverable 2 3

2 3 5 Provide assistance in implementing programs to improve collections and reduce non-technical losses

This task was accomplished and related documents are included in volume 1 of Deliverable 2 5

2 3 6 Develop strategies to overcome current and foreseeable supply problems and the need for load shedding

This task was accomplished and related documents are included in Task Report 2 3 6

2 3 7 Support design and launching of media campaign aimed at reducing theft and increasing collections

This task was accomplished and documentation is included in volume 2 of Deliverable 2 5

2 3 8 Analyze metering, billing and collection problems at Kyrgyzenergo and define a cheap, fast, high payoff program to reduce KE's theft and collection problems, and a follow up procedure to track the government's implementation

This task was completed and related documents are included in volume 1 of Deliverable 2 5

## **TASK 2 DELIVERABLES**

1 Report detailing tasks, schedules, costs for completing task 2  
This was submitted early in the project and estimates were continually provided as justification for later contract modifications

2 Report on legislative, regulatory and power sector reform activities completed under task 2

This has been submitted as Deliverable 2 2

3 (as stated in Modification 2) Regulatory Authority Action Plan

3 (as stated in Modification 3) Report on Regulatory Agency organization, procedures and functioning, and expected implementation time-lines

[NOTE the language of MOD 3 says "Add the following under (2)" of Section VI Deliverables, Task 2 Legal and Regulatory and Tariff Reform " Since MOD 2 had already added a number 3 but gave no guidance as to the contents of a "Regulatory Authority Action Plan," it would appear that MOD 3's addition to Task 2 deliverables was a clarification of MOD 2's language ]

This has been submitted as Deliverable 2.3

- 4 Memo providing advice, model agreements, contracts, policies, procedures, regulations and draft licenses

This has been submitted as Deliverable 2.4, Volumes 1-4

- 5 Reports, recommendations and the results of initiatives in billing and collection and anti-theft

This has been submitted as Deliverable 2.5, Volumes 1 and 2

- 6 Report on financial analysis of Kyrgyzenergo provided to GOKR & Parliament

This has been submitted as Deliverable 2.6

### **TASK 3        Restructuring and Privatization**

#### **3.1        Restructuring**

3.1.1 Review status and provide assessment of power sector restructuring plans including determination of whether overall plan includes incentives for long term competition, privatization and market based pricing and consider related factors

3.1.2 Based on this assessment, identify proposed changes or actions needed to be added to existing plans to achieve effective restructuring and attract long term financial support and investor interests, provide options and pros and cons for consideration and decision by GOKR

3.1.3 Develop overall strategy for restructuring the power/heat sector including the structural and implementation details for power company transformation, develop two-three alternative structures including strategy options on unbundling and divestiture of assets/activities

These three tasks were accomplished and documentation is included in Deliverable 3.3

3.1.4 Perform diagnosis of power company considering longer term structure of utility industry including current performance, control, appropriateness of framework to introduce company-wide policies and adequacy of current manuals/procedures, staffing and personnel management, management information systems, develop revaluation methodology

3.1.5 Develop detailed report with recommendations and an action plan with schedule

The study and report called for in these two tasks were prepared by Price Waterhouse and is Deliverable 3.4

3.1.6 Implement key recommendations of this report in collaboration with the company and the government

Details of how this task was pursued and accomplished are included in Deliverables 3.5, 3.6, and 3.8

3.1.7 Develop corporatization documents and plans, establish corporate plan and design of commercialization steps including delineation of various management systems

This task was accomplished and related documents are included in Deliverable 3.2

3.1.8 Provide a user-friendly financial model of the to-be unbundled Kyrgyzenergo

This task was completed and is included in Deliverable 2.6

3.1.9 Assist in preparation of corporate charters for the to-be unbundled companies of Kyrgyzenergo

This task was completed and the draft charters are included in Deliverable 3.8

3.1.10 Assist the SPF and KE prepare a Business Plan and action plan for unbundling Kyrgyzenergo

This task was accomplished in three separate phases and related documents are included in Deliverables 3.5, 3.6, and 3.8

## **3.2 Privatization**

3.2.1 Identify the needs for assistance to develop commercially viable corporate entities, joint ventures, multinational funding support, and or private financing, as appropriate, using a utility as an example by advising on structure, financial, and management systems, including financial and accounting policies and practices, management and operational information systems, business plans, and financial investment informational materials

This has been an ongoing task and was coordinated with other donors who invested heavily (at least four person years) in financial and accounting reform within Kyrgyzenergo. Documentation related to this task is included in Deliverables 3.2, 3.6 and 3.8

3.2.2 Prepare informational materials for presentation to Members of Parliament related to restructuring and privatization. Participate with SEA, SPF, and Kyrgyzenergo in small working-sessions with Members of Parliament to help obtain approval of GOKR's Program for Privatization of Kyrgyzenergo

This has been an ongoing task. Related documentation is included in Deliverables 3.2, 3.3, 3.5, 3.6, and 3.8

3.2.3 Prepare standard package of general information about the power sector for prospective investors

Hagler Bailly prepared and published as a special edition of a Kyrgyz economics journal an entire booklet for investors containing all framework documents related to the power sector's restructuring and privatization, including the energy and electricity laws, regulations, the Government's Privatization Program, the Tariff Policy Summary, and the Kyrgyzenergo Charter

In addition, substantial time was spent with every potential energy sector investor who visited Kyrgyzstan, referred to Hagler Bailly by the various Embassies and the donors, providing our information and analysis of the power sector

3.2.4 Assist in preparation and offering of proposed tenders for large and small hydro projects

This task was accomplished and related documentation is included in Deliverable 3.7

3.2.5 Assist GOKR and others with analysis of recommendations related to reducing impediments to restructuring and privatization

This has been an ongoing task and information related thereto is included in Deliverables 3.2 and 3.6. Hagler Bailly efforts were closely coordinated with those of TACIS, which funded a major (three person-years) project to identify roadblocks to privatization, produce an investor handbook, and recommend legislation or amendments to reduce the roadblocks

3.2.6 Advise the SPF on further privatization of KE shares through appropriate mechanisms, coordinating closely with other USAID programs

This task was accomplished and related documents are included in Deliverable 3.2

## **3.3 Private Investment**

3 3 1 Identify generic key factors required to attract private investment into the power sector particularly in generation Assess specific privatization issues which will include viability of assets, prospective sales and demand growth, mechanism for issuing tenders and stock, and the issues involved in attracting private and/or international funding Provide advice on fund raising and financial issues, mechanisms for establishing wholesale power markets, pricing and price regulations, cash management policies, capital structures, and financing/investment vehicles

This task has been an on-going effort and encompasses most of Hagler Bailly's priority work in Kyrgyzstan over the last 18 months This task was accomplished in close coordination with the efforts of other donors (TACIS in particular, see 3 2 5 above) Related documents are included in Deliverables 3 2, 3 5, 3 6, 3 7, and 3 8

3 3 2 Specify requirements to establish independent competitive power generation market including legal, regulatory, planning, negotiating and implementation of competitive power program

Accomplishment of this task is reflected in the Government's Privatization Program for Kyrgyzenergo, which is still pending approval by the Parliament as of September 30, 1998 Related documents are included in Deliverables 3 2 and 3 7

### **TASK 3 DELIVERABLES**

1 Plan for providing restructuring and privatization support to the energy projects identified during coordination with the Ministry and USAID during planning meetings

Plans and projections of level of effort and expenditures were presented early in the project and were revised periodically as justification for the contract modifications

2 Report on assistance to example utilities and to others, including privatization activities completed for the power sector, progress toward privatization, status of overall privatization efforts, and on major issues which need to be addressed to facilitate this project

This has been submitted as Deliverable 3 2

Under Modification 2, the following Deliverables were added

- 3 Sector Restructuring Options Study
- 4 Power Company (KNEHC) Analysis
- 5 Power Company Restructuring Implementation Plan

Under Modification 3, the following Deliverables were added

- 3 Power Sector Restructuring Options and Plan
- 4 Report on Power System Privatization

[NOTE MOD 3 language says "Add the following under (2)" of Section VI Deliverables, Task 3 Restructuring and Privatization Since MOD 2 had already added 3,4, and 5 as above, there is some confusion, especially since deliverable #3 as stated in MOD 3 looks like a combination of MOD 2's deliverable #3 and 5

This contradiction has been resolved by including all the items from both MOD 2 and MOD 3, but considering the "plan" as meant to be specific to the Company rather than to the overall sector This should be satisfactory since Kyrgyzenergo constitutes virtually the entire power sector in Kyrgyzstan ]

3 Power Sector Restructuring Options Study

This has been submitted as Deliverable 3.3

#### 4 Power Company (KNEHC) Analysis

This has been submitted as Deliverable 3.4

5 Power Company Restructuring Implementation Plan

This has been submitted as Deliverable 3 5

6 Report on Power System Privatization

This has been submitted as Deliverable 3 6

7 Formal comments on draft tenders for new construction and privatization of energy facilities

This has been submitted as Deliverable 3 7

8 Reports summarizing analyses and strategies for unbundling KE with enclosures on briefing papers and proposed business plan

This has been submitted as Deliverable 3 8