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KYRGYZSTAN: ENERGY PLANNING

(Task 2.2.5)

**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
Bureau for Europe and NIS
Office of Environment, Energy and Urban Development
Energy and Infrastructure Division

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September 25, 1998

EXECUTIVE SUMMARY

Task 2.3.6

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 through 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.

The reports included here describe the crisis as it evolved, and several suggested action steps for a strategic solution to the supply (though really cash) shortfall. Also included 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 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.

Overcoming Supply Problems (Task 2.3.6)

TABLE OF CONTENTS

	Executive Summary
Chapter 1.	Kyrgyzenergo Rolling Brownouts (Report of August 13, 1997)
Chapter 2.	Building Energy Crisis (Report of October 20, 1997)
Chapter 3.	Developing Supply Crisis In The Kyrgyz Electric Sector (Report of January 28, 1998-r)
Chapter 4.	Program To Improve Reliability And Restore Full Supply Of Electric Energy In The Kyrgyz Republic (Prepared at the Request of State energy Agency on March 12, 1998)
Chapter 5.	Nine Actions Status Report (Report of May 5, 1998)
Chapter 6.	Presentation For President Akaev (September 10, 1998)
Annex 1.	Memo on Heating Load and Water Crisis (February 22,1998)
Annex 2.	Comparison of Actual Consumption per Day with Limits Ordered by Governmental Decrees for Summer-Winter Season of 1997-1998
Annex 3.	Toktogul Reservoir Levels
Annex 4.	Press Clips on Crisis: "Love for Electricity"; "Where there are no Cables" (September 30, 1997) "Ananyevo village is in a Darkness" (October 29, 1997)
Annex 5.	Report to the Minister of Finance on State and Dynamics in the Sector and in Kyrgyzenergo (February 13, 1998)
Annex 6.	Report on Financial Status of Kyrgyzenergo and Value-adding Strategies (February 25, 1998)
Annex 7.	Report on Government Resolution on Financial Improvement of Kyrgyzenergo (May 7, 1998)
Annex 8.	Report on Toktogul Water Level (May 9, 1998)
Annex 9.	Decrees of Government on Supply Crisis and Restoration of Service
	1. Summary of the Following Decrees:
	2. Kyrgyz Republic Government Resolution # 327; June 2, 1997
	3. Kyrgyz Republic Government Resolution # 492; August 29,1997
	4. Kyrgyz Republic Government Resolution # 676; November 21, 1997
	5. Resolution of the Meeting of People's Representatives of Jogorku Kenesh of the Kyrgyz Republic on Energy Supply Status of the Republican Economy and Readiness of the Energy System for Autumn and Winter Period of 1997-98; December 1, 1997
	6. Kyrgyz Republic Security Council Resolution # 6; December 25, 1997
	7. Kyrgyz Republic Government Resolution # 762; December 29, 1997
	8. Kyrgyz Republic Government Decree # 59; February 3, 1998
	9. Kyrgyz Republic Government Resolution # 219; April 24, 1998
	10. Items Deleted by the Government from Kyrgyzenergo's Draft of the Program "On Improving Kyrgyzenergo's Financial Situation"



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MEMORANDUM

August 13, 1997

TO: Distribution

FROM: Joellyn Murphy
Hagler Bailly, Bishkek

RE: Kyrgyzenergo Rolling Brownouts

As I previously reported, calculations by Kyrgyzenergo show a serious net draw down of the Toktogul reservoir due to the combination of 1) winter production of electricity to meet demand, 2) summer irrigation flows, and 3) a couple of dry years with less snow pack and glacier melt than normal.

Kyrgyzenergo has now undertaken "extreme" measures to build back reserve levels by setting targets for reduced load that distribution entities will meet through load shedding and rolling brown outs.

As the attached chart shows, Kyrgyzenergo estimates that without taking extreme measures, the reservoir will fall below the "dead zone" in 1998, in which case the Naryn Cascade hydroplants (80% of the Republic's capacity) would not be able to generate. (There was an earlier calculation which showed that the reservoir would fall below the dead zone in 1997, but I was told that, after careful deliberations regarding this sensitive issue, the Government instructed Kyrgyzenergo to reexamine that calculation.)

Also attached is an article that appeared in the Bishkek daily paper about the brownouts that are now affecting even Bishkek. Please note the surprising last paragraph.

Help! Electricity has faded!

Mass outages started in Bishkek.

Every day residents of the 5th, 6th and some other southern microdistricts of the capital stay for several hours without electricity. And, as usual, none of the consumers was notified about these outages.

At customers' request we asked energy authorities to have mercy on us. The result was negative. And here are the reasons.

The authorities of Bishkek distribution networks think that Government is guilty in this situation. Because the Government set rather rigid limits on consumption and controls its compliance. A special schedule of electricity supply was worked out, based on this limit. It refers not only to microdistricts but to the central parts of the city as well. So nobody would be in better situation.

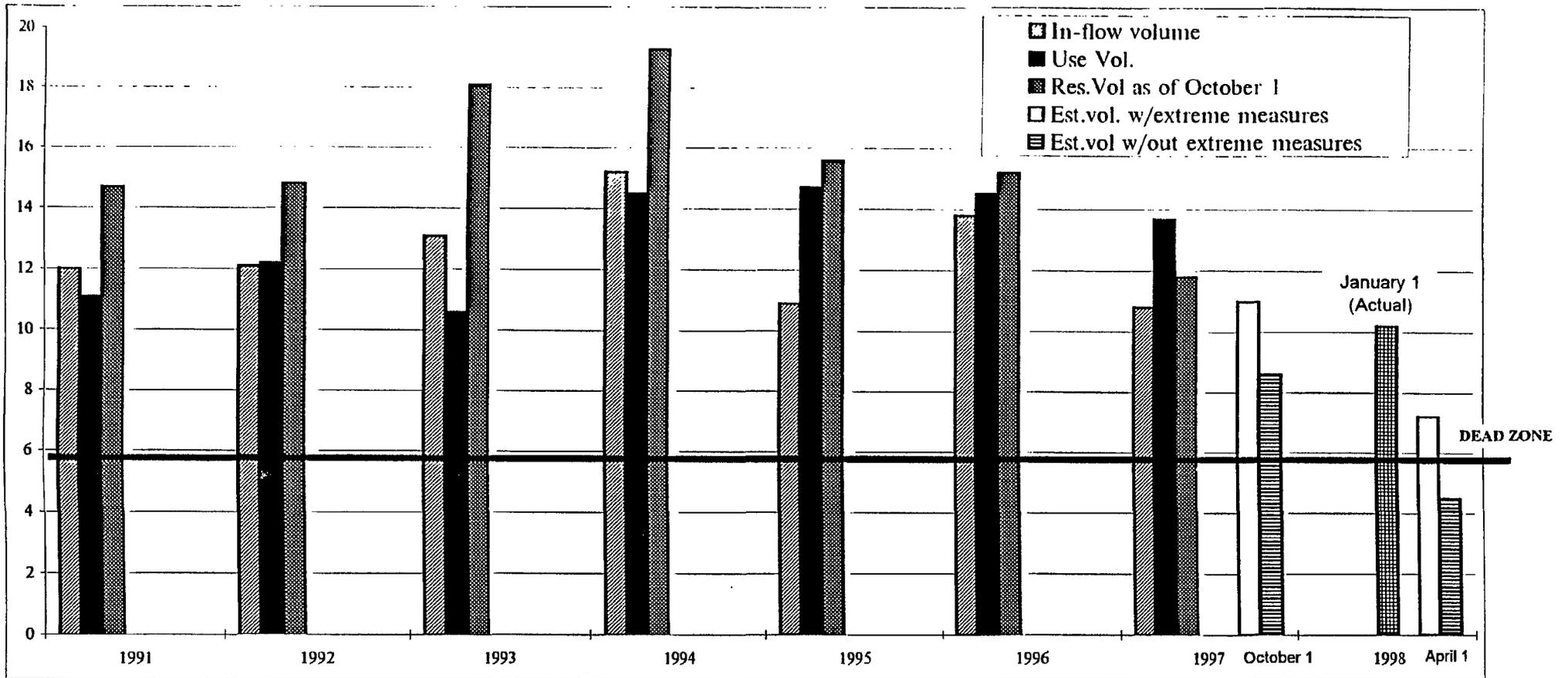
Also nobody could answer how long the schedule would function. As soon as the Government gives an instruction, the lights will be on for the whole day and food products will not get spoiled in our fridges. The problem is how can we increase this limit. There is only one way to do it - it could be done at the expense of rural customers. But they have already been limited more than the city residents. The whole summer there are constant disconnections lasting many hours, not only in far-away areas but not far from the city as well. They say that the situation will be getting worse and worse. Why?

Energy analysts try to defend the Government, who is undertaking the most resolute steps because of natural cataclysms. They refer to shortage of water also. That's why we need to economize water resources in order not to find ourselves in a dark kingdom.

To cut a long story short, all attempts to clarify the situation have only one thesis: there is a catastrophic lack of energy in the country. As for customers, they do not save it and do not pay for it in time. They are getting what they deserve - let them sit without the light.

Balance of Energy Resources of Toktogul Reservoir for 1991/98

6



	1991	1992	1993	1994	1995	1996	1997	1998
In-flow volume	12	12.1	13.1	15.2	10.9	13.8	10.8	
Use Vol.	11.1	12.2	10.6	14.5	14.7	14.5	13.7	
Res. Vol as of October 1	14.7	14.8	18.1	19.3	15.6	15.2	11.8	
Res. vol as of January 1	16.26	13.91	13.75	16.94	17.66	13.92	13.07	10.2
Est. vol. w/extreme measures							Oct. 1 11	Apr. 1 7.2
Est. vol w/out extreme measures							Oct. 1 8.6	Apr. 1 4.5

January 23, 1998
Bal_tok.xls01

October 20, 1997

TO: Patricia Buckles

FROM: Joellyn Murphy

RE: Building Energy Crisis

As your energy sector advisor in Kyrgyzstan, I would like to formally alert you to the accelerating problem with the Republic's electric supply that I have been discussing informally with Barry, CJ, Fred and John for the last several weeks.

From previous faxes, you are already well aware of the critically depleted state of the Toktogul reservoir, the Government's mandate to reduce load through load shedding (rolling brownouts and blackouts,) and the growing public hardship in the rural oblasts.

I would like to share with you some of the reasons why my concern continues to deepen as the weeks pass.

1. The situation **MAY** be worse than the official numbers indicate. Kyrgyzenergo's official calculations show that the Reservoir level will not fall below the "dead zone" this winter or next. However, these calculations are based on the assumption that the Government's "extreme measures" (i.e. the load shedding) will successfully halt further reduction of the reservoir and that this winter's snow pack will be "average." Furthermore, I must also express my personal skepticism that all these calculations have been made solely from a technical perspective.

2. Even if generation doesn't hit the "dead zone," large parts of the distribution system could "crash" under winter stresses. Distribution networks are currently so overloaded that system failure is a real possibility if this winter brings extreme weather, curtailment of gas supplies, or a coal shortage. Any one of these stresses would cause an increased use of electricity, which could, especially in Bishkek, "burn out" large buildings or entire neighborhoods.

3. Kyrgyzenergo will likely implement the "extreme measures" in ways that will increase public outrage and be destabilizing.

Last week I asked Mr. Sartkaziev whether the Government intended to issue additional decrees to limit loads even more than the current average 30% reduction from last year's consumption. He replied, "No, I don't think so. We are now considering closing the schools for two months this winter to save electricity." This week, he said the same thing during hearings in Parliament. That Kyrgyzenergo (and the Government?) could be considering such a dire measure indicates that we haven't hit bottom yet.

4. People are already taking things into their own hands in ways that can further polarize the social/political situation. Some individuals have begun to, in essence, micro-privatize the electric system by installing their own generators. (Small ones are selling in Bishkek at a rate of 3-5 per day.) So, rich people will have electricity when poor people don't. And all because the Government won't raise tariffs because it wants to protect poor people!

Information on Generators

1 cylinder, petrol/diesel

Capacity	Fuel Consumption	Price
4 kW	1.5 liter/hour	\$1,092
6 kW 1 phase 3 phase	1.5 liter/hour	\$1,600 \$1,800
8 kW	1.5 liter/hour	\$2,484
10 kW	1.5 liter/hour	\$3,430
15 kW	1.5 liter/hour	\$7,500

Turnover 3 or 4 generators are being sold every day.

Customers Citizens of Kazakhstan (Georgievka village, Jambul, Karaganda)
Bishkek Residents

Advertisement in the "Vecherni Bishkek" newspaper

<p>JV "Turkestan Ltd" an official dealer of the "AKSA" plant (Istanbul) offers GENERATORS (6 modifications) single and three phase, 220-380 V; 2,2 - 15 kW, petrol or diesel 1 year of guarantee Spare parts are provided Consulting Services. "Service on Subscription" Agreements</p> <p>Waiting for orders on delivery of GENERATORS (with capacity varying from 2.2 to 1600 kW)</p>	<p>Address: Bishkek #40 Manasa St. Room 52</p> <p>Tel. ## 22-43-87 21-17-82</p> <p>Fax: 22-27-44</p>
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January 28, 1998 (r)

TO: Patricia Buckles, USAID Mission Director

FROM: Joellyn Murphy
Hagler Bailly, Bishkek

RE: Developing Supply Crisis in the Kyrgyz Electric Sector

As requested, here is my summary of the current situation, including an assessment of whether the system is likely to "crash."

The Current Situation

Kyrgyzenergo's ("KE") calculations of water volume in the Toktogul Reservoir show a serious net draw down in 1997 due to the combination of 1) high production of electricity to meet winter demand and export targets, 2) large summer releases for irrigation for Uzbekistan and Kazakhstan, and 3) a run of two dry years with less than normal snow pack and glacier melt.

Toktogul's normal water level in January is about 14 billion cubic meters. On January 1, 1997 the level was about 13.1 and on January 13, 1998, it was 9.7, about 30% under norm.

Last June and again in August, the Government ordered Kyrgyzenergo to take "extreme measures" to limit consumption in order to build back reserve levels. Without such measures, KE estimates that the Reservoir will fall below the "dead zone" (5.5 billion cubic meters) by April 1998. (See chart and diagram attached). This means KE would be unable to generate electricity from the Naryn Cascade (which is now producing about 85% of the Republic's power). In the oblasts, and in parts of Bishkek, distribution networks are meeting these limits by shedding load (blackouts and brown outs).

The load limits for 1997-98 winter months (October through April) average an across-the-board reduction of 30% from 1996 levels. But, because most of Bishkek is being kept up (as are priority users such as hospitals and schools), the effect in rural areas would be closer to a 40% reduction, if the limits were fully implemented.

Media report almost daily on the deteriorating situation and resulting problems: increasing crime, burned out water pumps, cut off drinking water supplies, spoiled food, frozen pipes, damaged electrical appliances, shut down production lines, closed shops, and foreign investment put on hold because of power shortages. There are also reports of Kyrgyzenergo employees extorting bribes to respond to emergencies or turn the power on for weddings and funerals; of increasing vandalism of electrical transformers and substations, and of attacks on Kyrgyzenergo employees.

Kyrgyzenergo can't solve the problem by importing power. To import the 2 billion kWh needed (from Turkmenistan, the only CAR that currently has a surplus), it would cost about \$80,000,000 -- which is almost twice KE's reported total expenditures last year.

Nor can Kyrgyzenergo easily solve the problem just by increasing output at the Bishkek Thermal Plant. To do so, KE would have to pay about \$30 million for additional fuel. And KE is unable to pay for fuel even at the plant's current level of output.

KE reports that the Bishkek Thermal Plant (as of Jan. 21) was down to about a 10-day supply of coal. Kyrgyzenergo says Kazakhstan coal trains are loading and on the way, but the State Energy Agency tells us this is not so. To stretch the current fuel supply, KE has lowered the temperature of the water for the district heating system. So indoor temperatures are down noticeably.

Shut down of this plant because of lack of fuel would leave most of Bishkek without heat. Residential heating consumers would then switch to electric heaters and so overload the system that a "burn out" of large parts of Bishkek would be likely. This could affect parts of the drinking water supply (especially multi-storied buildings) as well as some analogue phone switching stations.

We saw a small scale version of this effect in December when the gas supply was curtailed. Consumers switched to electricity for cooking and caused burnouts in many parts of the city, leaving some customers without power for 15-30 days.

While it's easy to blame the dry years for the current situation, they simply accelerated public exposure of the fundamental problem: there is no cash. A thumbnail sketch of the situation is that:

- Of total domestic production,
 - * 27% is stolen,
 - * 13% of what is billed is never paid for,
 - * only 19% is billed at and paid for at full tariff,
 - * full tariff is only 60% of estimated real cost, and
 - * 72% of payments are barter.

The Kyrgyz electric sector has been steadily heading for crisis despite continuous warnings and recommendations for financial and structural reform from hosts of European, US, and Asian advisors. Existing problems were aggravated by the staggering growth in small consumer demand -- a fivefold increase in the last six years -- due primarily to the Government's conscious policy to promote use of electricity for heating through subsidized tariffs.

So far, there's been unwillingness to make the necessary hard decisions that would put cash into the system: raise tariffs to cover full costs, fund a social safety net for low-income customers, stop the theft, disconnect non-payers, and eliminate the myriad payment discounts. One result is that Kyrgyzenergo and the Government are not in compliance with covenants of donor loans.

Because there is no cash, the electric sector as both a technical and financial system has deteriorated to a critical point. Technical redundancy in the system (the key to system reliability) is used up due to years of "disinvestment" (accumulating backlogs for repair, maintenance, rehabilitation, etc.).

Kyrgyzenergo proposed its solution to the 1998 supply crisis to the Government on January 9: decrease hydro output by 2.5 billion kWh, increase thermal output by 1.1 billion kWh, and decrease exports by 1 billion kWh -- for a net decrease in domestic consumption of about .4 billion kWh (all relative to 1996 levels).

It is as yet unclear how Kyrgyzenergo intends to finance this plan: the additional fuel for the Thermal Plant would cost about \$15 million and the decrease in exports would drop about \$17 million from revenues. KE's plan does not identify a credible source for the additional \$32 million. (And this \$32 million is, presumably, in addition to the \$30-40 million KE says it can find to finish the Tashkumyr and Shamaldysai plants on its own without private investors or donor involvement.)

Assessment of the Potential for the System to "Crash"

From the perspective of a Western utility operator, the system has already crashed: a majority of customers are without 24-hour power, outages are increasing in frequency and duration, and Kyrgyzenergo is unable to keep up with emergency repairs.

From a more local perspective, the Republic's electric system as a whole is unlikely to crash this winter, BUT:

- The blackouts and brownouts will most likely get longer, spread to more areas, and drag more of the economy. They could also destabilize the political environment.
- Because of the system's increased vulnerability to any single additional stress -- whether a drop in gas supply, running out of coal for the thermal plant, or sabotage of a substation, etc.-- large parts of the distribution system are likely to burn out or be shut down for long periods, especially in Bishkek.
- More and more well-off individuals will "micro-privatize" the system by installing their own small generators (4-5 a day are currently being sold in Bishkek), increasing air pollution, noise, import of fossil fuels, and strain on the social fabric.
- Hitting the dead zone next winter is still a serious possibility unless the next three months are very, very wet.

And, unless the Government undertakes immediate, fundamental, and straightforward reform of the sector, there appear to be only two alternatives:

- further reduce consumption by significantly increasing the rolling blackouts,
- request emergency loans from donors to pay for fuel needed to increase output at the Bishkek Thermal Plant.

Recommendations

There has been a number of decrees and resolutions recently -- from Parliament, the Security Committee, President Akaev, and the Government. But it's not clear whether these decrees will result in real changes within the sector and therefore real solutions.

In fact, there was a disturbing indication this week that the Government does not intend to bring about the necessary changes. This was the deletion of key sections from the State Energy Agency's recently drafted Performance Agreement between Kyrgyzenergo and the Government. Deleted were sections committing the Government to:

- increase tariffs and eliminate payment discounts,
- provide administrative and legal support to KE's efforts to fight against theft,
- earmark profits from exports to fund the social safety net for low-income consumers.

I think the following set of actions must be taken if reform of the sector is to happen in time to save it from collapse. I also believe that their implementation should be a precondition to any additional donor assistance for the sector.

1. The President names a new Kyrgyzenergo Board of Directors, composed of outsiders and including a representative of the private investor who now holds more than half the stock sold through the coupon auction. (The current Board is composed of KE managers and violates both the Kyrgyz Law on Companies and KE's own Charter.)
2. The President declares an emergency condition, names a 3-person Executive Committee of the Board, and vests it with emergency authority to reform and restructure KE. All three would be outside Directors, subject to coordination with the donors.
3. The Government takes action to raise tariffs, pay its own bills, fund the social safety net, eliminate privilege discounts, collect bills, and stop theft, stating specific dates and targets in the Performance Agreement executed with Kyrgyzenergo,
4. Kyrgyzenergo brings its operations into substantial compliance with the covenants in EBRD, World Bank, and ADB loans, stating specific dates and targets in the Performance Agreement executed with the Government,
5. Execution and implementation of this three-year Performance Agreement becomes a condition of all future donor loans, including any emergency measures that may be sought by the Government,
6. Kyrgyzenergo invests about \$1 million to revamp its metering, billing, and collection system (which would recoup an estimated \$17 million in the first year, \$25 million in the second and \$33 in the third),
7. The State Property Fund issues a tender for the partial privatization of five distribution companies by August, 1998,
8. Kyrgyzenergo immediately seeks soft loans for completion of Tashkumyr and Shamaldysai.
9. Kyrgyzenergo ceases exports except for those related to summer irrigation releases as long as load shedding is in effect.

DRAFT

March 12, 1998

**PROGRAM TO IMPROVE RELIABILITY AND
RESTORE FULL SUPPLY OF ELECTRIC ENERGY IN
THE KYRGYZ REPUBLIC**

In order to fulfill measures specified in the Government's Decree # 327 of 2 June 1997, Decree # 492 of 29 August 1997, Decree # 676 of 21 November 1997, Decree # 762 of 29 December 1997, and Decree # 59 of 3 February 1998, and in Resolution # 6 of the Security Council of the Kyrgyz Republic of 25 December 1997, and in the Resolution # 747/1 of the Jogorku Kenesh of 1 December 1997, and in order to fulfill its responsibilities under the Energy Law of the Kyrgyz Republic, the State Energy Agency under the Government of the Kyrgyz Republic has determined that:

1. Extraordinarily high technical and commercial losses and unacceptably low rates of cash collection have impaired the ability of JSC "Kyrgyzenergo" to provide reliable service and uninterrupted supply of electricity to the people and enterprises of the Kyrgyz Republic;
2. This situation is causing financial loss to businesses and industry in the Republic, discouraging new investment, and imposing economic loss and social hardship on the population of the Republic.
3. Without both an increase in tariffs and significant improvement in cash revenues, JSC "Kyrgyzenergo" is unable to maintain and repair essential facilities or to procure sufficient fuel to increase production at the Bishkek thermal plant to compensate for reduced hydropant production made necessary by international water agreements and the low level of water in the Toktogul Reservoir.
4. The following specific actions are necessary in order to improve the reliability of the Republic's electric system, to restore full supply of electric energy, and to eliminate the need for load shedding and the economic and social hardships it is causing the people and enterprises of the Kyrgyz Republic:
 - 1) JSC "Kyrgyzenergo" will immediately adopt the new Accounting Standards of the Kyrgyz Republic, and before April 14 will calculate and report both profit and income for 1997 in accord with the new Accounting Standards.
 - 2) JSC "Kyrgyzenergo" will immediately calculate and begin reporting monthly to the State Energy Agency an actual average collected tariff in addition to its standard calculation of average tariff.
 - 3) JSC Kyrgysenergo will develop a schedule for financing and installing meters on all customers and on each 10/0.4kV substation and submit it by April 30, 1998 for approval by the State Energy Agency.

- 4) JSC "Kyrgyzenergo" will procure and begin using tamper proof meter seals by June 30, 1998.
- 5) JSC "Kyrgyzenergo" will immediately reorganize its metering operations to separate the functions of meter reading, meter sealing, and money collection and to assure that by June 30, 1998, meter readers are reading 100% of meters each month.
- 6) JSC "Kyrgyzenergo" will by March 31, 1998 submit to the State Energy Agency a plan to make certain adjustments to the existing billing system that will enable each Distribution Enterprise by July 31, 1998 to begin calculating monthly bills for all customers and to provide sufficient, verifiable data to the State Energy Agency about average monthly consumption and payments and actual aging of accounts receivable by customer class by rayon and by customer for the largest customers in each rayon.
- 7) JSC "Kyrgyzenergo" will by March 31, 1998 submit to the State Energy Agency for approval its proposed policies and procedures related to the orderly disconnection of customers for habitual non-payment, including the definition of customers who cannot be disconnected for reasons of life-saving, health or safety, in accord with Article 11 of the Electricity Law of the Kyrgyz Republic.
- 8) JSC "Kyrgyzenergo" will by June 30, 1998 develop and submit to the State Energy Agency a plan on how it will eliminate barter in collections by June 30, 1999.
- 9) JSC "Kyrgyzenergo" will immediately begin to report monthly to the State Energy Agency on each rayon's initiatives and progress in reducing theft and barter and increasing collections, including verifiable statistics on results.
- 10) JSC "Kyrgyzenergo" will appoint an Executive Director whose sole responsibility will be to focus on the reduction of commercial losses, the increase of collections, and the continuous improvement of customer service, including the development of both formal and informal customer complaint resolution mechanisms at the rayon level, as well as a customer information and energy savings education program.
- 11) JSC "Kyrgyzenergo" will by June 30, 1998 negotiate and execute the Performance Agreement approved by the Government of the Kyrgyz Republic. JSC "Kyrgyzenergo" will at the same time submit to the State Energy Agency a revised system for determining and paying employee bonuses for 1998 on meeting performance standards set forth in the Agreement.
- 12) Distribution of the 1% of shares of JSC "Kyrgyzenergo" currently reserved for the employees of "Kyrgyzenergo" will not be distributed unless the Government's target for reduction of commercial losses, improved collections, and the requirements of Article 9 of the Performance Agreement have been met, as verified by an independent

auditor, including the provision that monthly average collected tariff shall be no less than 95% of the posted tariff for each customer class.

The State Energy Agency also makes the following recommendations to the Government of the Kyrgyz Republic:

1. That the Ministry of Justice prepare amendments to the Administrative Code to clarify penalties and fines related to the theft of electricity and thermal energy and provide administrative and legal support to JSC Kyrgyzenergo's efforts to fight against theft.
2. That after Kyrgyzenergo is unbundled the State Property Fund sell up to 5% of the State's packet of shares in the Naryn Hydro Company and the National Grid Company in a competitive tender in order to raise sufficient revenue to create a permanent investment trust fund, the proceeds of which will be used in perpetuity to fund the "social safety net" so that low income customers can afford a basic minimum amount of electricity and thermal energy.

Март 13, 1998

ПРОЕКТ

**ПРОГРАММА ПО УЛУЧШЕНИЮ НАДЕЖНОСТИ И
НОРМАЛИЗАЦИИ ЭЛЕКТРО И ТОПЛИВОСНАБЖЕНИЯ В
КЫРГЫЗСКОЙ РЕСПУБЛИКЕ**

В целях осуществления мер, предусмотренных постановлениями Правительства Кыргызской Республики № 327 от 2 июля 1997 года, № 492 от 29 августа 1997 года, № 676 от 21 ноября 1997 года, № 762 от 29 декабря 1997 года, № 59 от 3 февраля 1998 года, а также постановлением № 6 Совета безопасности Кыргызской Республики от 25 декабря 1997 года и постановлением Жогорку Кенеша № 747/1 от 1 декабря 1997 года, а также во исполнение своих обязанностей, возложенных Законом Кыргызской Республики "Об энергетике", Госагентство по энергетике при Правительстве Кыргызской Республики пришло к следующим заключениям:

1. Необычайно высокие показатели технических и коммерческие потерь и неприемлемо низкий уровень сборов платежей снизили способность АО "Кыргызэнерго" осуществлять надежное электроснабжение населения и предприятий Кыргызской Республики;
2. Такое положение дел наносит финансовый ущерб предприятиям и промышленности Республики, отпугивает новые инвестиции и накладывает экономическое и социальное бремя на население Республики;
3. Без повышения тарифов и значительного улучшения сбора платежей АО "Кыргызэнерго" не в состоянии осуществить техническое обслуживание и ремонт основных объектов и закупать достаточное количество топлива для увеличения объемов производства электроэнергии на Бишкекской ТЭЦ в целях компенсации снижения уровня производства на ГЭС, которое стало необходимо в силу международных соглашений о водных ресурсах и низкого уровня воды в Токтогульском водохранилище;
4. Для повышения надежности энергетической системы Республики, нормализации электро- и топливоснабжения и для устранения необходимости применения лимитов потребления и вызываемых ими экономических и социальных трудностей для населения и предприятий Кыргызской Республики необходимо принять следующие меры:
 - 1) АО "Кыргызэнерго" незамедлительно ввести новые стандарты бухгалтерского учета Кыргызской Республики и до 14 апреля сделать расчеты и сообщить данные о прибыли и доходах за 1997 г. согласно новым стандартам бухучета.
 - 2) АО "Кыргызэнерго" незамедлительно ежемесячно сообщать Госагентству по энергетике данные по фактически собираемому среднему тарифу в дополнение к обычному среднему тарифу.

- 3) АО “Кыргызэнерго” составить график финансирования и установки счетчиков у всех абонентов и на каждой подстанции 10/0.4 кВ и представить на одобрение Госагентства по энергетике до 30 апреля 1998 года.
- 4) АО “Кыргызэнерго” обеспечить доставку и начать использовать надежные пломбы на счетчики к 30 июня 1998 года.
- 5) АО “Кыргызэнерго” немедленно пересмотреть свои операции по проверке показаний счетчиков с тем, чтобы отделить функции снятия показаний счетчиков, их пломбирования и сбора оплаты, а также добиться того, чтобы к 30 июня 1998 года контролеры считывали показания со всех подконтрольных им счетчиков каждый месяц.
- 6) АО “Кыргызэнерго” к 31 марта 1998 года предоставить в Госагентство по энергетике план мероприятий, который позволит каждому ПЭС к 31 июля 1998 года начать ежемесячную выписку счетов, для всех абонентов, а также предоставлять Госагентству по энергетике достаточную и проверенную информацию о среднем месячном потреблении и платежах по каждому классу потребителей в районе и по каждому крупному потребителю в каждом районе с указанием фактического срока дебиторской задолженности.
- 7) АО “Кыргызэнерго” к 31 марта 1998 года предоставить на утверждение Госагентству по энергетике порядок отключения потребителей за систематические неплатежи с четким определением тех абонентов, которые согласно статье 17 Закона Кыргызской Республики “Об электроэнергетике” не могут быть отключены, если прерывание услуг угрожает их жизни, здоровью или безопасности.
- 8) АО “Кыргызэнерго” к 30 июня 1998 года разработать и представить в Госагентство по энергетике план устранения бартерных расчетов при сборе платежей за потребление электроэнергии к 30 июня 1999 года.
- 9) АО “Кыргызэнерго” незамедлительно начать предоставлять в Госагентство по энергетике ежемесячные отчеты о работе каждого района по снижению уровня хищений и бартера, улучшения сбора оплаты за потребленную электроэнергию, содержащие проверенные данные.
- 10) АО “Кыргызэнерго” назначить исполнительного директора, обязанностью которого будет работа по сокращению коммерческих потерь, улучшению сбора платежей, неуклонному улучшению качества предоставляемых услуг, а также разработка официальных и неофициальных механизмов разбора жалоб абонентов на уровне районов и подготовка программ информирования потребителей и обучающих программ по энергосбережению.

- 11) АО “Кыргызэнерго” к 30 июня 1998 года провести переговоры и начать исполнять Соглашение о деятельности, утвержденное Правительством Кыргызской Республики. Одновременно АО “Кыргызэнерго” предоставить в Госагентство по энергетике пересмотренную систему расчета и выплаты премий своим работникам за 1998 год, основанную на выполнении требований, предусмотренных Соглашением о деятельности.
- 12) Распределение 1% акций АО “Кыргызэнерго”, зарезервированных в настоящее время для работников АО “Кыргызэнерго”, не проводить до тех пор, пока не будут достигнуты намеченные Правительством уровни сокращения коммерческих потерь, улучшение сбора оплаты, а также выполнены требования статьи 9 Соглашения о деятельности. Выполнение этих требований должно быть проверено независимым аудитором. Должно быть также соблюдено условие, что среднемесячный собираемый тариф должен составлять не менее 95% от установленного тарифа по каждому классу потребителей.

Госагентство по энергетике также вносит следующие рекомендации Правительству Кыргызской Республики:

1. Министерству юстиции Кыргызской Республики разработать дополнение к кодексу Кыргызской Республики об административных правонарушениях, определяющие санкции и штрафы за правонарушения в области электроэнергетики, а также обеспечить административную и юридическую поддержку АО “Кыргызэнерго” по борьбе с хищениями.
2. После реструктуризации АО “Кыргызэнерго” Фонду Госимущества Кыргызской Республики продать до 5% акций из государственного пакета акций компании “Нарын Гидро” и компании “Национальные сети” на торгах с неограниченным количеством участников для получения достаточного количества средств на создание постоянного инвестиционного трастового фонда, доход от которого будет на постоянной основе использоваться для финансирования “Сети социальной защиты”, что позволит малообеспеченным получать базовый минимум электро - и теплоэнергии.



Hagler Bailly

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USAID Contractor



FAX COVER SHEET

Date: *5 May 1998* # of pages: 4

Subject: *Status of "Nine Points"*

From: *Jocelyn Murphy*

To: Barry Primm/Russ Backus
CJ Rushin-Bell/ John Bayer
David Keith/Jim Westfield
Mike Biddison/Doug Miller
• Bob Archer

This fax is in response to Russ Backus' request for a status report on the nine actions listed in my 28 January memo to Ms. Buckles -- actions which I think the Government must take in order to save the electric sector from imploding.

1. Action:

The President names a new Kyrgyzenergo ("KE") Board of Directors composed of outsiders (as required by KR Law and Kyrgyzenergo's own Charter) and which includes a representative of the private investor who owns a large portion of the KE shares sold during the coupon auction.

Status:

According to the President's staff, he has made up a list of new Board Members of non-KE managers, but he did not put it forward at KE's annual meeting on April 14, as had been planned, due to the PM's precipitous resignation and the ensuing shake up in the Government. However, we are told there will be action soon. And, we learned from the private investor who owns a large chunk of the KE shares in the market that they were asked by the National Securities Commission to take a place on the Board.

In a related development, the President's office recently took action to correct deficiencies in the Charters of Kyrgyztelecom and the Airline related to composition of and election to the Board.

2. Action:

The President declares an emergency and appoints a three-person Executive Committee of the Board and vests it with authority to reform and restructure KE.

Status:

The World Bank's Varadarajan Atur told me (at the end of his recent two-week Mission in Bishkek), that the President plans to appoint a 3-person commission to "review the reports and situation of Kyrgyzenergo." We understand that this is a prelude to changing senior management at KE.

3. Action:

The Government raises tariffs, pays its own bills, funds the social safety net, eliminates special privileged discounts, and allows KE to collect bills and stop theft, stating specific dates and targets in the Performance Agreement.

Status: the Performance Agreement we drafted for the State Energy Agency was reviewed by Government, and the SEA has begun the initial round of negotiation with KE. Of particular note, the World Bank has made it a condition of the \$15 million credit supplemental that the SEA and KE execute the Performance Agreement in a form acceptable to the Bank. (So we've now got the leverage and attention we need to get the meat back into the Performance Agreement.)

Also please note that since my memo:

- the SEA did raise tariffs (as of March 1),
- the Government approved the SEA's tariff policy on March 13,

- the Government approved a "Financial Recovery Program" for Kyrgyzenergo on March 13 which, in essence, provided for the Government to pay its bills through mutual clearings,

- USAID consultants managed to persuade KE not to declare dividends on its paper "profits" until after an audit has been done, and also obtained an agreement from the SPF that any dividends that might eventually be declared would not be used by the Government as a credit against its electric bills. This agreement was codified by the World Bank which added it to the conditions for the credit supplemental.

- Funding the social safety net remains a problem, but the World Bank is pressing on this issue, and resolution is a factor in the credit supplemental.

- The previous Prime Minister said that privileged discounts would remain. We don't know yet the views of the new Prime Minister. This seems to be a political

sacred cow.

-Kyrgyzenergo has developed and adopted a full program for reducing commercial losses and improving billing and collection. It's too early to see tangible results yet, but there is a lot of activity, including systematic work with the media in conjunction with our guerilla "media campaign" about theft and bill paying.

4. Action: KE brings its operations into compliance with Bank covenants, with dates and targets specified in the Performance Agreement.

Status:

These have been incorporated in the draft Performance Agreement. There has been progress on several past sticking points. For example, coverage ratios should increase with the tariff increase and the push to improve collections. (But only time will tell for sure!). Another example: KE issued an order to start buying all customer-owned meters. etc.

5. Action:

Execution and implementation of the Performance Agreement becomes a condition of all future donor loans.

Status: As mentioned above, this is now a condition of the World Bank credit supplemental. We will also be discussing this with EBRD and ADB.

6. Action: Kyrgyzenergo implements the Hagler Bailly recommendations for improving metering, billing and collections (the Chawolwski report of December, 1997).

Status:

The World Bank has made it a condition of the credit supplemental that KE hire a consultant acceptable to the Bank to implement this program.

7. Action: State Property Fund issues a tender for partial privatization of the distribution companies.

Status: We understand that EBRD has drafted the call for tenders and will pay for the tender consultant. However, action is stymied pending decisions on the issue of Parliament's approval of the Privatization Program.

8. Action: KE seeks soft loans to complete Tashkumyr and Shamaldysai.

Status: So far, KE still maintains that it can and will finance completion of these hydroplants itself. Even offers from the "bidders" on the Kambarata 2 plant could

not budge them.

9. KE ceases exporting electricity except for those exports related to summer irrigation.

Status: I have personally discussed this in private with Minister Koichumanov, especially the political implications of turning off Kyrgyz citizens so KE could sell to Uzbekistan or Tractebel in Almaty. He sees the problem, but nevertheless, the Government has included language in various recent decrees that calls for an increase in electricity exports. However, the Government is also maintaining -- in public -- that load shedding will not be necessary in the 1998-99 season.

Whether exports make sense for this year depends on:

- the expected inflow/outflow balance of the Toktogul Reservoir,
- the implications of the water/energy agreement that set water release targets, and
- the way in which Kyrgyzstan intends to reduce its 1998 domestic energy consumption by 10% below 1997 (which was already a reduction of 5% below 1996), as required by the water/energy agreement.

I will be sending a separate fax about the prognosis for Toktogul, and we are still trying to figure out how the Kyrgyz intend to comply with the 10% reduction imposed by the agreement. So far, we're not getting any straight answers.



**PRESENTATION FOR
PRESIDENT AKAEV**

September 10, 1998

On Kyrgyzenergo's Current Situation and the Need to Unbundle the System and Privatize the Distribution Companies.

The Kyrgyzenergo's distribution system is seriously overloaded as a result of a staggering 30% a year increase in total useage by small consumers between 1990 and 1996. Around 1992, theft of electricity started to grow rapidly, and by 1996, small consumers were stealing as much as they were paying for. (See Chart 1.)

By 1996 small user consumption had increased five fold relative to 1990. The speed and magnitude of this load growth had dire consequences for Kyrgysenergo's physical-technical distribution system, which was designed to carry a maximum load of between 2-4 billion kwh. In 1996 and 1997, small consumers used more than 5.4 billion kWh. The amount of their overload on the system exceeded their total load in 1990. (See Chart 2.) This overload is now the major cause of the frequent neighborhood and village outages.

Kyrgyzenergo is unable to cope with the rapidly deteriorating physical system because of its poor financial condition, which in turn is due to high losses and low tariffs. Despite Government orders in 1996 to Kyrgyzenergo to cut losses, stop theft, and collect accounts receivable, losses and theft and accounts receivable all went UP in 1997. System losses (technical and commercial) reached 45% of total domestic production in 1997. Theft by small consumers went from 50% to 61% of kWh used. Accounts receivable increased 10%. (See Charts 3 and 4.)

Needed tariff increases have lagged far behind other essential commodities. (See Chart 5). And even these low tariffs are decreased futher by a variety of discounts. In 1997 about 65% of customers received special privileges (from 25% to 100% discounts) in addition to universal discounts on the first 300 kWh consumed in summer and 700 kWh in winter. The result in 1997 was that only 15% of total domestic production was billed at and paid for at full tariff. (See Chart 6.)

The recent tariff increase raised the average consumer's monthly electric bill from 18 to 21 som. But tariffs still do not yet cover full costs, nor even the costs of just keeping the system repaired. (See Charts 7 and 8.)

The net result is that Kyrgyzenergo loses money on every kWh it produces for the domestic market, even though it reports a "paper profit." (See Chart 9.) Kyrgyzenergo would be considered financially bankrupt from an international accounting perspective.

And the distribution sub-sector would also be considered a liability, because of the large capital infusion it needs to bring the system back up to standards. Kyrgyzenergo needs 13.9 billion som right now just to repair, rehabilitate, or replace equipment and facilities that are already beyond their useful life. About

80% of this backlog (11.5 billion som) is in distribution. (See Chart 10.) Kyrgyzenergo should be spending about 4 billion som each year to reduce this backlog over the next ten years and to keep up with replacing equipment that will go beyond its useful life between 1999-2007.

Yet last year it spent only 307 million on this, and almost half of that was from foreign donors. (See Chart 11.) Government ordered local authorities to take up some of this burden, but in 1997 they only completed 6% of the low voltage lines they were suppose to rebuild and 50% of the transformers. (See Chart 12.)

The Solution

Kyrgyzenergo needs a large capital investment in its distribution sector just to bring it back to a 24-hour system everywhere in the Republic. The best way to bring in the needed investment to fix the system is to unbundle Kyrgyzenergo -- creating one or two generation companies, a National Grid company (legally the successor to JSC Kyrgyzenergo) and 3 to 5 (maximum) distribution companies -- and to privatize the distribution companies in an international tender for strategic investors. (See Chart 13). This is the basic program created by the State Property Fund in April, 1997, approved by Government, and sent to Parliament for approval, where it has been languishing for 15 months.

Even though some think "privatization" means selling the hydro plants, there is no reason to do so. They are in reasonably good shape. The problem is in the distribution sub-sector, and it should be privatized as soon as possible. And even the distribution companies don't have to be sold. They can be privatized through a long-term concession if sale is not politically feasible. (See Charts 14, 15, 16.)

There are two notions of "privatization" being talked about that won't work here. One is to unbundle the distribution companies and turn them over to local authorities. But local authorities don't have the money to invest, nor the tax base to borrow against, nor the experience in commercial business practices necessary to cut losses and collect bills. This was tried unsuccessfully in Georgia, where they are now pulling the distribution companies back from the local authorities in order to privatize them.

The second notion is to unbundle the distribution companies and allow some to be put under a short term management contract. This also won't accomplish what needs to be done because of the short time frame. No investor will be able to make the size of capital investment needed to fix the distribution system and earn back his investment in just three years. All the investor would be able to do is introduce commercial business practices and improve collection rates. It won't get the system fixed.

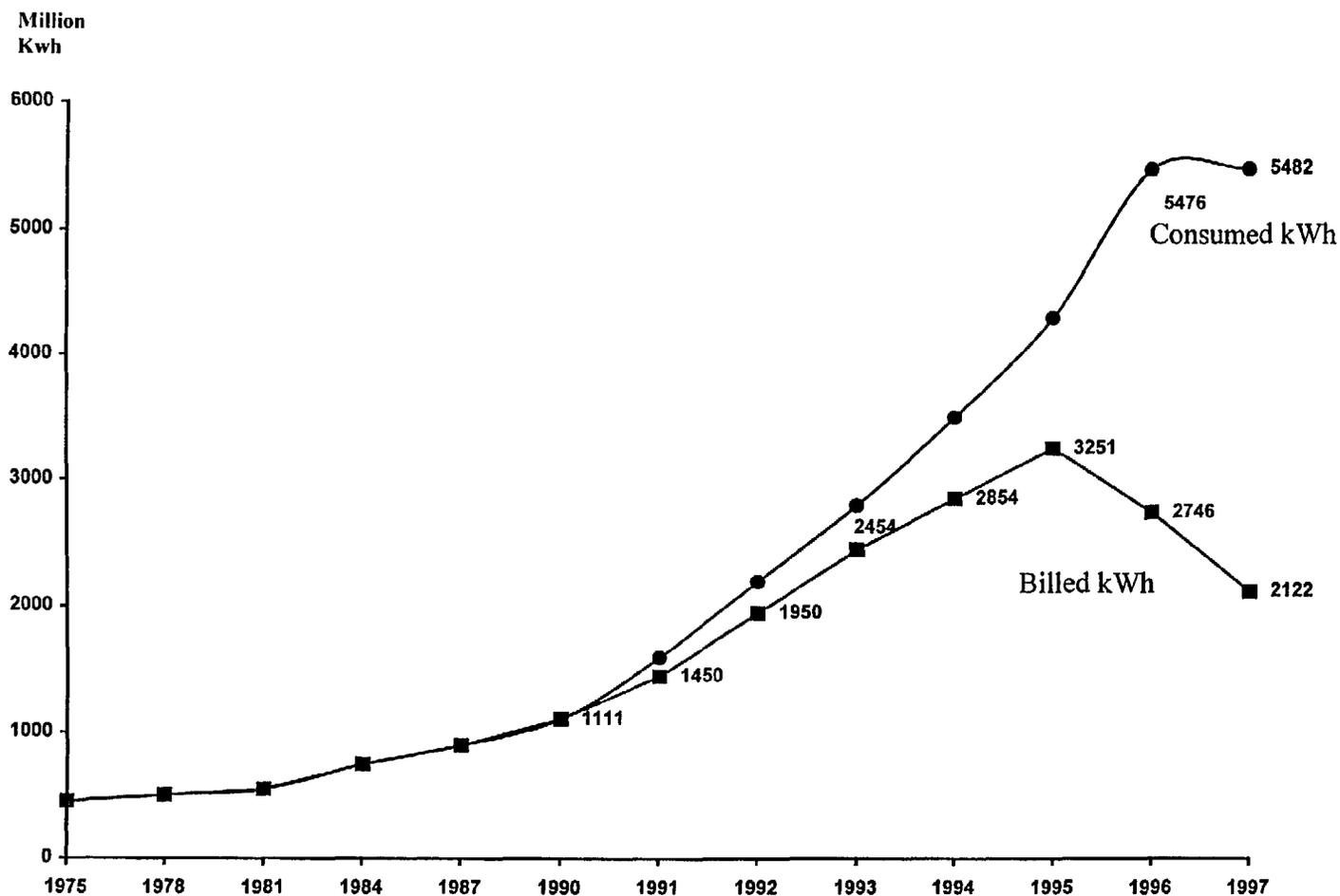
Each month that goes by while the talk goes on reduces the company's asset value that much more and increases the political risks inherent in the status quo. (See Chart 17.)

The Stakes

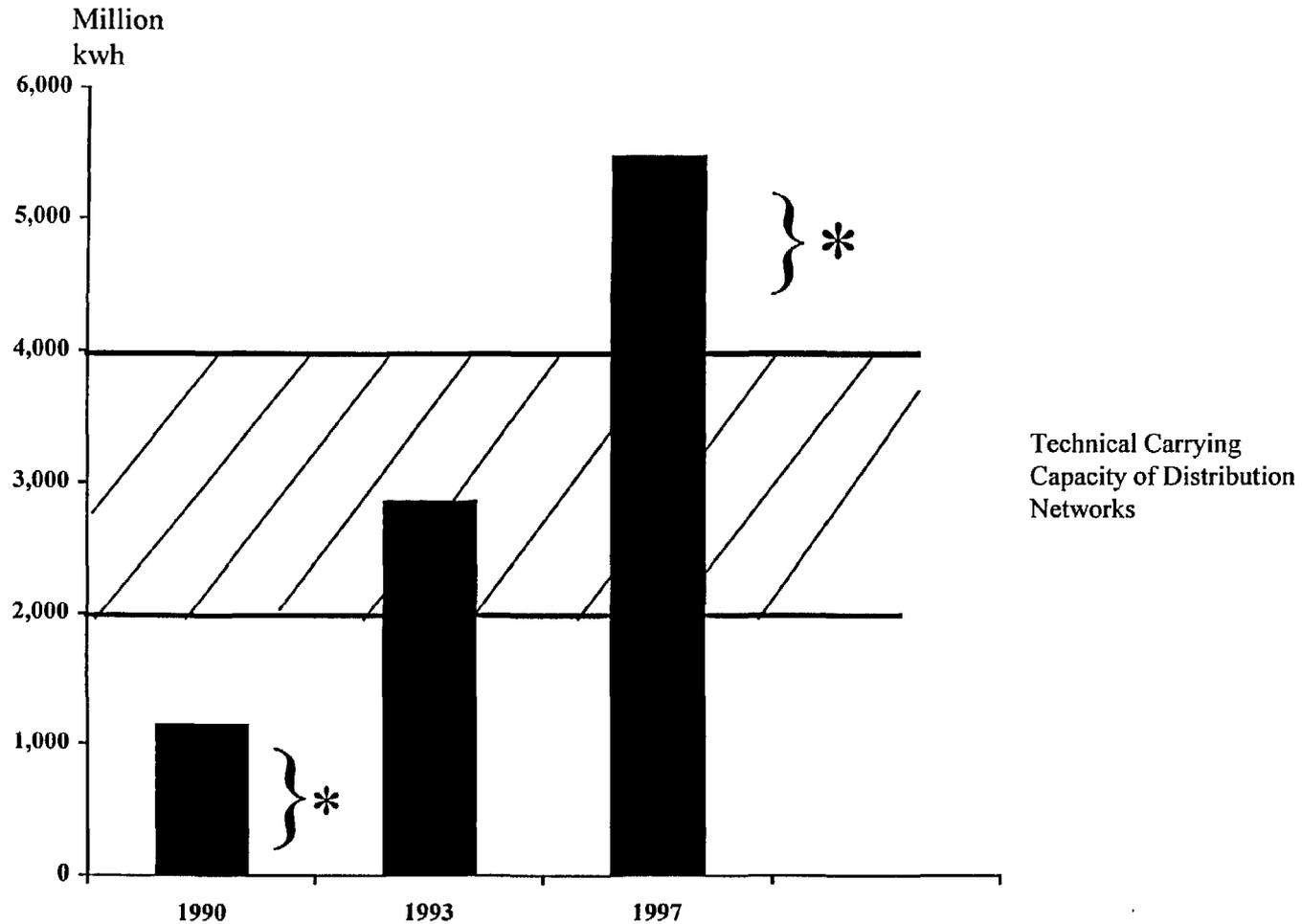
The Kyrgyz electric system is living on borrowed time. It is loosing money, and it is liquidating itself by "disinvesting." The country is eating its electric company because it thinks it can't afford to feed it. But it can't afford not to. A 24-hour electric system is at the base of a modern economy. There won't be new investment in industry, agriculture, or small and medium enterprise unless the country has reliable power. Without these, there can't be economic development. And without that, there won't be social justice. (See Chart 18.)

Growth in Small Customer Consumption

Averaged A Staggering 30% a Year Between 1990-1996



Growth of Consumption Has Overloaded the Distribution System



* Overload in 1997 exceeded total load in 1990.

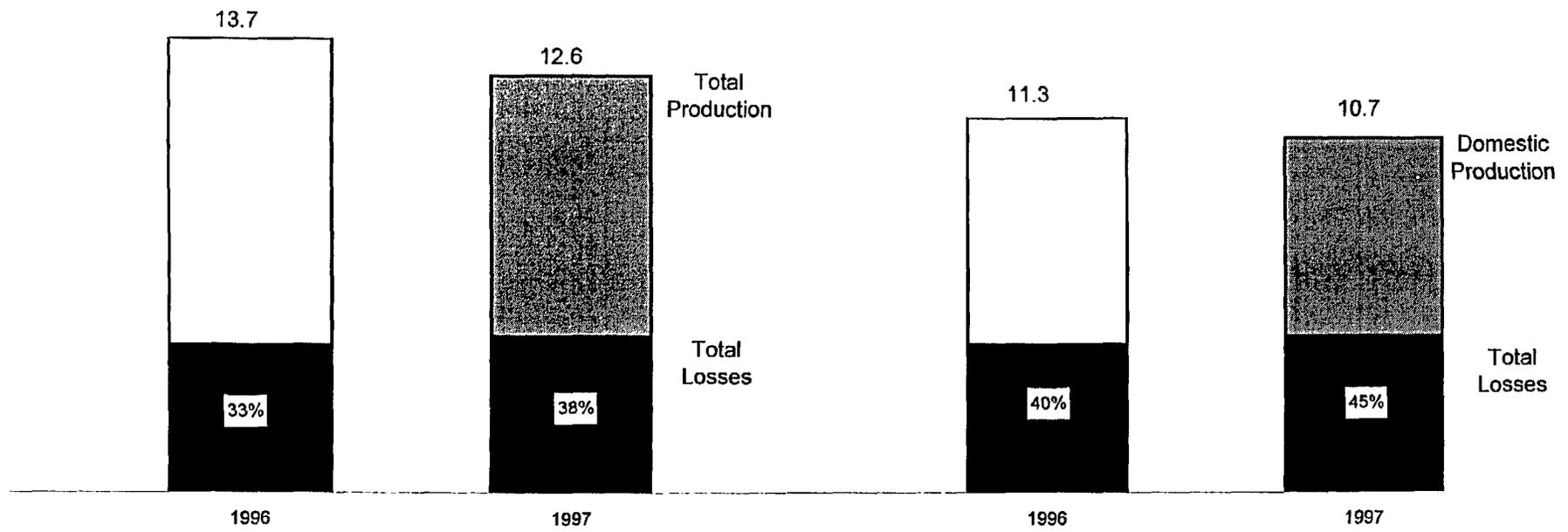
Kyrgyzenergo's 1997 System Losses Increased Compared to 1996*

Losses as a % of Total Production reached 38% in 1997, which is 115% of the 1996 level

Losses as a % of Domestic Production reached 45% in 1997, which is 112.5% of the 1996 level

(billion kWh)

(billion kWh)

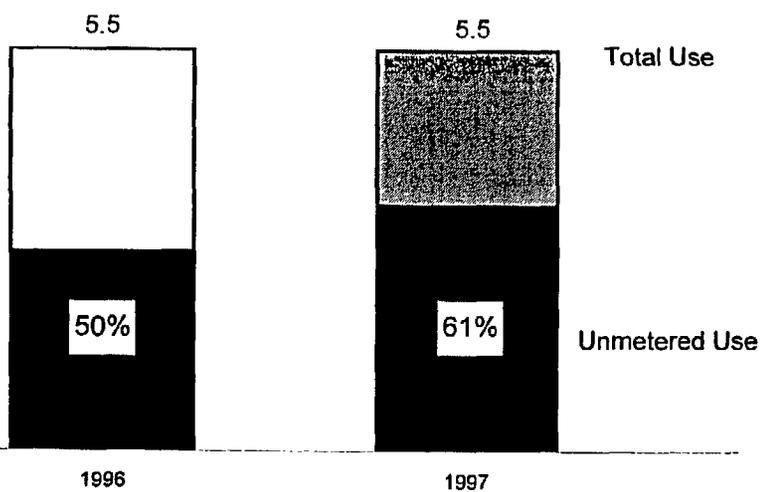


* Based on Kyrgyzenergo Data as of March 10, 1998

The Causes of Kyrgyzenergo's Financial Problems Got Worse in 1997 *

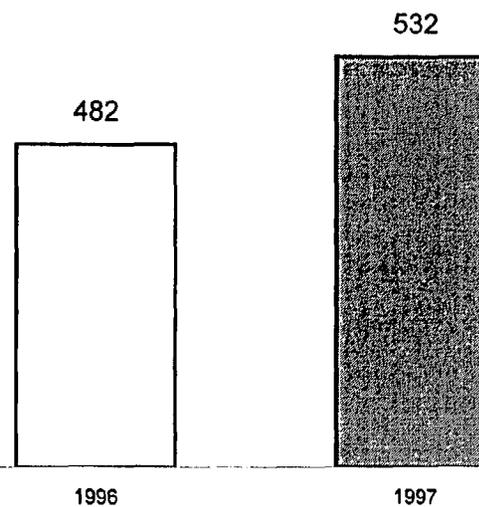
Theft by small customers in 1997 was 122% of the 1996 level

(billion kWh)



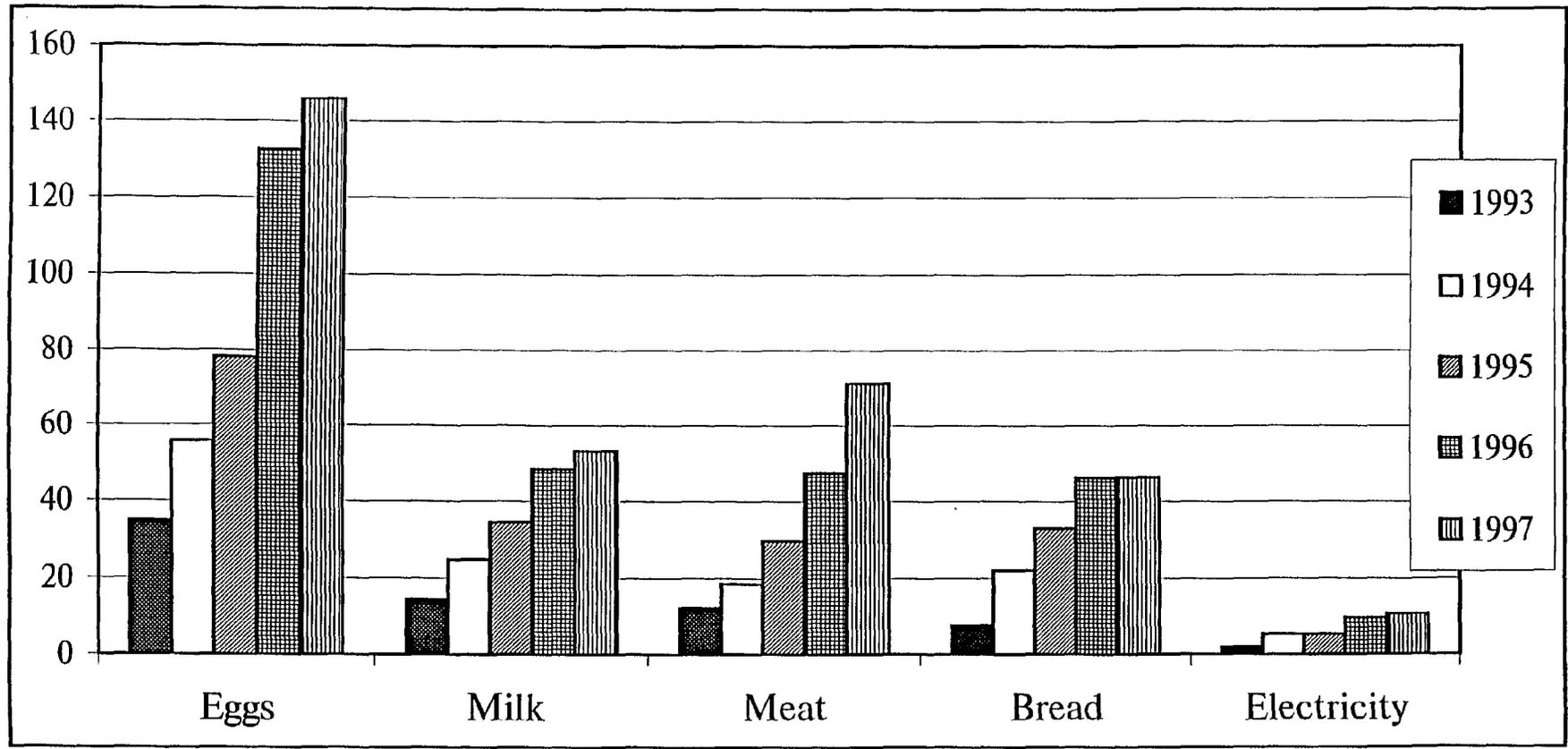
Accounts Receivable in 1997 were 110% of 1996 level

(million Som)



* Based on Kyrgyzenergo Data as of March 10, 1998

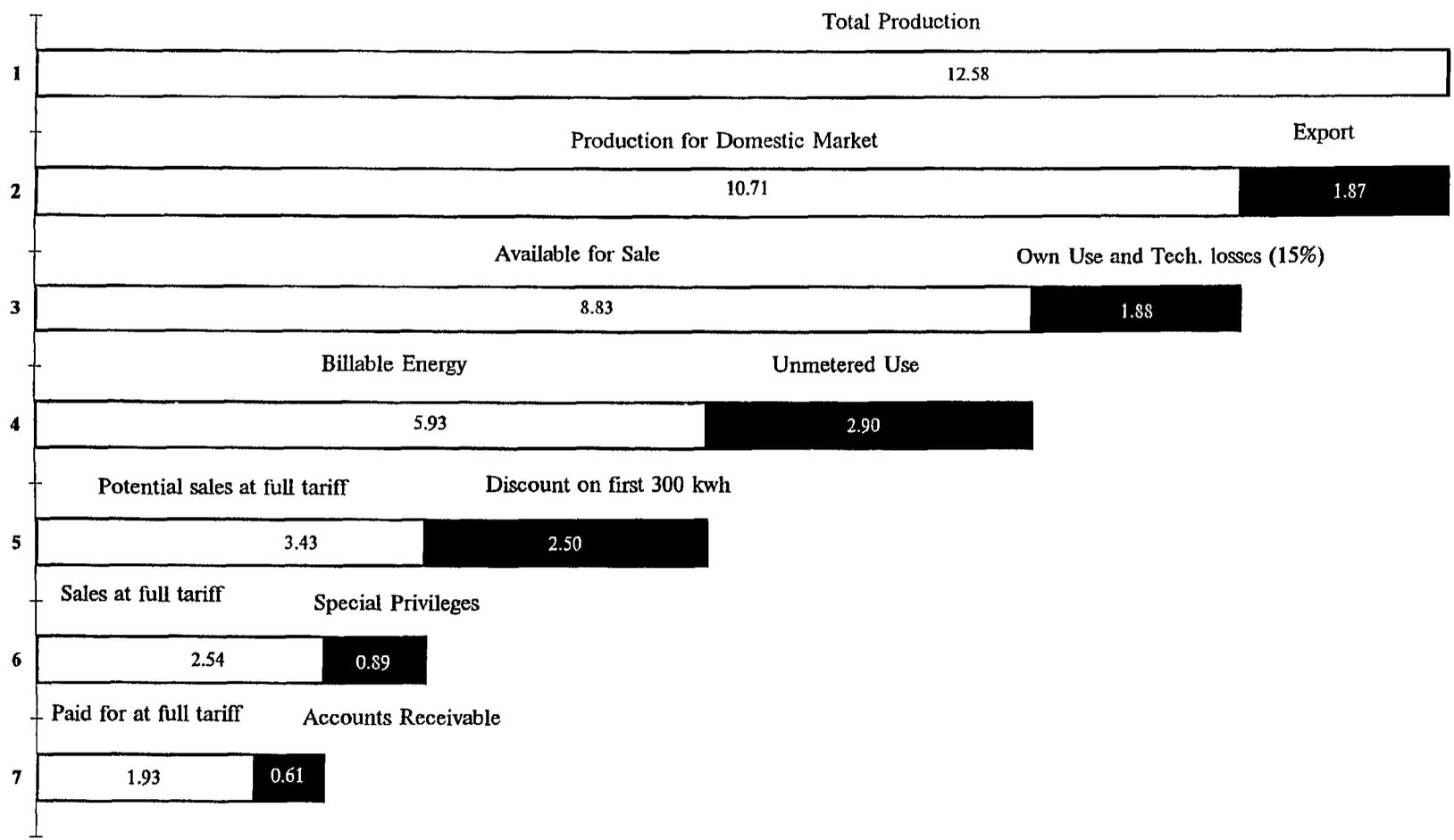
The Price of Electricity Has Risen Much More Slowly Than The Price of Other Essential Commodities



Years	Eggs	Milk	Meat	Bread	Electricity
1993	34.8	14.5	12.3	7.6	2
1994	55.7	24.7	18.5	22	5.4
1995	78	34.6	29.6	33	5.4
1996	132.6	48.4	47.4	46.2	9.7
1997	145.86	53.24	71.1	46.2	10.67

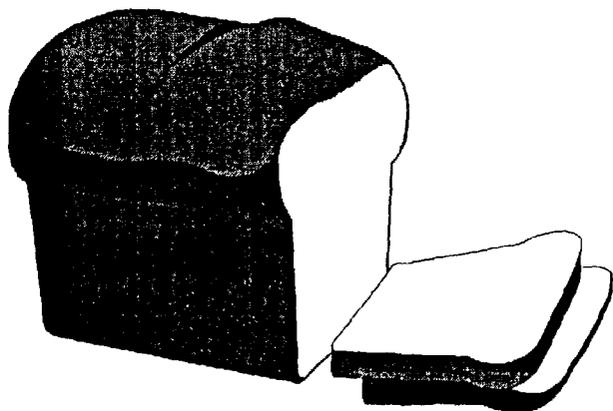
Only 15 % of Total Production for the Domestic Market was billed at and paid for at full tariff

(Billion kWh, 1997)



The tariff increase means a family's monthly electric bill for 150 kWh will go from 18 Som to 21 Som

The 3 Som increase is equivalent to:



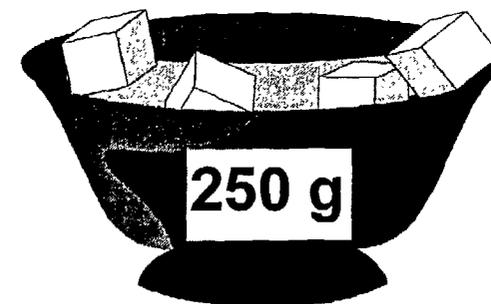
one loaf of bread

or



1/2 liter of milk

or

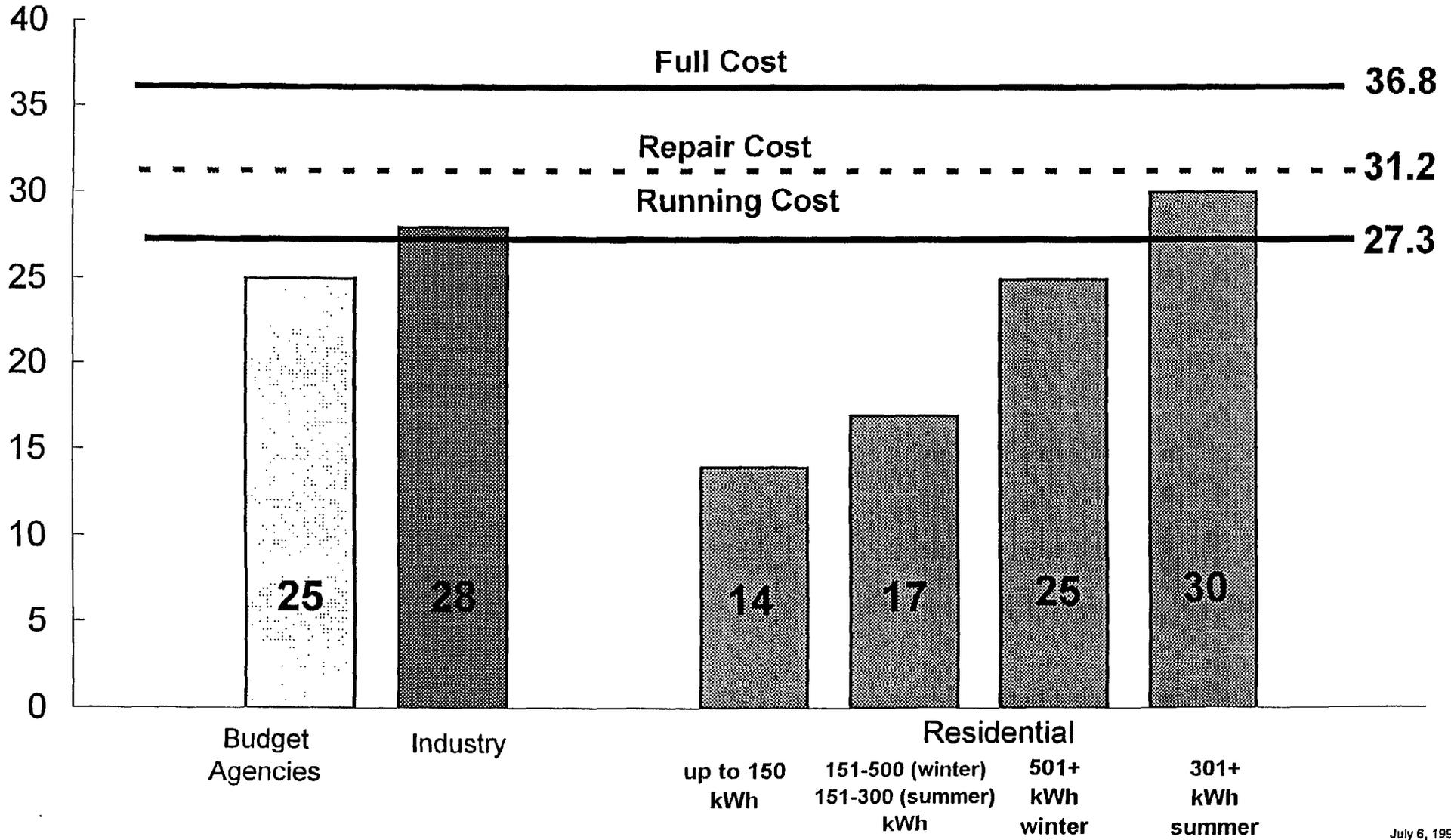


1/4 kg of sugar

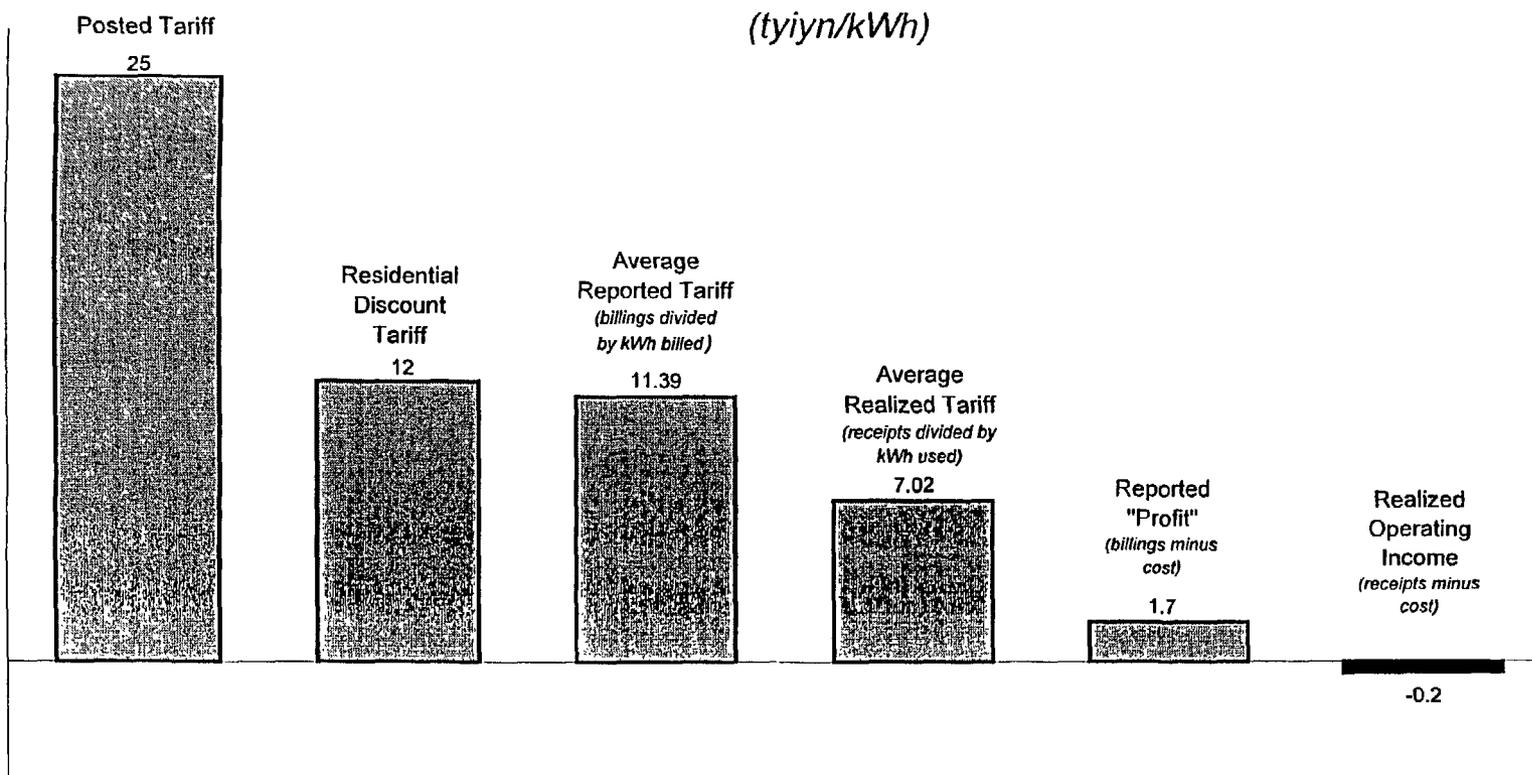


Even at the New Tariff Level, Rates Don't Yet Cover Full Cost

tyiyn/kWh

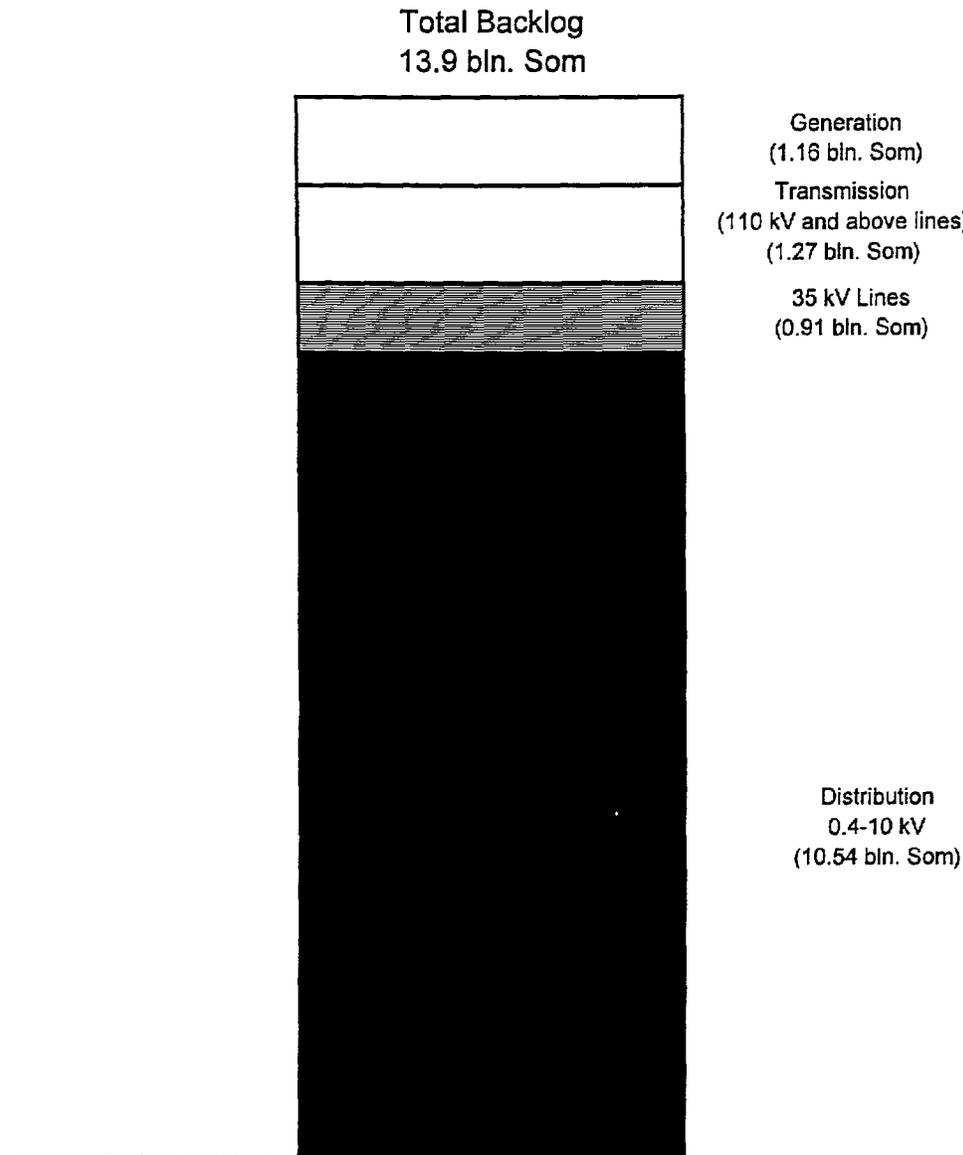


Kyrgyzenergo Actually Loses Money on Every kWh Used in Kyrgyzstan, Even Though it Reports a Profit



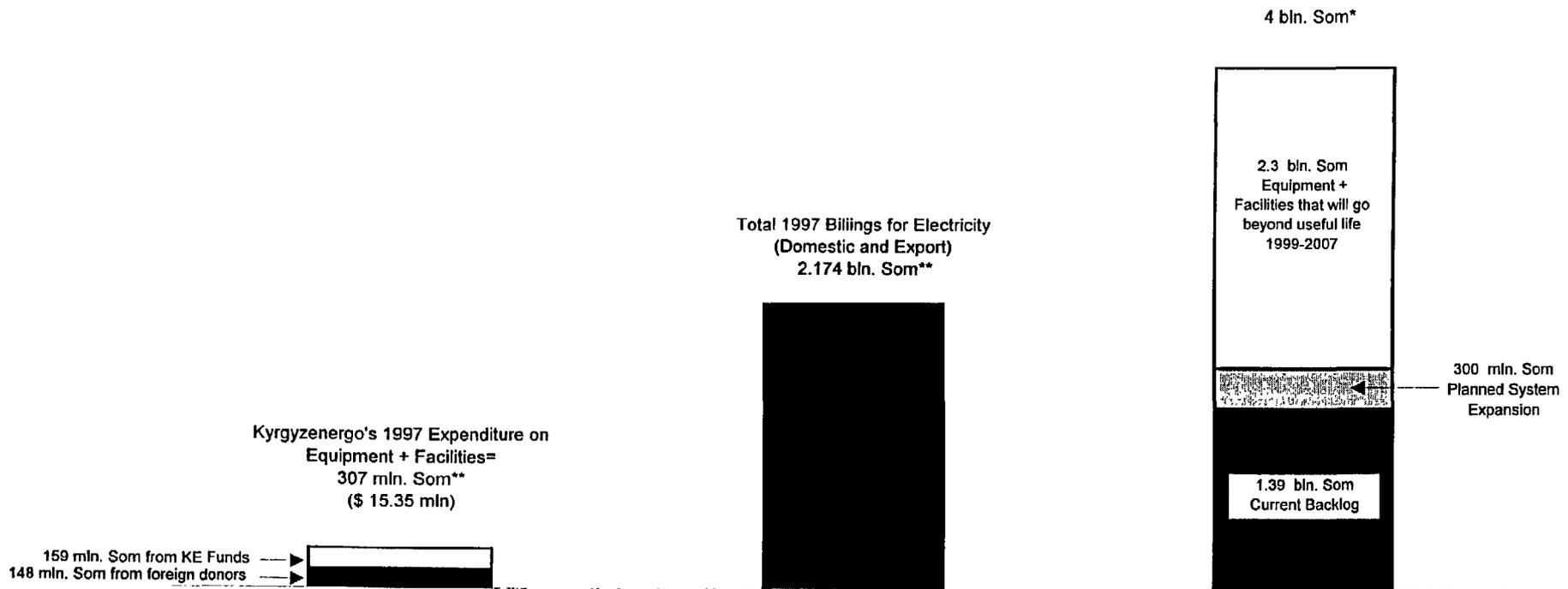
Note: Although Kyrgyzenergo reported total revenues of \$ 77.8 M in 1996, the recent Price Waterhouse Audit of Kyrgyzenergo's 1996 financial results reported sales at \$100 M. The PW audit also reported a loss of \$13.8 M (before extraordinary income of a \$5 M Swiss Government grant).

**Kyrgyzenergo Needs 13.9 bln. Som (\$ 695 mln)
to Repair or Replace Worn Out Equipment And Lines,
11.5 bln. Som (\$ 575 mln) Just In The Distribution Sector***



* Based on analysis prepared by TACIS Assistance to the State Energy Agency

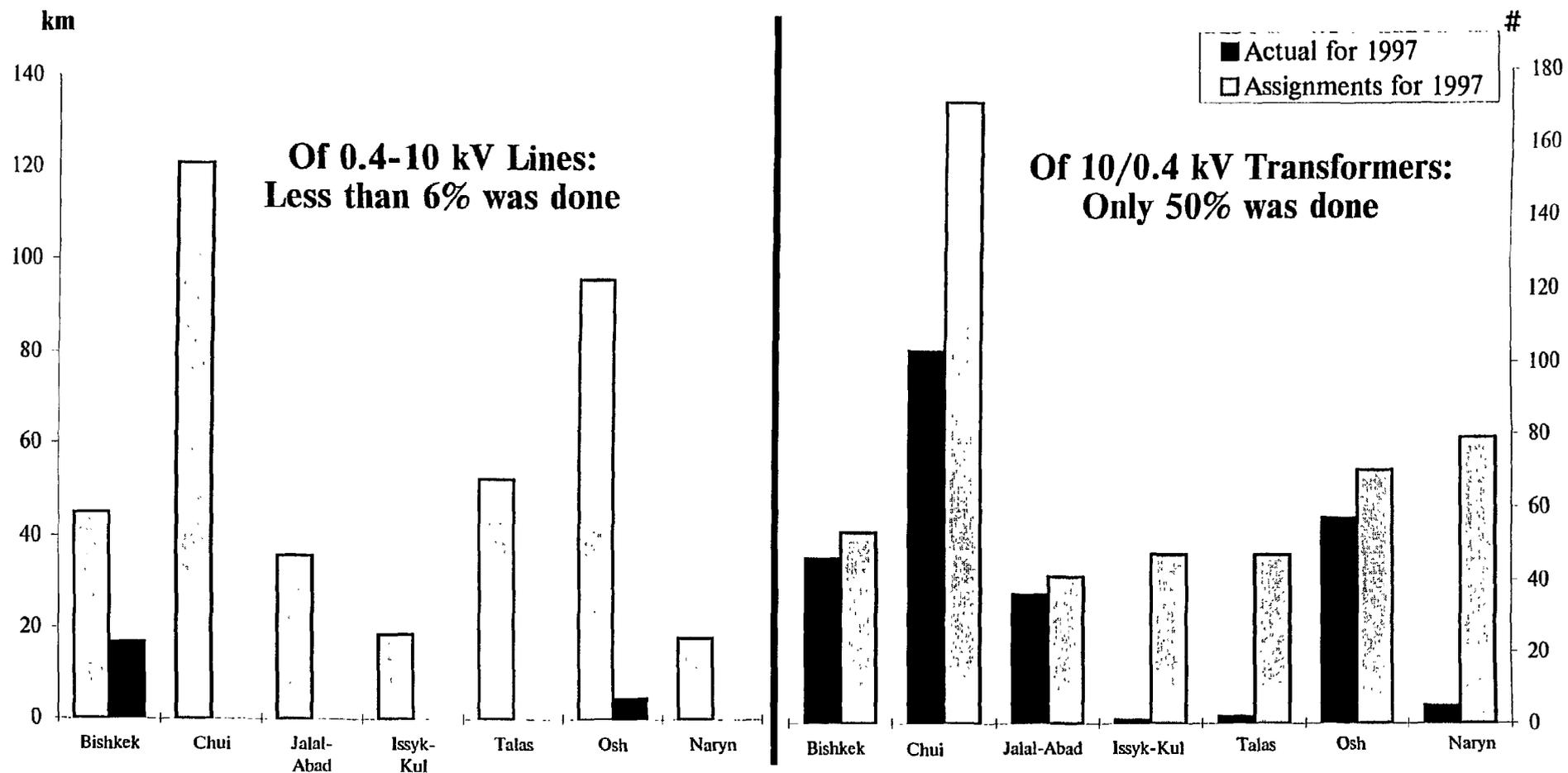
Kyrgyzenergo Should Be Spending 13 Times As Much As It Is Now On Rehabilitation, Repair, And Replacement*



* Based on analysis prepared by TACIS Assistance to the State Energy Agency
** Source: Kyrgyzenergo, Annual Report

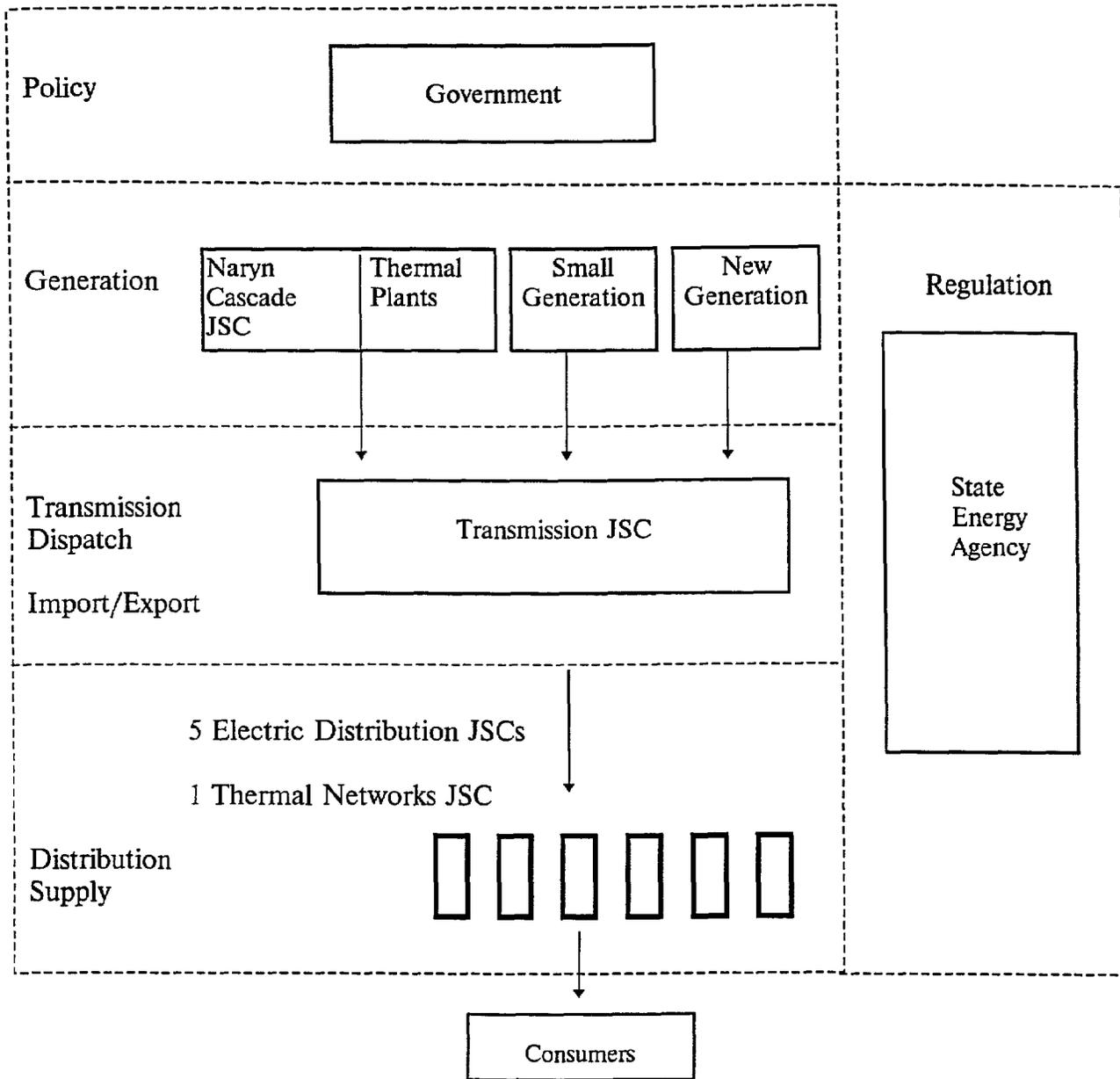
Oblasts Can't Fulfill Government's Assignments to Fix the Distribution System

38



	Bishkek		Chui		Jalal-Abad		Issyk-Kul		Talas		Osh		Naryn		Total	
	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4	0.4-10 kV	10/0.4
	Line (km)	Transform	Line (km)	Transfor	Line (km)	Transfor	Line (km)	Transfor	Line (km)	Transform	Line (km)	Transfor	Line (km)	Transfor	Line (km)	Transform.
Assignments for 1997	45.1	53	121	171	36	41	18.6	47	52.4	47	96	70	18	79	387.1	508
Actual for 1997	16.75	46	0	103	0	36	0	1	0	2	4.81	57	0	5	21.56	250
% Accomplished	37%	87%	0%	60%	0%	88%	0%	2%	0%	4%	5%	81%	0%	6%	5.6%	49%

KNEHC Restructuring



PRIVATIZATION PROGRAM SCHEDULE

- Step 1: Incorporate "Kyrgyzenergo"; Coupon Auction (done 6/97); adopt Tariff Policy (done 3/98); create consortia for new large hydros
- Step 2: Spin off non-core and social assets; privatize small hydros (begun Aug' 97)
- Step 3: Unbundle distribution (was to be done June/Aug' 98); create National Grid (to be done 4/99); unbundle generation (to be done 4/99)
- Step 4: Call for tenders for privatization advisor (was to be done by 10/97); call for and award privatization tenders (to be done between 6/98-6/99)

(Note: Some of these steps have been delayed pending the Program's approval by Parliament)

Why Privatize the Electric Sector?

- Halt the deterioration of the system
 - Restore reliability and quality of service as basis for industrial and economic growth
 - Reduce the need for state investment
 - Reduce both direct and hidden subsidies
 - Improve sector efficiency and performance and lower costs
- 

Recommendations for Kyrgyzstan

- Avoid single investors - either foreign or domestic; best results are obtained when several parties are involved
- Do not focus on the valuation controversy; the reality is that “Kyrgyzenergo” is unprofitable from an international accounting perspective, and it will not fetch a high price
- Restructure before any more sale or distributions of stock
- Be realistic about the “trade-offs”; a higher purchase price or investment commitment will require a higher tariff
- Weight the purchase price and investment commitment appropriately
- The Distribution Enterprises should be targeted first for privatization because they are in greatest need of capital investment to halt further system degradation and return Kyrgyzstan to 24-hour, country-wide electric service

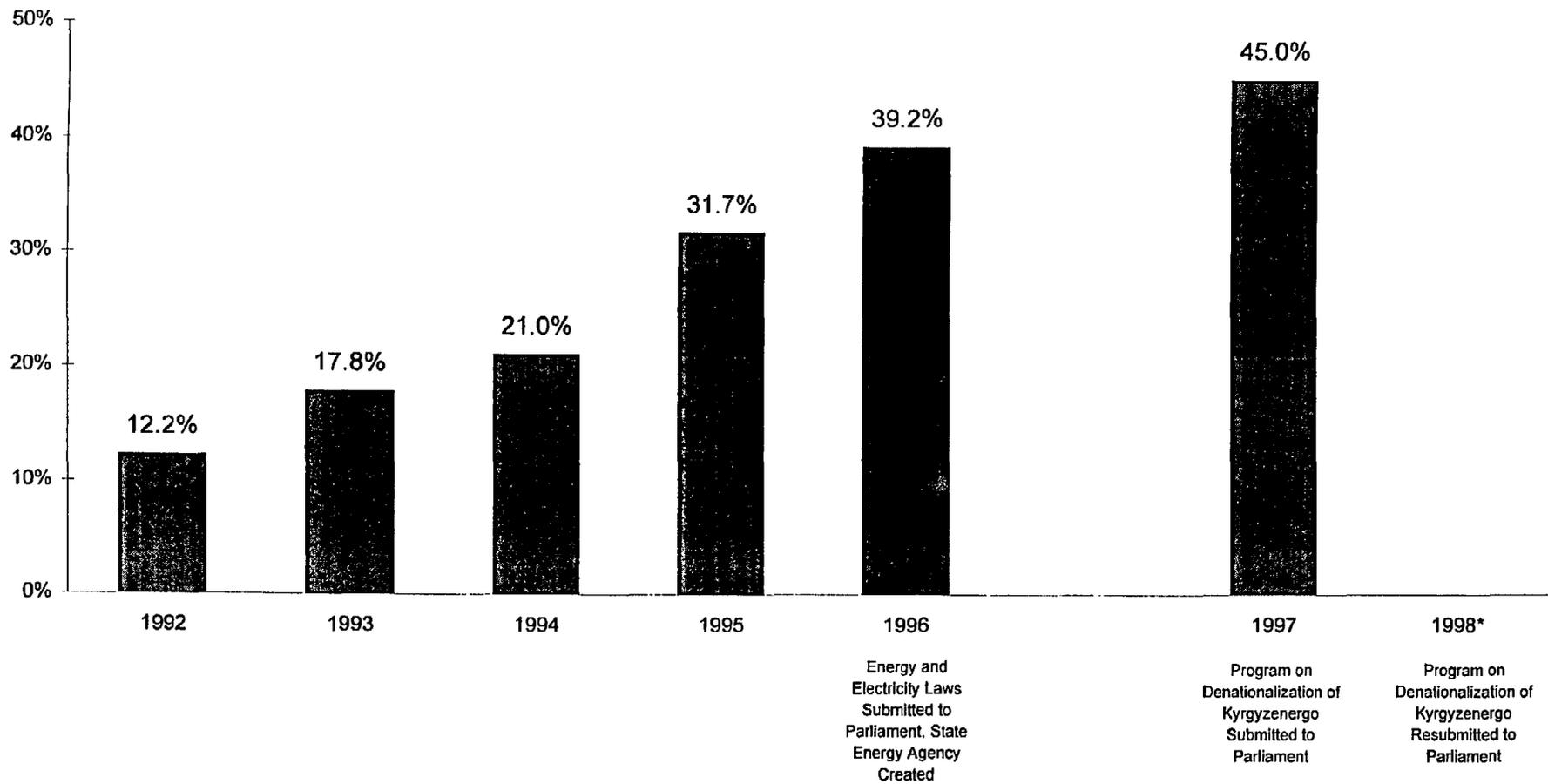
Recommendations for Kyrgyzstan

- Complete sector restructuring:
 - create National Grid Co. (successor to Kyrgyzenergo)
 - separate all generation from Kyrgyzenergo (create new Hydro Company, sell small hydros as simple asset sale thru competitive tender, resolve issues on TES-1)
 - Unbundle 3 to 5 (maximum) distribution companies and privatize them
- Clearly commit to key reforms, especially tariff reform (both level and structure), systematic use of commercial business practices (meter, bill, collect and cut off non-payers rather than cut off villages and regions)

B

While We Have Been Arguing, Kyrgyzenergo's Losses Tripled in Four Years, and Continue to Grow

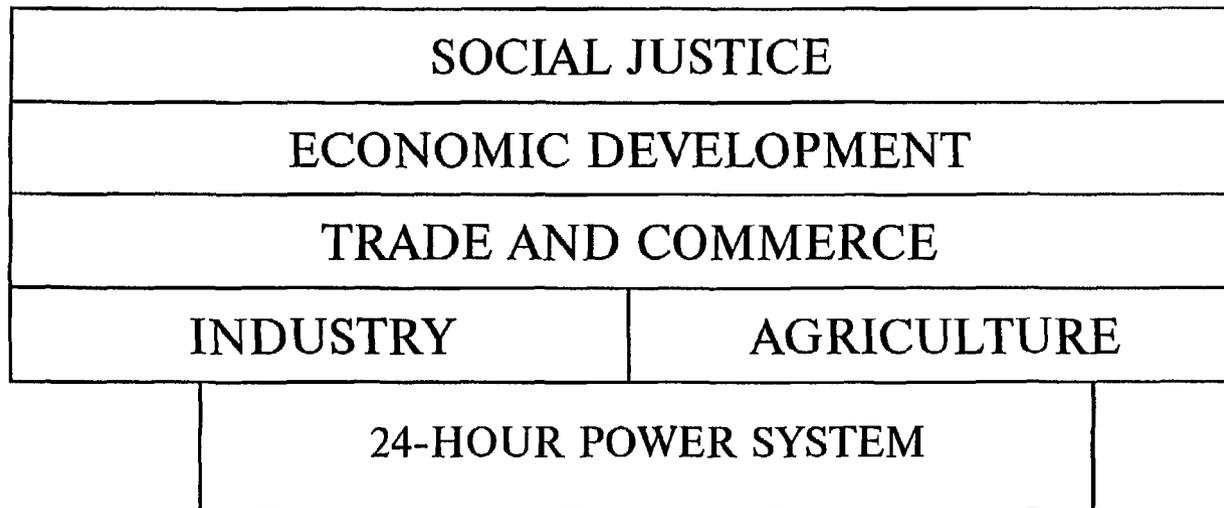
Losses as % of domestic production

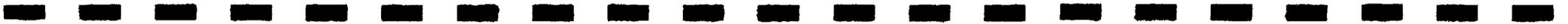


(* annualized, based on 6 months actual)

44

A 24-hour Power System Is The Base For A Modern Economy And Social Justice





**ПРЕЗЕНТАЦИЯ ДЛЯ
ПРЕЗИДЕНТА АКАЕВА**

10 сентября, 1998

45

О текущем состоянии АО “Кыргызэнерго” и необходимости реструктуризации энергосистемы и приватизации распределительных компаний

Сильное перенапряжение распределительных сетей АО “Кыргызэнерго” вызвано быстрым ростом потребления в 30% в год мелкими потребителями за период 1990-1996 гг. С 1992 года рост хищений электроэнергии стал набирать быстрые темпы и к 1996 году мелкие потребители воровали уже столько, сколько они заплатили бы за нее. (см. график 1.)

К 1996 году использование электроэнергии мелкими потребителями увеличилось в пять раз по сравнению с 1990 годом. Темпы и величина такого роста нагрузки имели пагубные последствия для материально-технического состояния распределительной системы АО “Кыргызэнерго”, которая по проекту должна была передавать максимум 2-4 млрд. кВтч. За 1996-1997 гг. потребление электроэнергии мелкими потребителями составило 5.4 млрд. кВтч. Объем перегруза системы превысил объем общей нагрузки в 1990 году. (см. график 2.) Такой перегруз сегодня является главной причиной частых отключений в близлежащих районах и селах.

АО “Кыргызэнерго” не в состоянии поддержать быстро ухудшающуюся техническую систему из-за плохого финансового положения, в котором оно оказалось вследствие высоких потерь и низких тарифов. Несмотря на правительственные постановления о том, что АО “Кыргызэнерго” должно сокращать потери, остановить хищения и обеспечить поступление дебиторских задолженностей, в 1997 году произошло увеличение потерь, хищений и дебиторских задолженностей. Системные потери (технические и коммерческие) составили 45% всего внутреннего производства за 1997 год.

Объем хищений мелкими потребителями увеличился от 50% до 61% использованных кВтч. Рост дебиторской задолженности составил 10%. (см. графики 3 и 4.)

Необходимый рост тарифов далеко отстает от прочих жизненно важных товаров. (см. график 5.) Даже эти низкие тарифы снижаются далее в результате применения различного рода льгот. В 1997 году около 65% потребителей пользовались специальными льготами (от 25 до 100%) дополнительно ко всеобщим льготам на первые 300 кВтч. летом и на 700 кВтч. в зимний период. В результате этого в 1997 году только 15% общего внутреннего производства было учтено по счетам и оплачено по полному тарифу. (см. график 6.)

Согласно последнему росту тарифов ежемесячный счет среднего потребителя на электроэнергию увеличился от 18 до 21 сом. Тем не менее, эти тарифы недостаточны для покрытия не только полной себестоимости, даже расходов на ремонт системы. (см. графики 7 и 8.)

В итоге АО “Кыргызэнерго” теряет деньги на каждом кВтч., который вырабатывается компанией для внутреннего рынка, хотя она представляет сведения о наличии “потенциальной прибыли.” (см. график 9.) Согласно международных стандартов бухучета АО “Кыргызэнерго” считалось бы обанкротившимся в финансовом плане.

В качестве пассива можно было бы также рассмотреть, по крайней мере, и распределительный подсектор, который требует большие вливания для восстановления системы до прежнего уровня. В настоящее время АО “Кыргызэнерго” требуется 13.9 млрд. сом только для ремонта, восстановления или

замены оборудования и установок, срок эксплуатации которых давно истек. Около 80% задолженности (11.5 млрд. сом) имеется по распределению. (см. график 10.) АО "Кыргызэнерго" необходимо направлять ежегодно 4 млрд. сом на снижение данной задолженности в течение следующих 10 лет и поддержать темпы замены установок, срок эксплуатации которых истечет за 1999-2007 гг. Несмотря на это, в прошлом году компания отпустила в этих целях только 307 млн. сом, половина которых поступила от иностранных доноров. (см. график 11.) Правительство издало приказ местным органам власти взять часть бремени на себя, однако в 1997 году они выполнили всего 6% работы по низковольтным линиям, которые они должны были отремонтировать и, 50% - по трансформаторам. (см. график 12.)

Решение

АО "Кыргызэнерго" требует огромные капиталовложения в свой распределительный сектор только для того, чтобы заново обеспечить круглосуточную систему энергоснабжения по всей Республике. Наилучшим способом привлечения необходимых капиталовложений и восстановления системы является реструктуризация АО "Кыргызэнерго" путем создания одной или двух вырабатывающих компаний, Национальной компании электросетей (законного правопреемника АО "Кыргызэнерго") и от трех до пяти (максимум) распределительных компаний - и приватизировать распределительные компании посредством организации тендера для иностранных инвесторов. (см. график 13.) Это базовая программа, разработанная Фондом государственного имущества в апреле 1997 года, одобренная правительством и представленная Парламенту на утверждение, томится там уже 15 месяцев.

Хотя некоторые считают, что "приватизация" означает продажу гидроэлектростанций, однако нет причин продавать их. Они находятся в достаточно хорошем состоянии. Проблема кроется в распределительной отрасли, и вот ее следует приватизировать безотлагательно. Но даже распределительные компании продавать не обязательно. Приватизировать их можно посредством долгосрочной концессии в том случае, когда продажа политически не оправдана. (см. графики 14, 15, 16.)

Существует два подхода к "приватизации", о которых все говорят, но которые не сработают. Один из них - это отделение распределительных компаний и передача их местным администрациям. Но у местных властей нет средств для инвестирования, нет и налоговой базы, под которую средства можно было бы занять, нет у них и опыта коммерческой деятельности, без которого невозможно снизить затраты и получить деньги с потребителей. Этот вариант безуспешно опробовали в Грузии, причем сейчас распределительные компании выводятся из-под контроля местных администраций с целью дальнейшей приватизации.

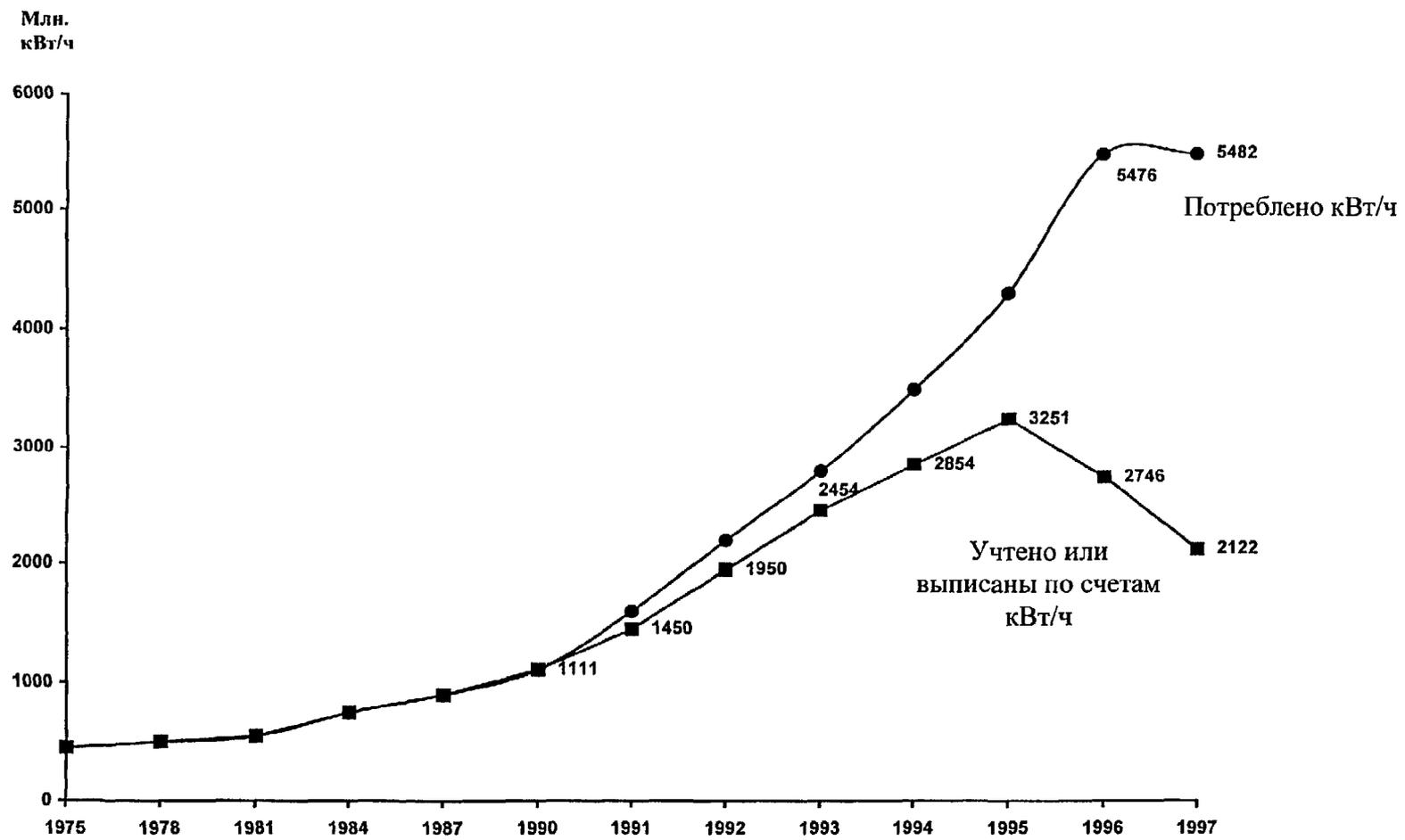
Второй подход заключается в реструктуризации распределительных компаний и обеспечении для всех возможности работать в рамках краткосрочного контракта на управление. Сжатый срок также не позволит определить то, что должно быть выполнено. Ни один инвестор не будет в состоянии предоставить инвестицию в количестве, необходимом для восстановления распределительной системы и добиться выплаты своей инвестиции через три года. Все, что инвестор сможет сделать, это введение практики коммерческого бизнеса и повышение темпов сбора оплаты. Он не будет в состоянии восстановить систему.

С каждым месяцем, который тратится на ведение переговоров, стоимость фондов компании падает, а политические риски, присущие нынешней ситуации, возрастают.

Чем мы рискуем

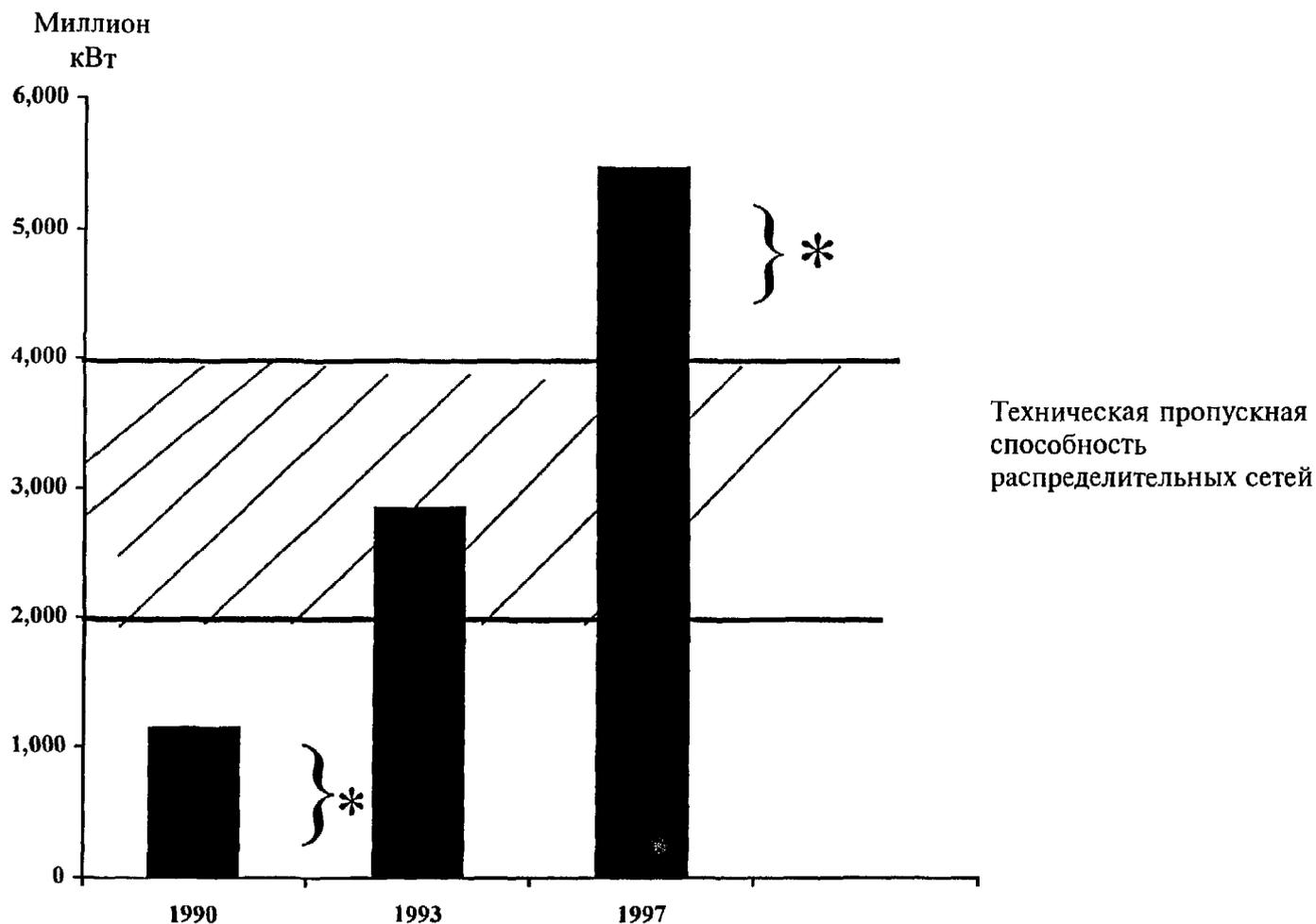
Кыргызская электрическая система существует в заиме. Она теряет деньги и ликвидирует сама себя, не вкладывая инвестиции. Страна продает собственную электрическую компанию, ибо полагает, что не в состоянии прокормить ее. Но как раз этого-то страна и не может себе позволить. Основой современной экономики служит круглосуточное электроснабжение. Без надежной энергетики нельзя ожидать новых инвестиций в промышленность, в сельское хозяйство, в малые и средние предприятия. А без них экономика не может развиваться. А без развития экономики нет и не может быть социальной справедливости для граждан. (см. график 18.)

За период 1990-1996 г.г. уровень потребления мелких потребителей в среднем увеличился на 30%



50

Рост потребления вызвал перегруз в распределительных электрических сетях

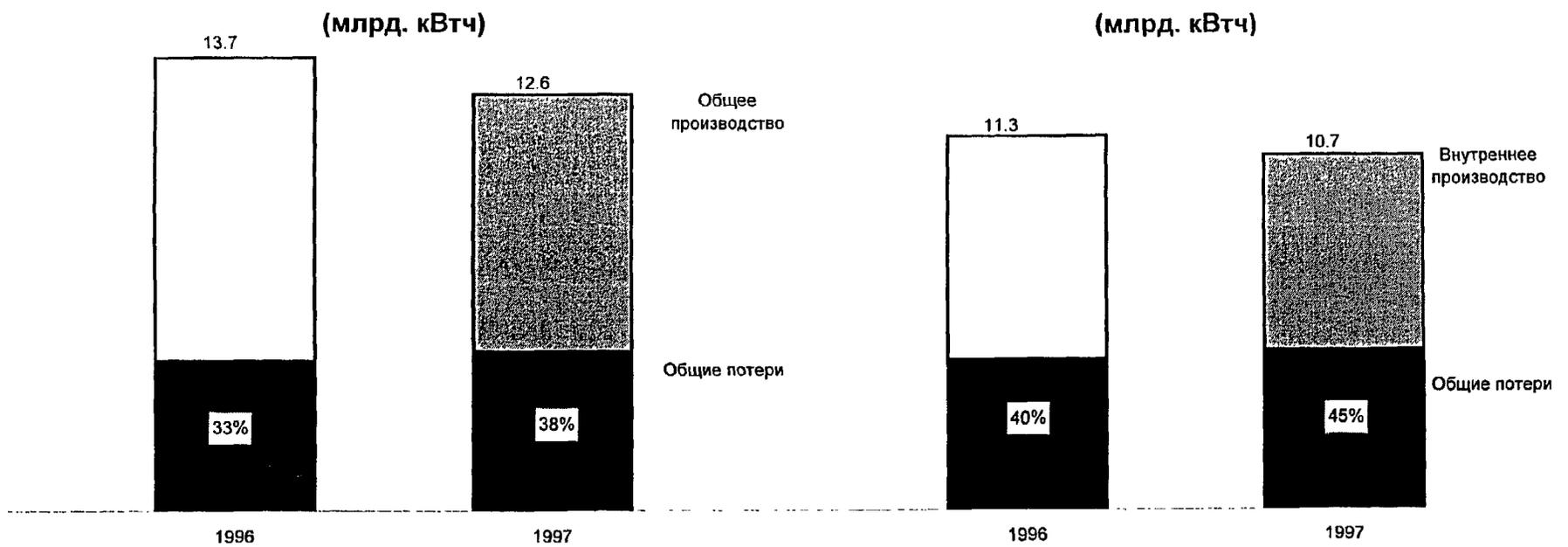


* Перегрузка в 1997 г. превысила весь объем нагрузки за 1990 год

Системные потери АО "Кыргызэнерго" за 1997 год увеличились по сравнению с 1996*

Потери как % от общего производства достигли 38% в 1997, что составило 115% от уровня 1996

Потери как % от внутреннего производства достигли 45% в 1997, что составило 112.5% от уровня 1996



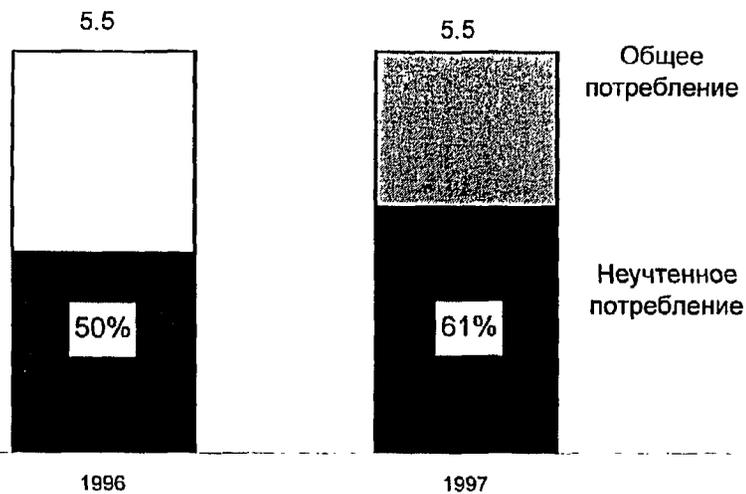
* На основании данных АО "Кыргызэнерго" от 10 марта 1998

25

Причины финансовых проблем АО "Кыргызэнерго" в 1997 усугубились *

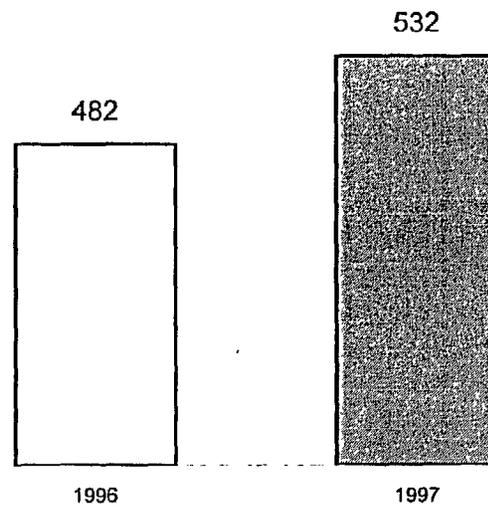
хищения населением
в 1997 составили 122%
от уровня 1996

(млрд. кВтч)



Дебиторская задолженность
в 1997 составила 110%
от уровня 1996

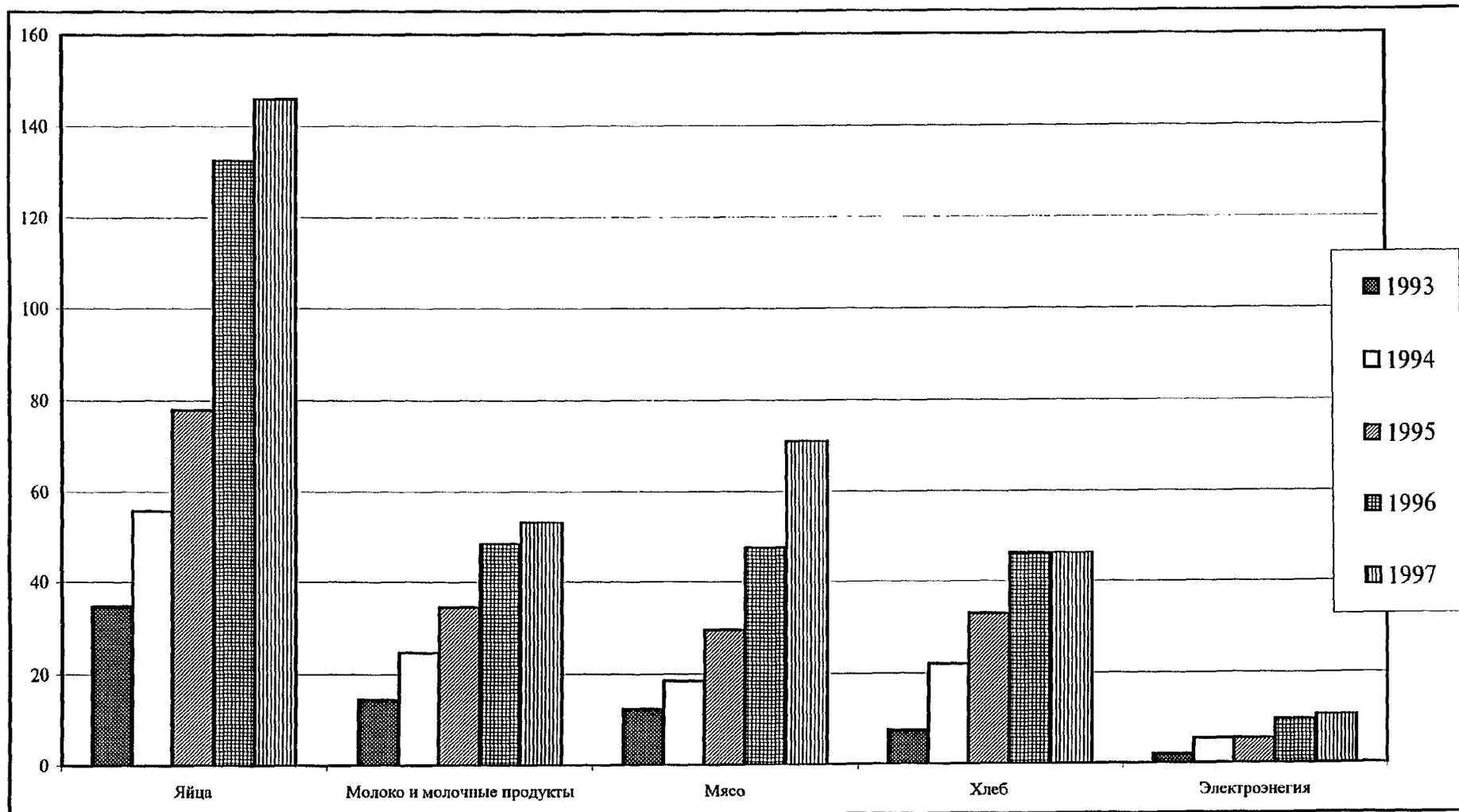
(млн. сом)



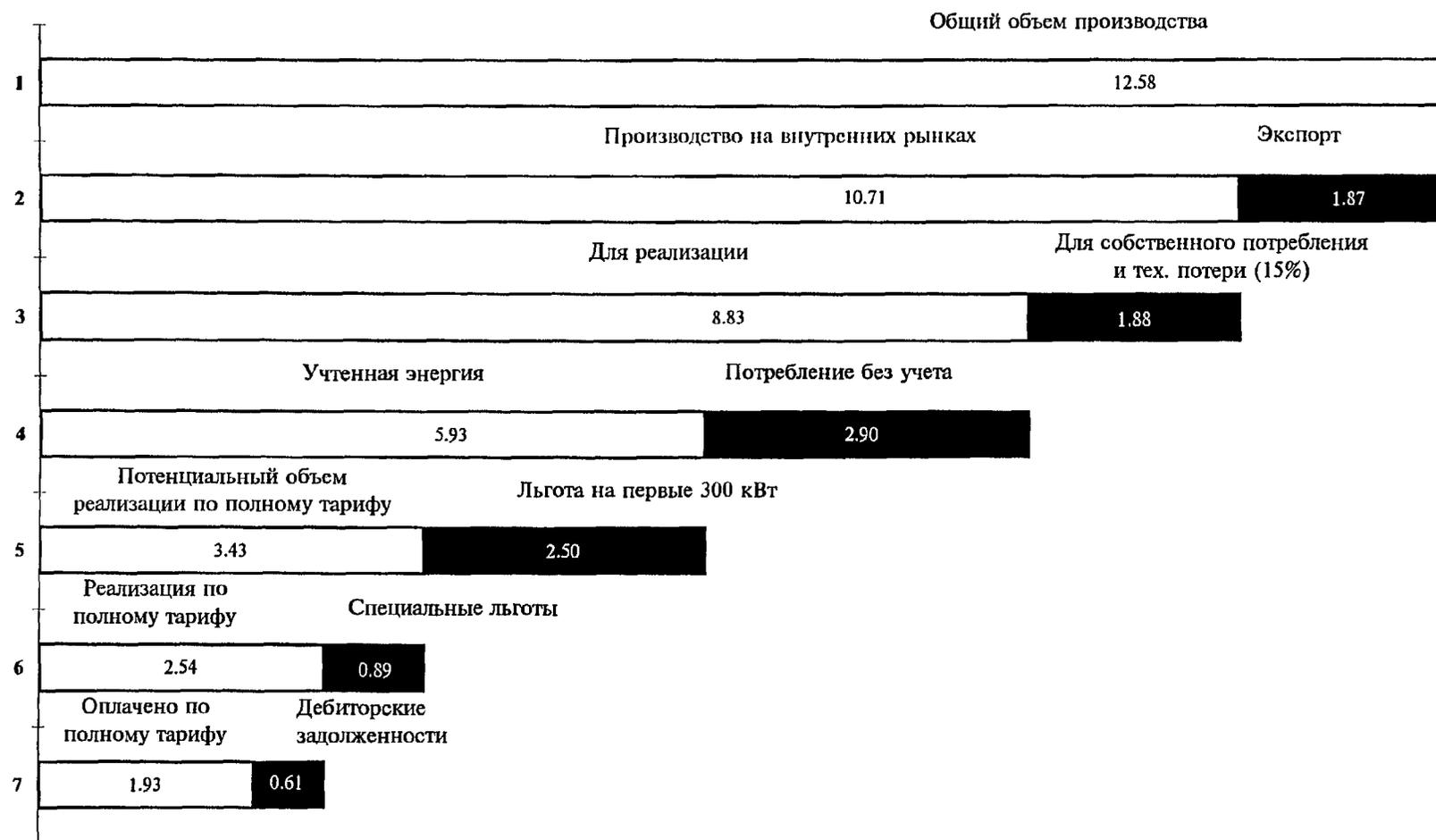
* На основании данных АО "Кыргызэнерго" от 10 марта 1998

53

Сравнение индексов цен на пищевые продукты и электроэнергию

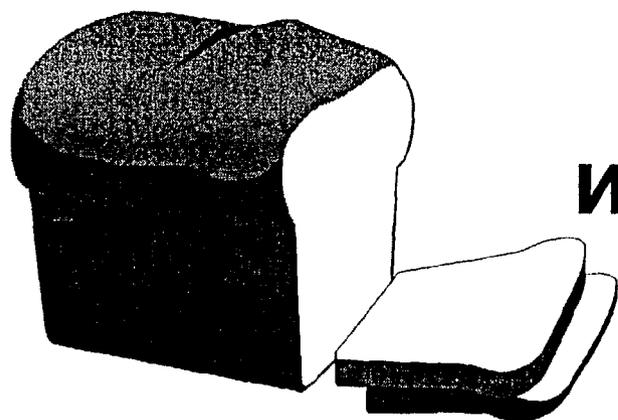


Только 15 % всего объема произведенной продукции было отпущено по счетам и реализовано по полному тарифу на внутренних рынках
(Млрд. кВтч, 1997)



Повышение тарифов означает, что оплата за 150 кВтч в месяц увеличится с 18 сом до 21 сома

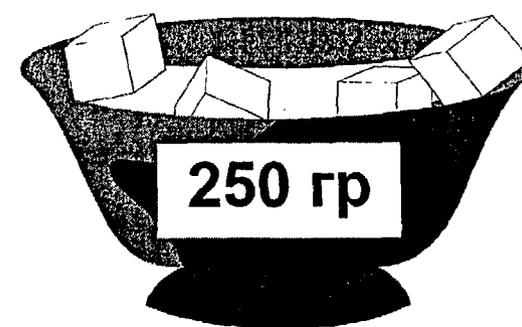
Разница в 3 сома равнозначна:



ИЛИ



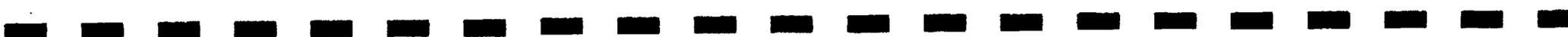
ИЛИ



1 булке хлеба

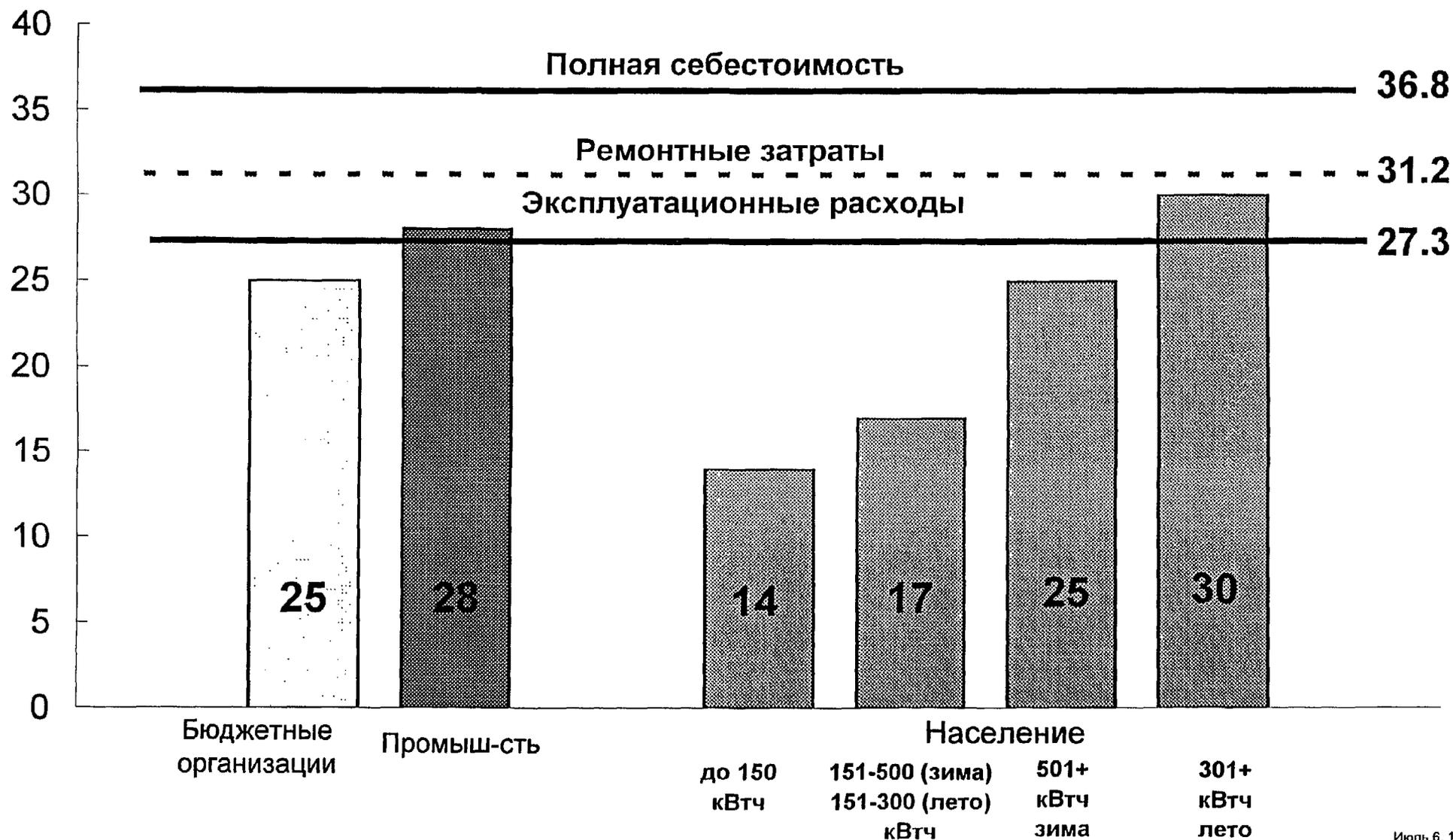
$\frac{1}{2}$ литра молока

$\frac{1}{4}$ кг сахара

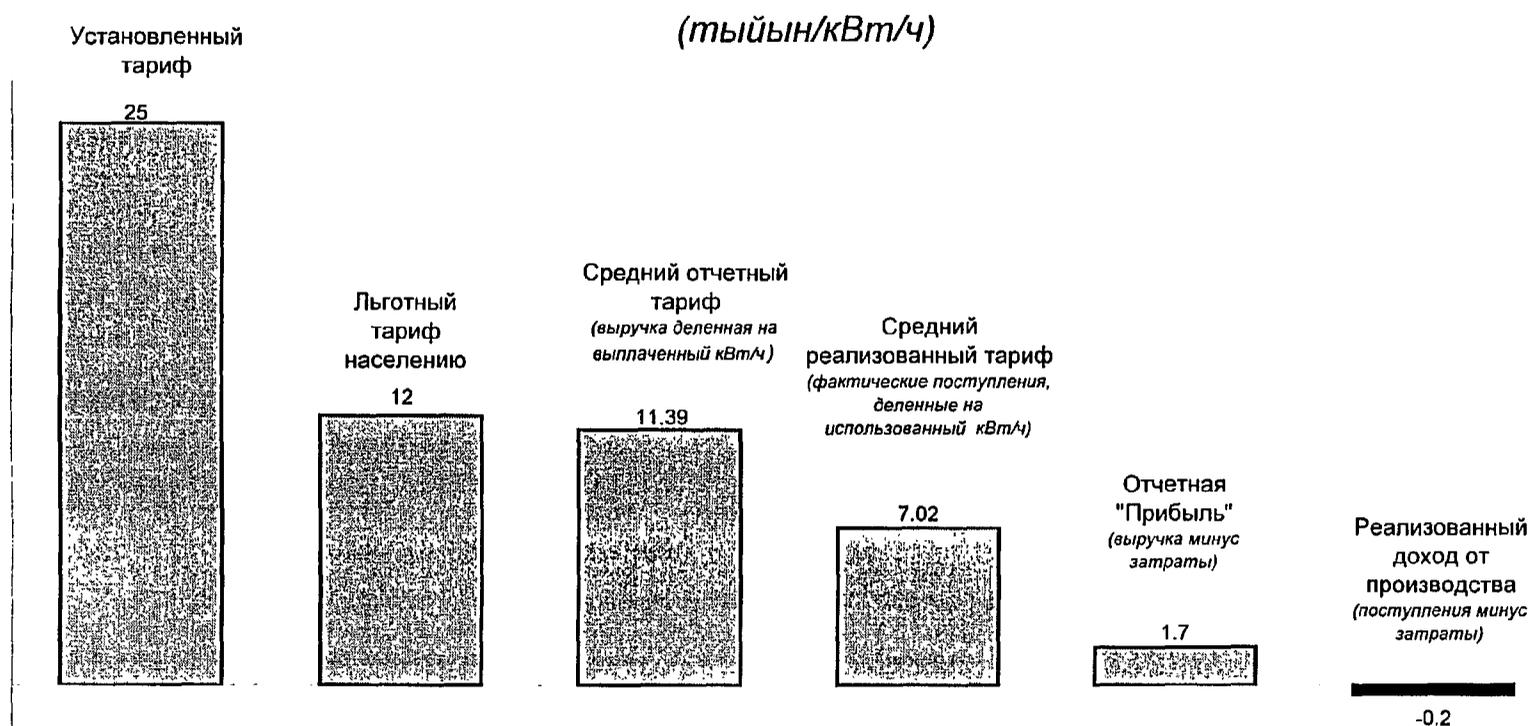


Даже новые тарифы не покрывают полной себестоимости

тыиын/кВт-ч

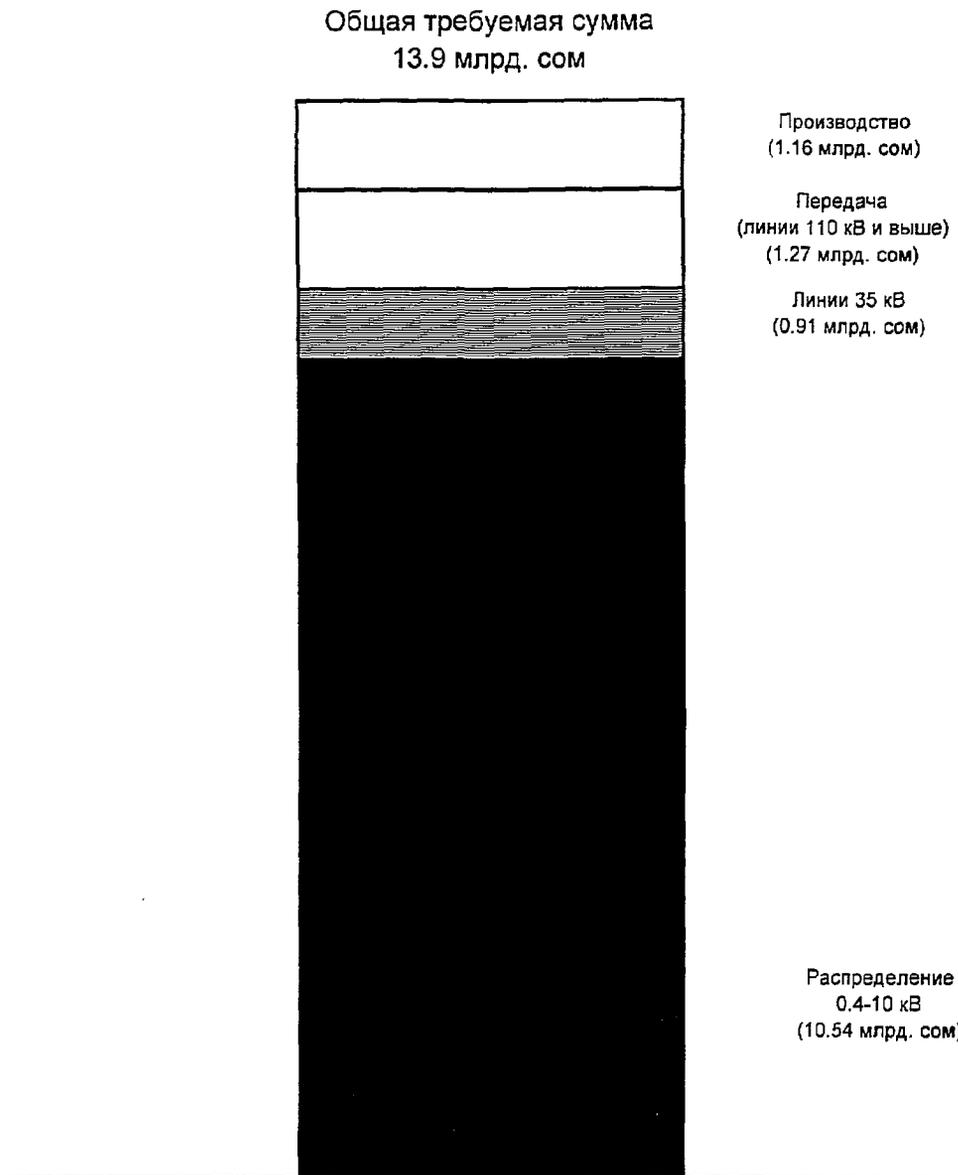


Фактически Кыргызэнерго теряет деньги по каждому кВт/ч электроэнергии, потребляемой в Кыргызстане, хотя по отчетам оно получает прибыль



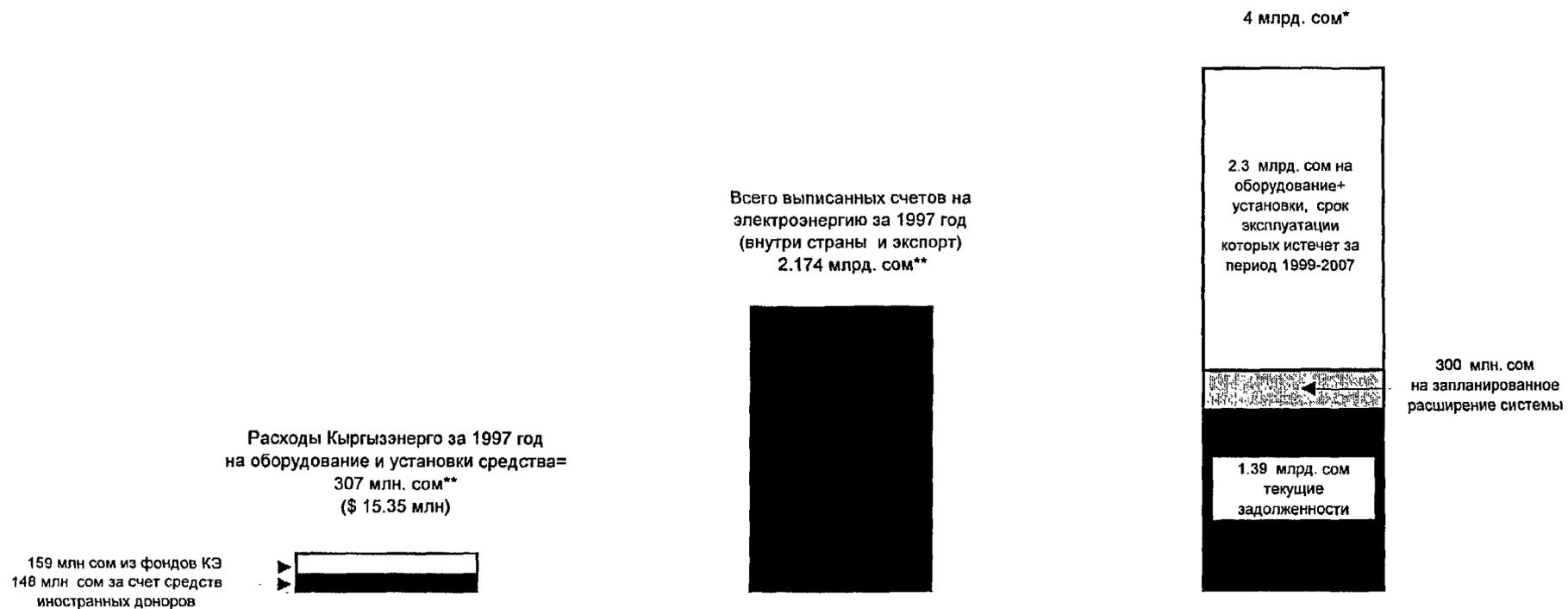
Примечание : По отчетам АО "Кыргызэнерго" общий объем доходов составляет 77.8 млн. долларов, хотя проведенный недавно организацией Price Waterhouse аудит финансовой деятельности АО "Кыргызэнерго" за 1996 год показывает, что реализация составила 100 млн. долларов. Результаты аудита PW показывают, что потери составили 13,8 млн. долларов (до поступления чрезвычайного дохода в виде гранта 5 млн. долларов от Правительства Швейцарии)

**Кыргызэнерго необходимо 13.9 млрд. сомов (\$ 695 млн)
для ремонта или замены изношенного
оборудования и линий,
11.5 млрд. сомов (\$ 575 млн) необходимо только
для сектора распределения***



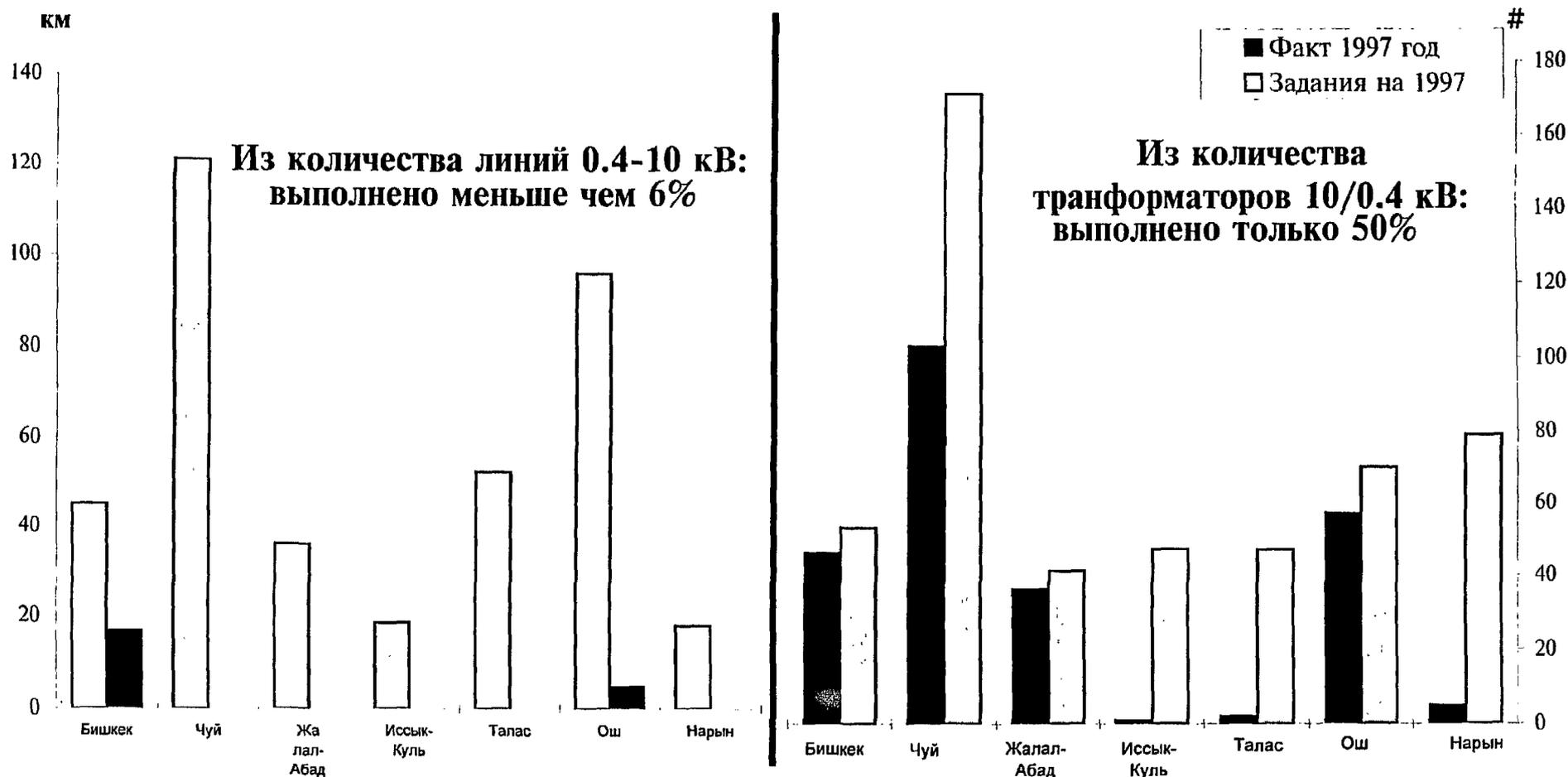
* На основе анализа, подготовленного ТАСИС по Программе оказания помощи Государственному агентству по энергетике

Кыргызэнерго необходимо потратить в 13 раз больше, чем сейчас оно тратит на восстановление, ремонт и замену*



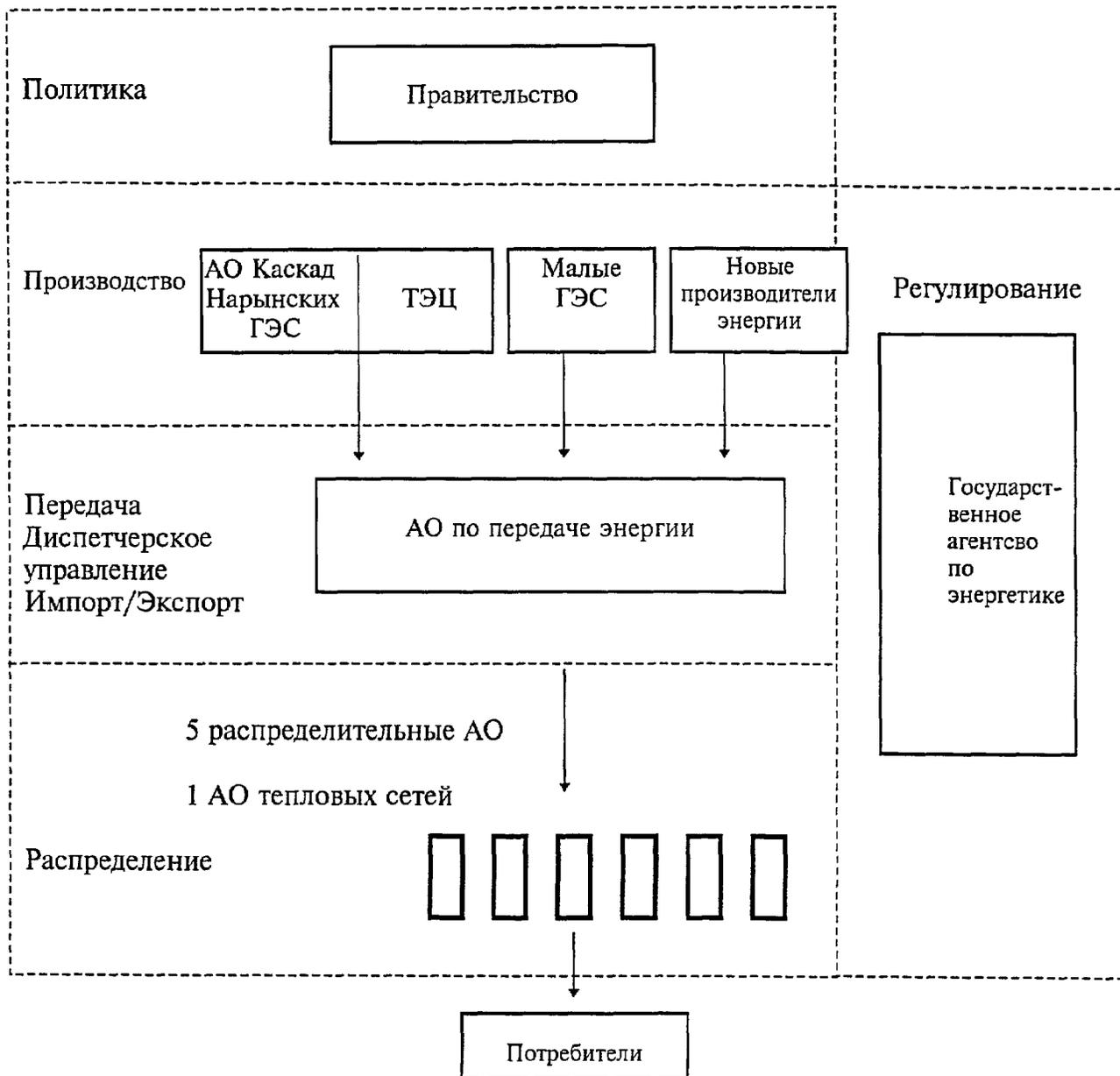
* На основе анализа, подготовленного ТАСИС по Программе оказания помощи Государственному агентству по энергетике
** Источник: Годовой отчет АО "Кыргызэнерго"

Области не в состоянии выполнить Правительственные задания по ремонту распределительной системы



	Бишкек		Чуй		Жалал-Абад		Иссык-Куль		Талас		Ош		Нарын		Всего	
	0.4-10 кВ линии (км)	10/0.4 трансфор.														
Задания на 1997	45.1	53	121	171	36	41	18.6	47	52.4	47	96	70	18	79	387.1	508
Факт 1997 год	16.75	46	0	103	0	36	0	1	0	2	4.81	57	0	5	21.56	250
% выполненного	37%	87%	0%	60%	0%	88%	0%	2%	0%	4%	5%	81%	0%	6%	5.6%	49%

Реструктуризация КНЭХК



ПРОГРАММА РАЗГОСУДАРСТВЛЕНИЯ

- Этап 1: Акционирование “Кыргызэнерго”;
купонный аукцион (проведен 6/97); принятие Тарифной политики (было сделано 3/98);
создание консорциумов для новых больших гидростанций
- Этап 2: Отделение неосновных социальных активов и не связанных с производством;
приватизация малых гидростанций (начата в августе 1997)
- Этап 3: Реорганизация распределительной сети (планировалось к июню/августу 1998);
создание Национальной сети электропередач (планируется к 4/99);
реорганизация электровырабатывающих станций (планируется к 4/99)
- Этап 4: Объявление тендера на должность советника по приватизации (планировалось к 10/97);
объявление тендера и заключение контракта на исполнение (планируется между 6/98-6/99)

(Примечание: Выполнение некоторых мероприятий было отложено в ожидании утверждения Программы Жогорку Кенешем)

Зачем приватизировать электроэнергетический сектор?

- Остановить ухудшение состояния системы
- Восстановить надежность и качество услуг как основу для промышленного и экономического роста
- Снизить необходимость государственного инвестирования
- Сократить прямые и скрытые дотации
- Улучшить эффективность и деятельность сектора и снизить затраты



Рекомендации для Кыргызстана

- Избегайте “одиноких” инвесторов как иностранных, так местных; лучшие результаты достигаются, когда вовлекаются несколько сторон
- Не рассчитывайте на расхождения при оценке имущества; “Кыргызэнерго,” в действительности, убыточно с точки зрения стандартов международного бухучета, и за него не заплатят высокую цену
- Проведите реструктуризацию, прежде чем дальше продавать или распределять акции
- Будьте реалистичными относительно “компромиссов”; более высокая покупная цена или инвестиционные обязательства потребуют более высокого тарифа
- Взвесьте (оцените) покупную цену и инвестиционные обязательства соответственно
- Распределительным предприятиям следует прежде всего нацеливаться на приватизацию, так как они крайне нуждаются в капиталовложениях, чтобы остановить дальнейшее разрушение системы и вернуть Кыргызстану круглосуточное электроснабжение по всей стране

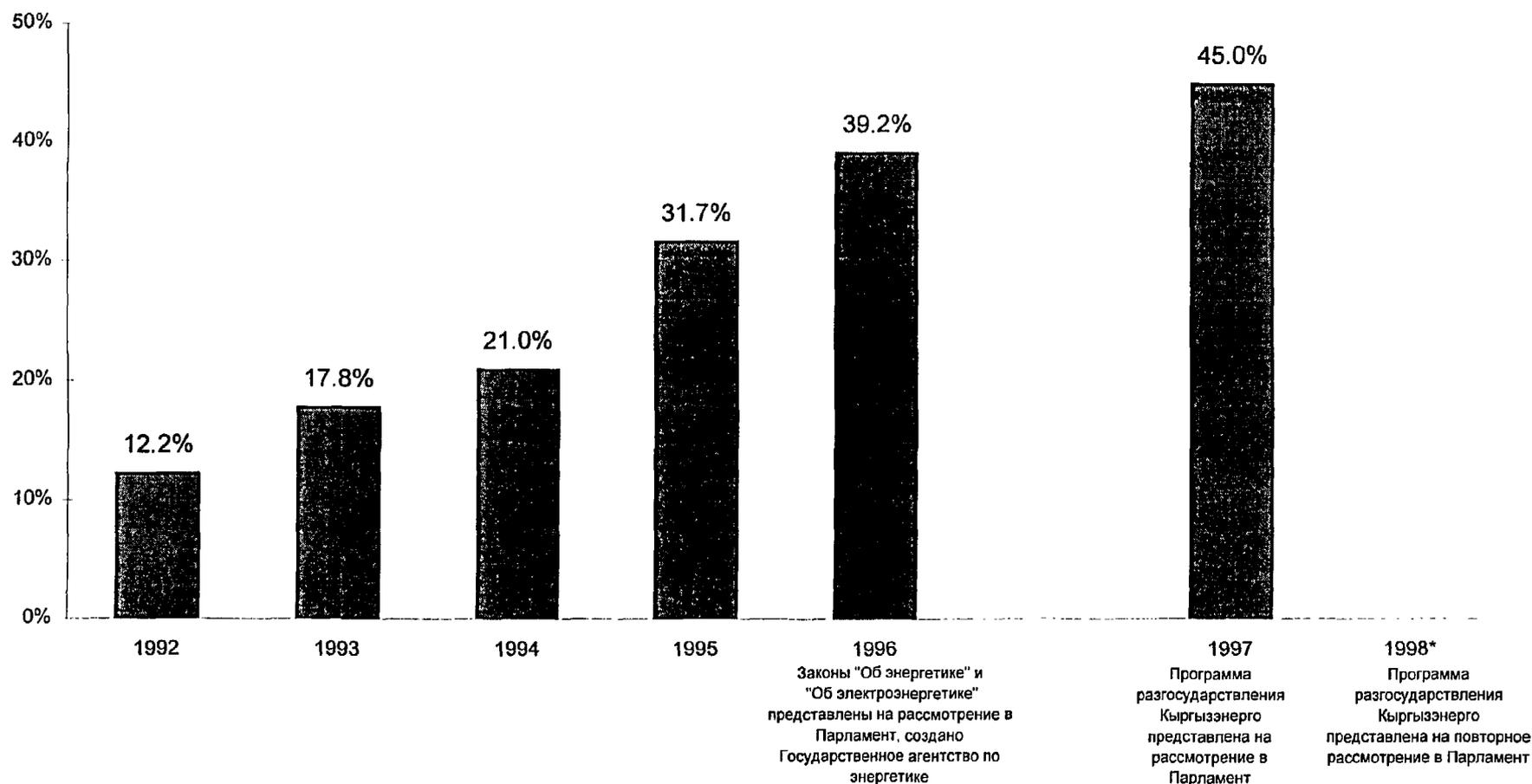


Рекомендации для Кыргызстана

- Завершить реструктуризацию сектора:
 - создать Компанию “Национальная Сеть“ (преемник Кыргызэнерго)
 - отделить все генерирующие мощности от Кыргызэнерго (создать новую Гидро Компанию, продайте малые гидростанции как простое имущество через конкурсный тендер, решите проблемы на ТЭЦ-1)
 - реструктуризовать и создать от 3 до 5 (максимум) распределительных компаний и приватизировать их
- Ясно нацельтесь на основные реформы, особенно тарифную реформу (как уровней, так и структуры), систематическое использование принципов коммерческой деятельности (учет электроэнергии, предъявление счетов и отключение неплательщиков, а не населенных пунктов и регионов)

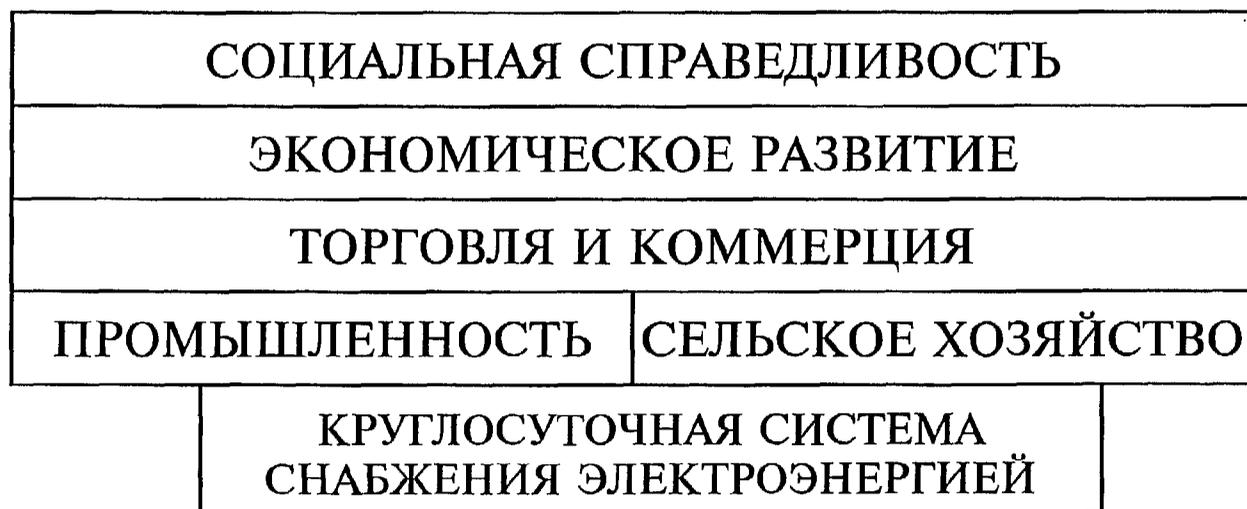
Пока мы спорим потери за четыре года возросли в три раза и продолжают расти

Потери в % от внутреннего производства



(*на год, на основе 6 месяцев-факт)

**Круглосуточная система снабжения электрической энергией
составляет основу современной экономики и социальной
справедливости**



MEMORANDUM

TO: Robert Archer, Barry Primm
FROM: Leszek Kasprovicz and Joellyn Murphy
DATE: February 22, 1998
SUBJECT: Heat and Water Crisis Waiting to Happen

This memo presents information on the astounding recent growth in use of electric water and space heaters in Kyrgyzstan.

Following the January, 1993 announcement of Government policy to promote use of electricity for heating loads, residential as well as commercial and industrial customers rapidly started installing new and replacing existing, non-electric heaters with electric ones. The conversion to electric space and water heating was virtually "free" because of very low electric tariffs and special discounts for large winter usage.

Formal advice from USAID consultants in October 1994 to institute an immediate moratorium on new electric heating loads for both industrial and residential consumers was ignored by Kyrgyzenergo, and the conversion proceeded rapidly.

The conversion to electricity caused total consumption to increase between 1990 - 1996, despite the large drop in industrial load. (See Chart A). It was also what led to the significant increase in recent years in the release of water from the Toktogul Reservoir during winter for electricity production. (See Chart B). One of the unfortunate results of this conversion, the draw down of the Toktogul Reservoir, and a dry year, is that about 282,000 hospitals, schools and public buildings are subject to load shedding this year because of their use of electricity for heating.

In the residential sector alone, the capacity of installed electric heaters grew from 24.4 MW in 1992 to 304.4 MW in 1996, a stunning 1,148% increase! The additional load would have cost the Kyrgyz system an estimated \$ 60 M in lost revenues from exports if the industrial load had not dropped precipitously between 1991 - 1993.

It did not take long to see the result of the government's policy of achieving "energy independence" through reliance on electricity as the country's sole source of energy. The overwhelming response from the customers very quickly started overloading the electric distribution network. While the high voltage network is designed to and capable of handling high loads, the load imposed at the distribution level went well beyond the designed carrying capacity. (See Chart C). The result has been increasingly frequent failures of transformers and resulting outages, which worsen the current situation in which "planned" disconnections (load shedding) are an every day reality.

In contrast to other electric appliances, the load imposed by electric heaters is of a continuous type, with a high level of coincidence (coincidence factor close to 1.0). This means that when the heater is turned on, it stays on for several hours, and in many situations it may actually operate without interruption. This is true for the majority of customers. Cold weather does not discriminate. Everybody responds to low temperatures by turning the heat on pretty much at the same time, and the imposed load is simply a sum of all heating capacities turned on. The rest is easy to picture: the electric load picks up fast, pushing the system to its limits and beyond.

The fuel switching initiated by the government also literally wiped out other than electric sources of energy (especially coal). Domestic coal production went from 4,400,000 tons in 1991 to 482,000 tons in 1996. And production dropped even further in 1997, to 418,000 tons. Our analysis of fuel substitution effects showed that the increase in electricity consumption between 1991 and 1996 is nearly equivalent to the reduction in coal consumption. After 1991, the price of coal rose and the price of electricity was held down. Switching to electricity was not only more convenient, but significantly cheaper as well.

Residential customers in all regions of Kyrgyzstan responded to the subsidized and discounted electric rates. The number of installed water and space heaters grew quickly, especially in Chui region (Fig. 1), which is responsible for close to half of all installations in the whole country. A similar trend can be observed in the total installed capacity (Fig. 2). The Chui region clearly leads the remaining parts of the country.

Looking at the trend in the average size of the installed heaters, it is clear that over the five year period the average size increased, as illustrated by the inclining trend line on Fig. 3. Over the five year period, the average size of installed heaters increased by slightly over 1 kW, or about 20%. The biggest units are being installed in Talas and Naryn regions. (Naryn is a high altitude oblast, where virtually all customers receive 50% discounts).

To install a heater, a user has to obtain a permit from Kyrgyzenergo, but the data seem to include both legal and not so legal installations. To be even more conservative, it is assumed that no new electric heating installations were added by residential customers in 1997.

By 1997, the issued permits had allowed the customers to install a whopping 600 MW of electric heating (Fig. 4). The permits were issued to budget organizations (26%), residential customers (31%), and an enigmatic group of "other" customers (43%), which most likely include commercial and industrial users. Kyrgyzenergo's data would indicate that for residential customers in Bishkek and Osh, the number of permits issued was greater than the number of actual installations. In some regions, the number of permits issued was less (much less) than 1% of total installations (Fig. 5).

Considering that residential users with permits could still install heaters based on their legal permits, there is a potential for at least 138 MW of additional heating load. So far, the residential

customers have installed 304 MW, and non-residential customers have installed up to 412 MW of electric heating capacity. Total load imposed by electric heating could therefore be as high as 854 MW (138+304+412). Given the total system demand of about 2,500 MW, the electric heating load thus constitutes a burden of between from 29% to 34%.

The system is already overloaded even though industry in Kyrgyzstan is essentially idle now and is not contributing significantly to the overall system load. If industry regains momentum and increases its load to a pre 1991 level, there will be a serious supply shortfall unless new capacity comes on line soon or money can be raised through increased and collected tariffs to pay for coal or to import electricity.

Kyrgyzenergo has reportedly recently stopped issuing permits for new installations of electric heaters. Apparently, customers who already installed electric heaters are being asked to dismantle them, especially schools and hospitals. Assuming that the current users can't afford to buy new equipment again so soon after switching to electric units and will thus continue using their heaters, three mitigating strategies come to mind.

First, make the heating load responsible for the burden it imposes on the system. This can be done through a demand charge that would reflect the cost of 1 kW connected to the system. Increased demand charge will send a price signal to the users that they will be charged for the size of the heater they use in addition to the energy charge.

Second, the energy charge should be increased for high energy users rather than decreased for large winter consumption (over 700 kWh/month), as proposed in the SEA's new tariff structure.

Third, to limit the impact of high electric bills, users should be encouraged to embark on energy savings measures that will result in cycling of the heating units or reducing its connected capacity. This can be accomplished primarily by reducing heat losses in dwellings and commercial buildings.

While adding more insulation is not feasible for existing dwellings, reducing infiltration losses may carry big payoffs. Based on earlier TACIS studies, infiltration can be responsible for up to 40% of overall heat losses. Weatherizing doors and windows is very cost effective and does not require a great deal of expertise. It is a simple do-it-yourself activity. Decreasing heat losses will reduce capacity needed for the heating load.

If capacity reduction is not possible, the appliance can at least be cycled on and off. This means that during cold weather less effective heating capacity will be connected at the same time resulting in the same heat delivery to the users and imposing less demand on the system. The cycling units are less likely to come on-line at the same time, and thus reduce the coincidence factor to something lower than 1.0. If the coincidence factor were decreased from 1.0 to 0.9, for 100 MW of the connected heating capacity, the system would be relieved of 10 MW $((1.0 - 0.9) * 100)$.

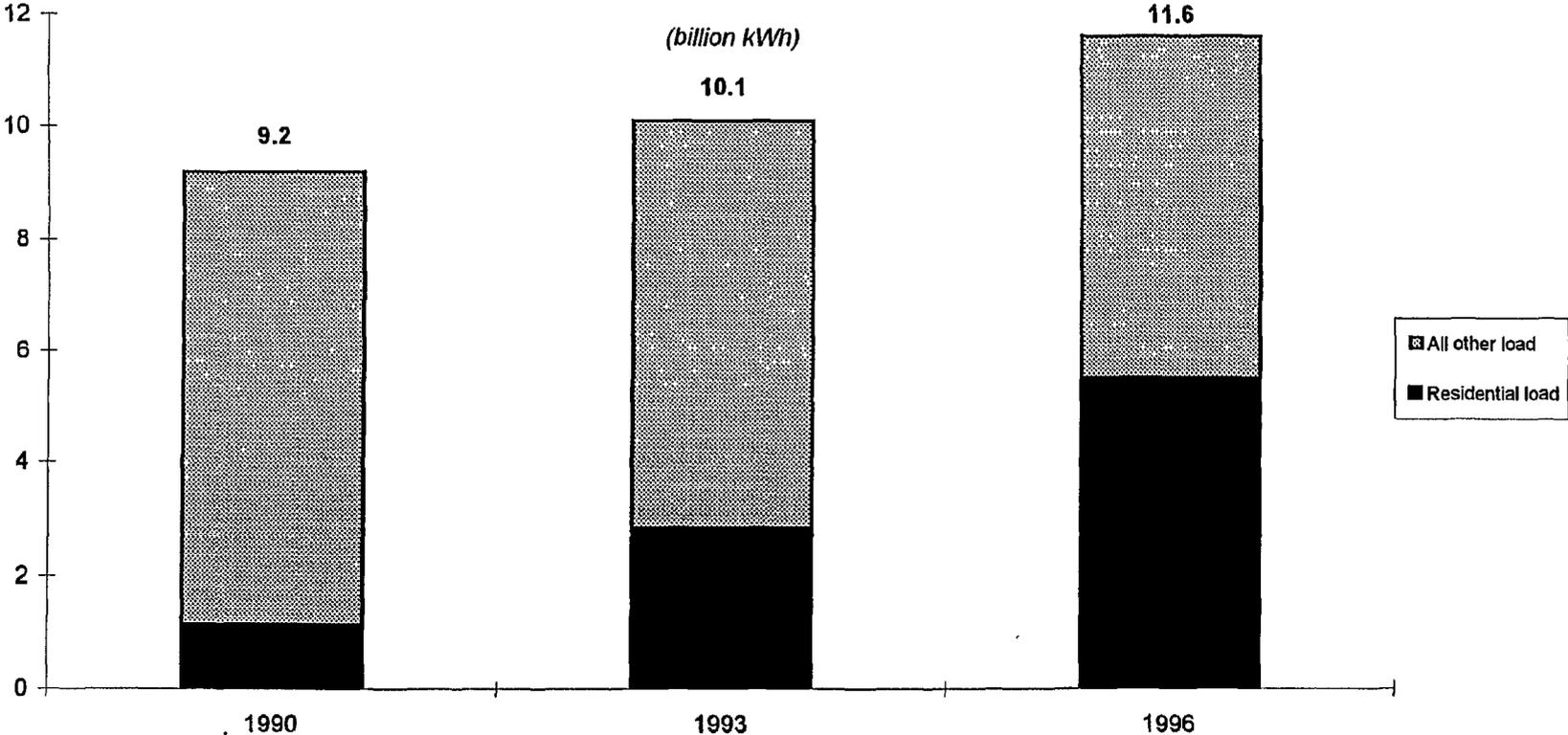
Weatherizing as an energy conservation measure is a win-win situation for both the electric and thermal system and for residential customers regardless of the type of heating system they use. Decreasing thermal losses in dwellings will both decrease the burden imposed on the electric system by all-electric users as well as decrease the demand for thermal heat by those who rely on centralized district heating. Energy education and simple, cost-effective conservation measures need to be popularized and become a part of every electric distribution companies' normal activities.

The electric tariff structure that continues to neglect the negative impact and future cost of electric heaters on the system needs to be redesigned even though this is considered politically difficult to do. Current tariffs still subsidize high winter consumption for heating, even though marginal cost to generate is about 3 times higher in the 5 winter months than the 7 summer months (\$0.06 vs. \$0.02 in an average hydrological year.) Tariffs should be designed to impose a specific capacity charge for electric heating demand.

Attachments:	Chart A	Despite Large Drop in Industrial Load, Total Increased - due Mainly to the Government's Promotion of Electricity for Heating
	Chart B	The Increase in Electric Heating Loads Is The Primary Cause of Increased Winter Releases from the Toktogul Reservoir
	Chart C	Growth of Consumption Has Overloaded the Distribution System
	Figure 1	Number of Installed Electric Heaters by Oblast
	Figure 2	Installed Capacity (kW) of Electric Heaters by Oblast
	Figure 3	Average Size (kW) of Electric Heaters by Oblast
	Figure 4	Issued Permits (kW) for Installation of Electric Heaters by Oblast
	Figure 5	Comparison of Residential Permits Issued (kW, 1990-97) vs. Actual Installations of Electric Heater (kW, 1992-96) by Oblast
		Analysis of Fuel Substitution from Coal to Electricity in Kyrgyzstan in 1996
		Public Institutions subject to Load Shedding because of Use of Electric Heating
		Presidential Decree of January 11, 1993 Setting forth The Conversion to Electric Heating as a Priority Development of the Electric Sector

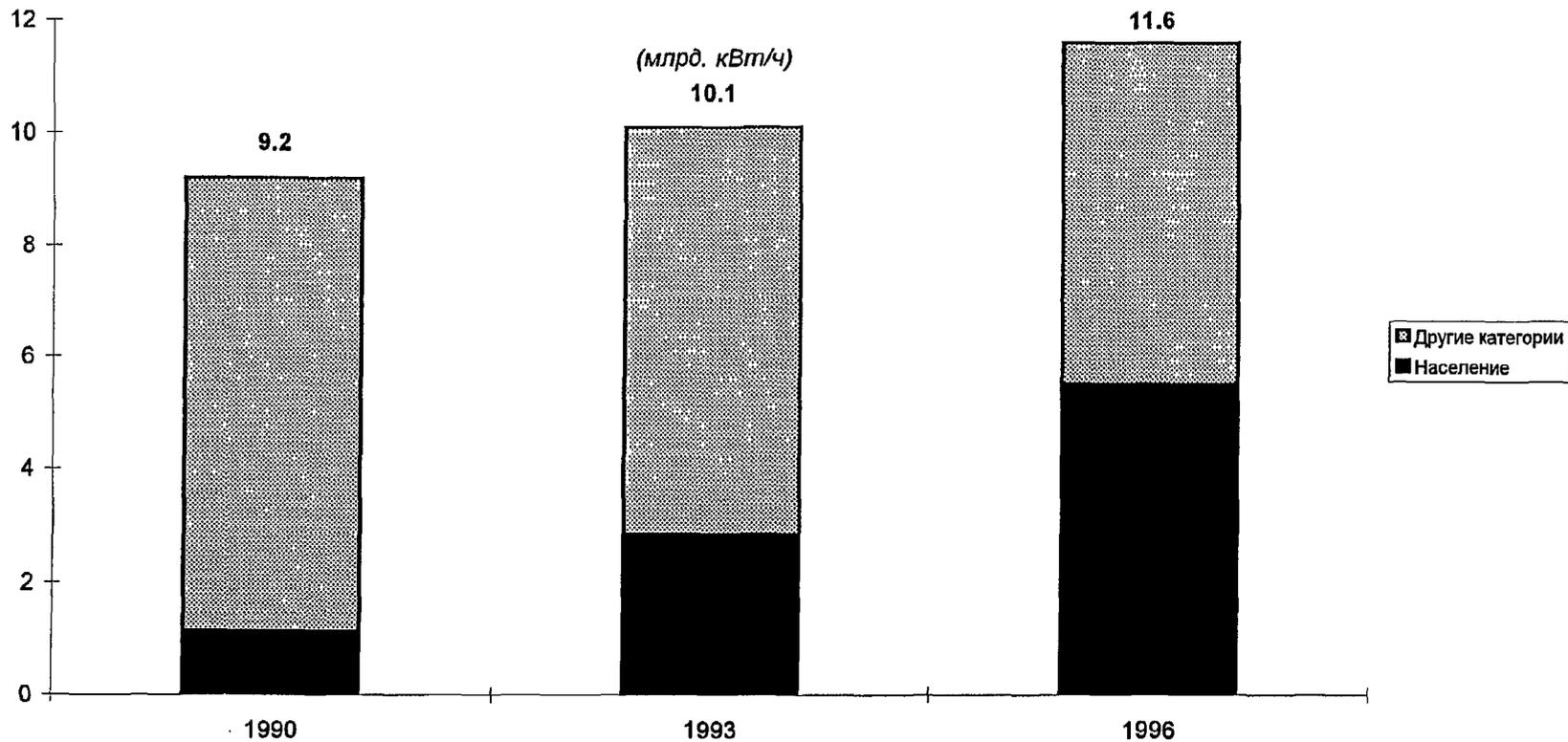
**Despite Large Drop in Industrial Load, Total Consumption Increased - -
Due Mainly to the Government's Promotion of Electricity for Heating**

Residential Use Went from about 1/8 to 1/2 of Total Domestic Consumption in 6 Years



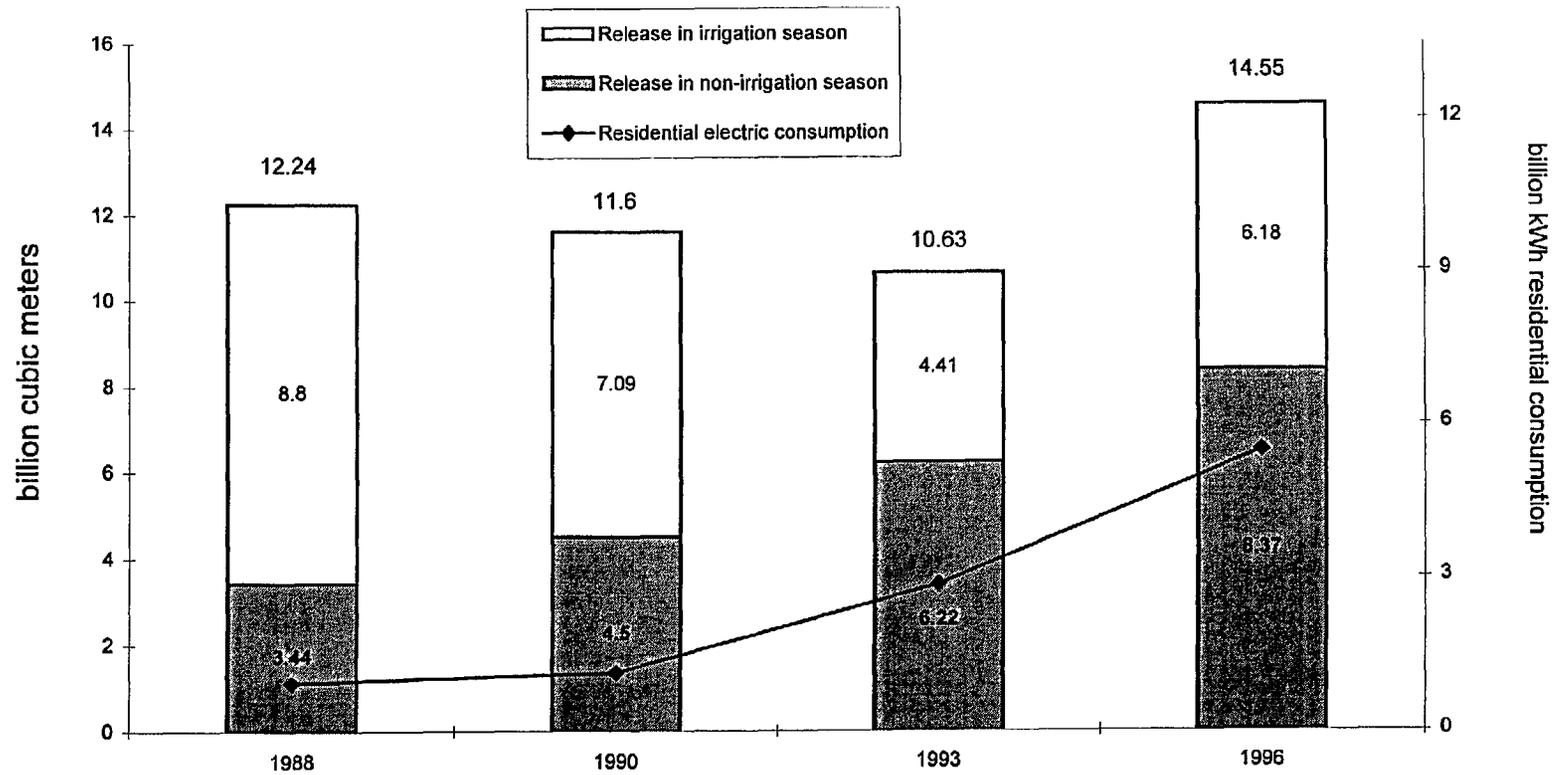
Несмотря на резкое сокращение промышленной нагрузки, увеличение общего объема произошло, в основном, благодаря правительственной поддержке электроэнергии, используемой для отопления

За 6 лет потребление электроэнергии населением увеличилось от 1/8 до 1/2 всего объема потребления внутри страны

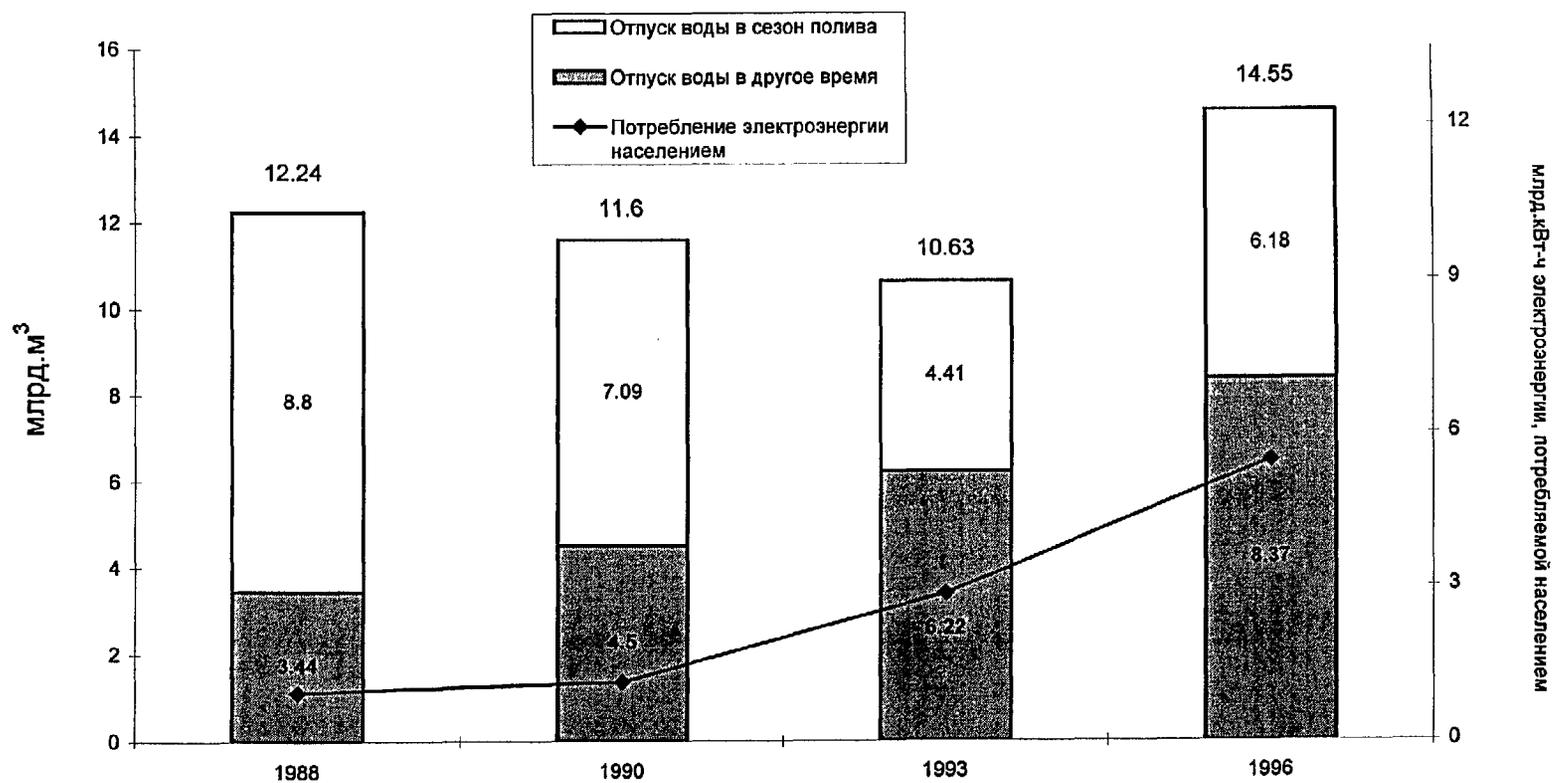


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The Increase In Electric Heating Load Is The Primary Cause Of Increased Winter Releases From The Toktogul Reservoir

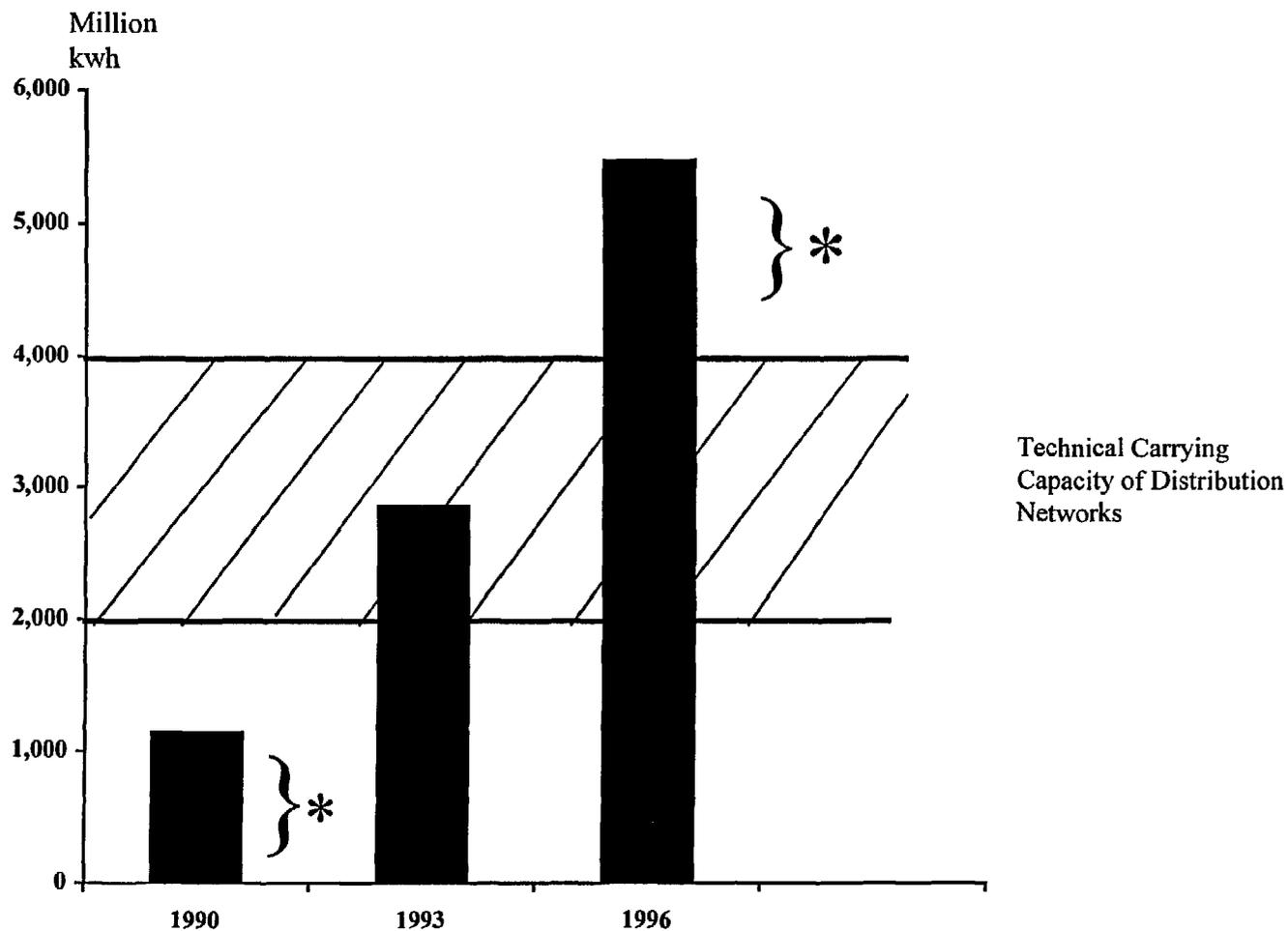


Рост электроотопительной нагрузки является основной причиной увеличения зимних выпусков с Токтогульского водохранилища



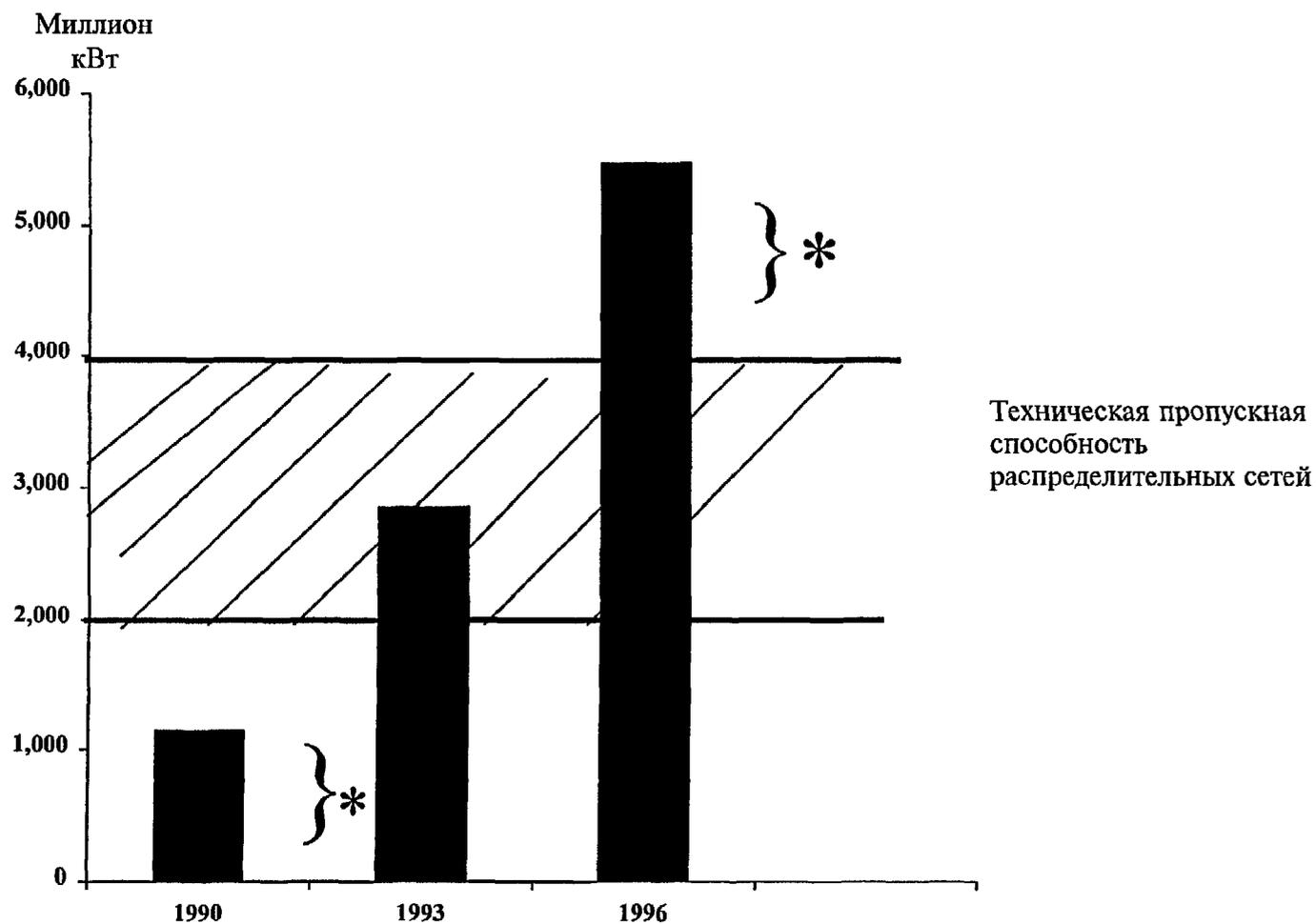
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Growth of Consumption Has Overloaded the Distribution System



* Overload in 1996 is equal to total load in 1990.

Рост потребления вызвал перегруз в распределительных электрических сетях



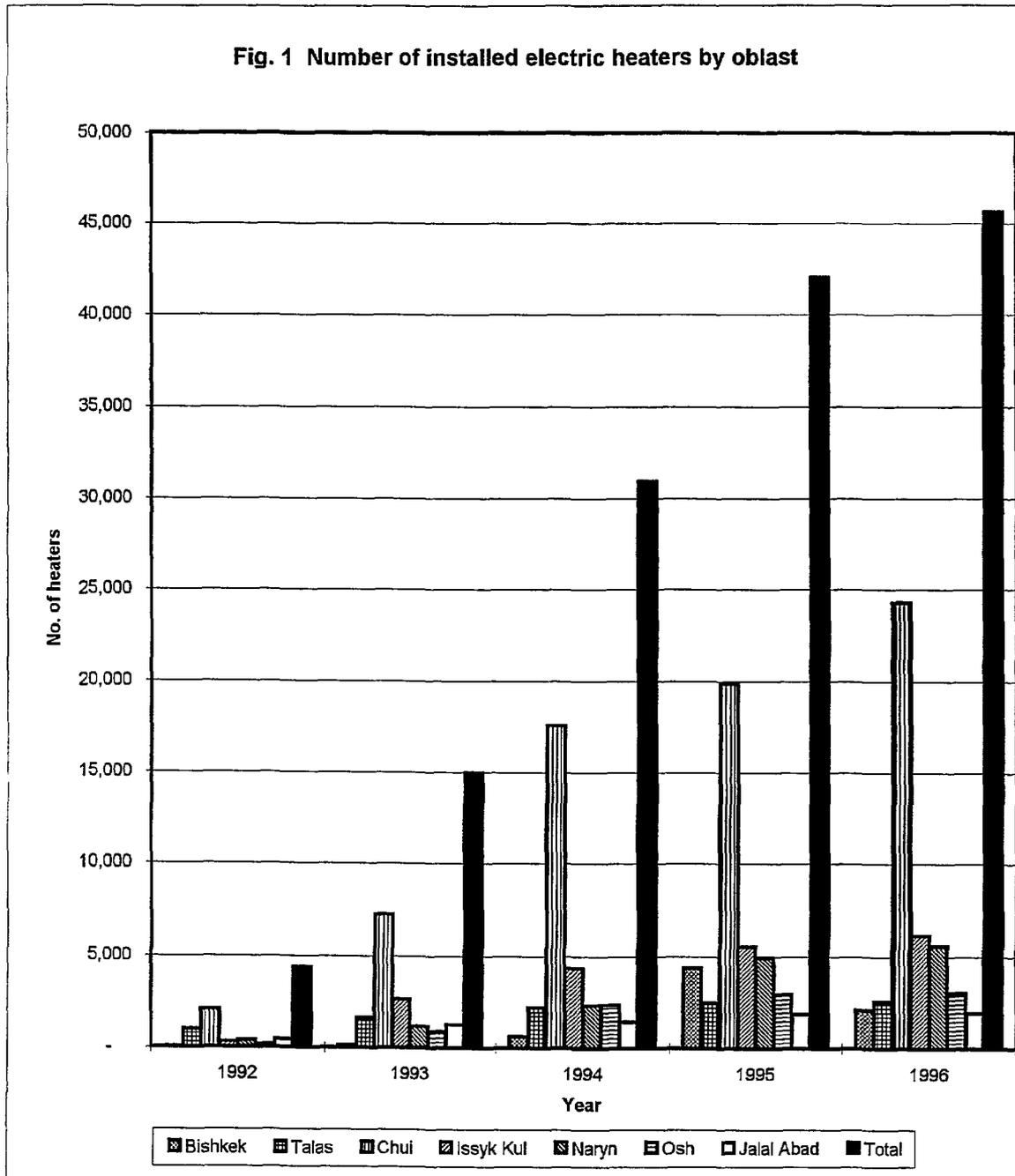
* Перегрузка в 1996 г. равна всему объему нагрузки за 1990 год

Installed

Number of installed electric heaters by oblast

	Bishkek	Talas	Chui	Issyk Kul	Naryn	Osh	Jalal Abad	Total
1992	17	988	2,078	294	397	169	432	4,375
1993	118	1,621	7,236	2,656	1,189	890	1,264	14,974
1994	628	2,204	17,593	4,340	2,343	2,356	1,460	30,924
1995	4,377	2,476	19,904	5,509	4,930	2,946	1,890	42,032
1996	2,088	2,556	24,298	6,144	5,591	3,037	1,958	45,672

Fig. 1 Number of installed electric heaters by oblast

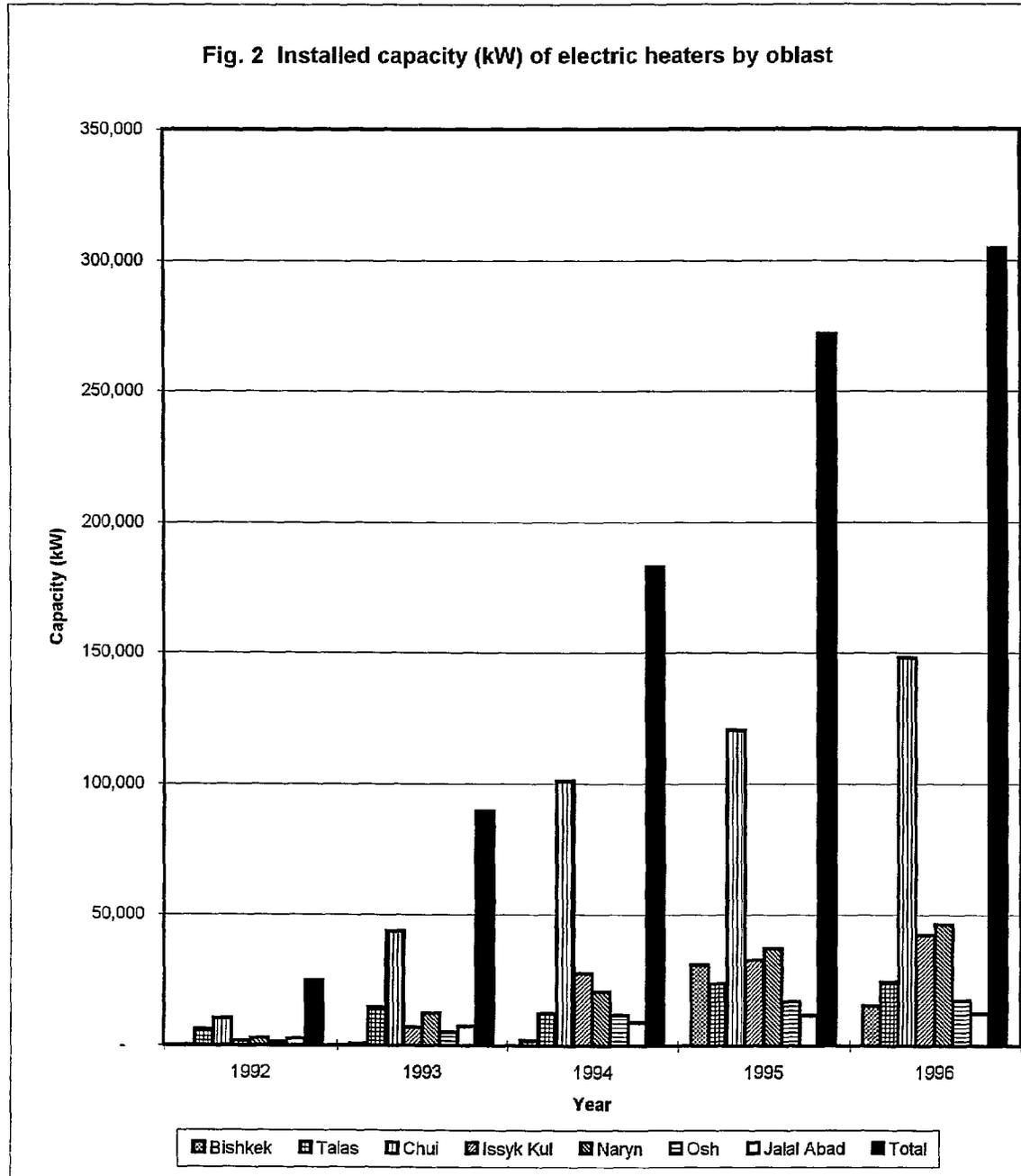


Installed

Installed capacity (kW) of electric heaters by oblast

	Bishkek	Talas	Chui	Issyk Kul	Naryn	Osh	Jalal Abad	Total
1992	102	5,928	10,192	1,761	2,620	1,226	2,592	24,421
1993	600	14,295	43,580	6,837	12,219	5,011	7,212	89,754
1994	1,962	12,266	101,091	27,312	20,437	11,439	8,680	183,187
1995	30,639	23,461	120,424	32,536	37,000	16,526	11,395	271,981
1996	14,849	24,060	148,015	42,180	46,256	17,042	12,055	304,457

Fig. 2 Installed capacity (kW) of electric heaters by oblast

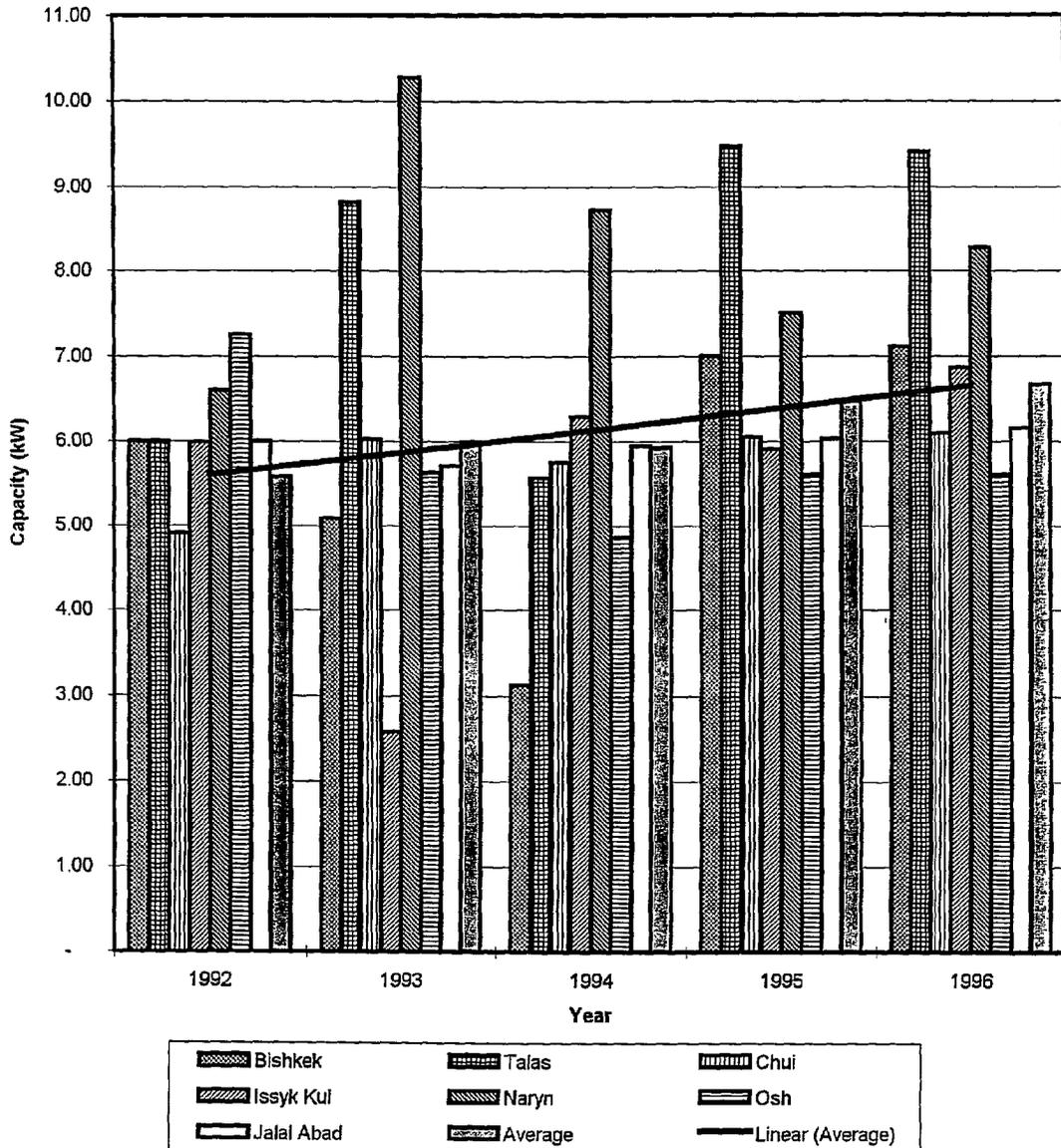


Installed

Average size (kW) of electric heaters by oblast

	Bishkek	Talas	Chui	Issyk Kul	Naryn	Osh	Jalal Abad	Average
1992	6.00	6.00	4.90	5.99	6.60	7.25	6.00	5.58
1993	5.08	8.82	6.02	2.57	10.28	5.63	5.71	5.99
1994	3.12	5.57	5.75	6.29	8.72	4.86	5.95	5.92
1995	7.00	9.48	6.05	5.91	7.51	5.61	6.03	6.47
1996	7.11	9.41	6.09	6.87	8.27	5.61	6.16	6.67

Fig. 3 Average size (kW) of electric heaters by oblast

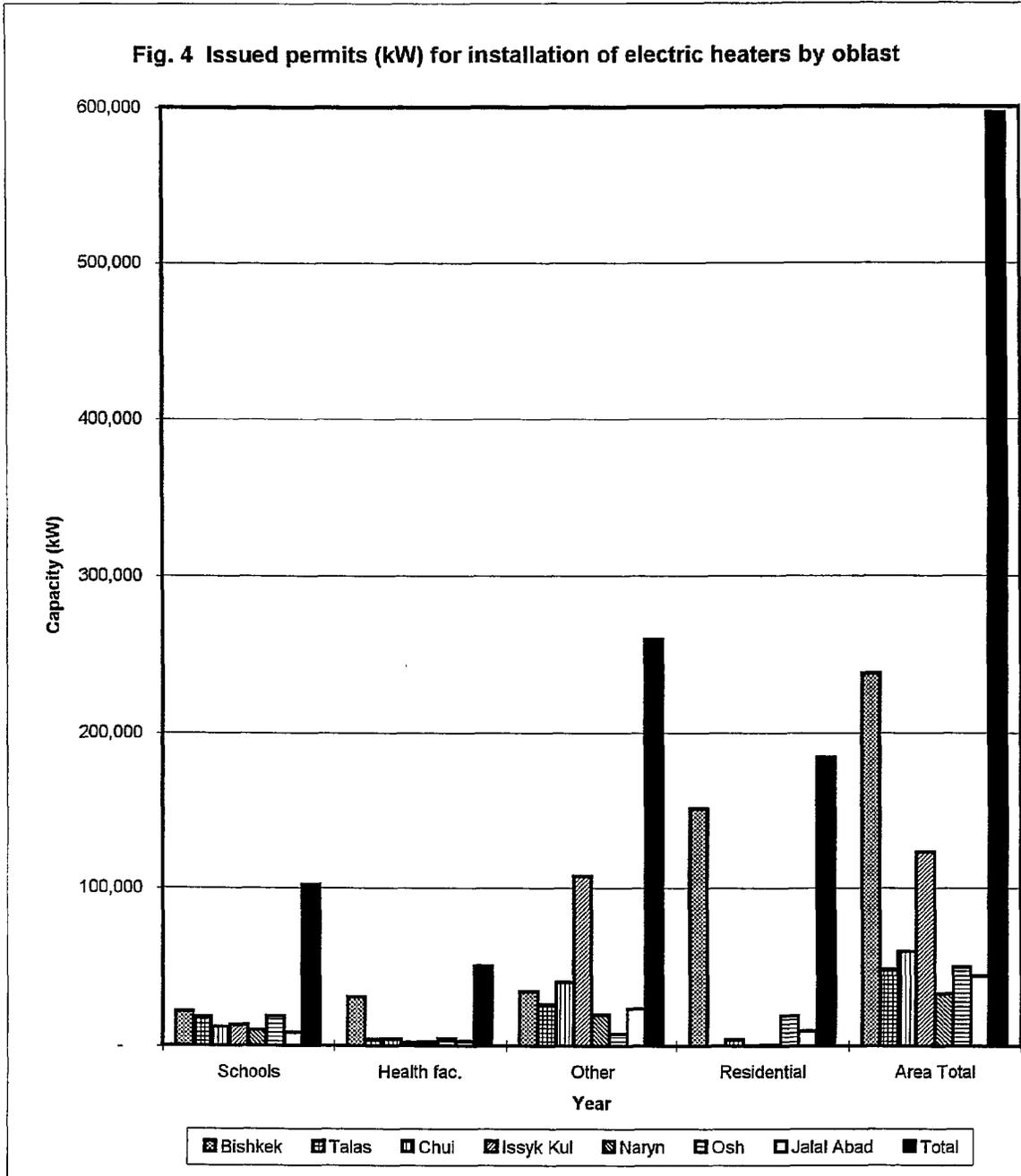


Installed

Issued permits (kW) for installation of electric heaters by oblast (1990-1997)

	Bishkek	Talas	Chui	Issyk Kul	Naryn	Osh	Jalal Abad	Total
Schools	21,490	18,375	11,649	13,074	10,155	18,856	8,505	102,104
Health fac.	30,940	3,829	4,125	2,140	2,260	4,529	2,938	50,761
Other	34,300	26,414	40,177	107,397	19,906	7,600	23,460	259,254
Residential	151,000	31	3,830	440	623	19,060	9,500	184,484
Area Total	237,730	48,649	59,781	123,051	32,944	50,045	44,403	596,603

Fig. 4 Issued permits (kW) for installation of electric heaters by oblast

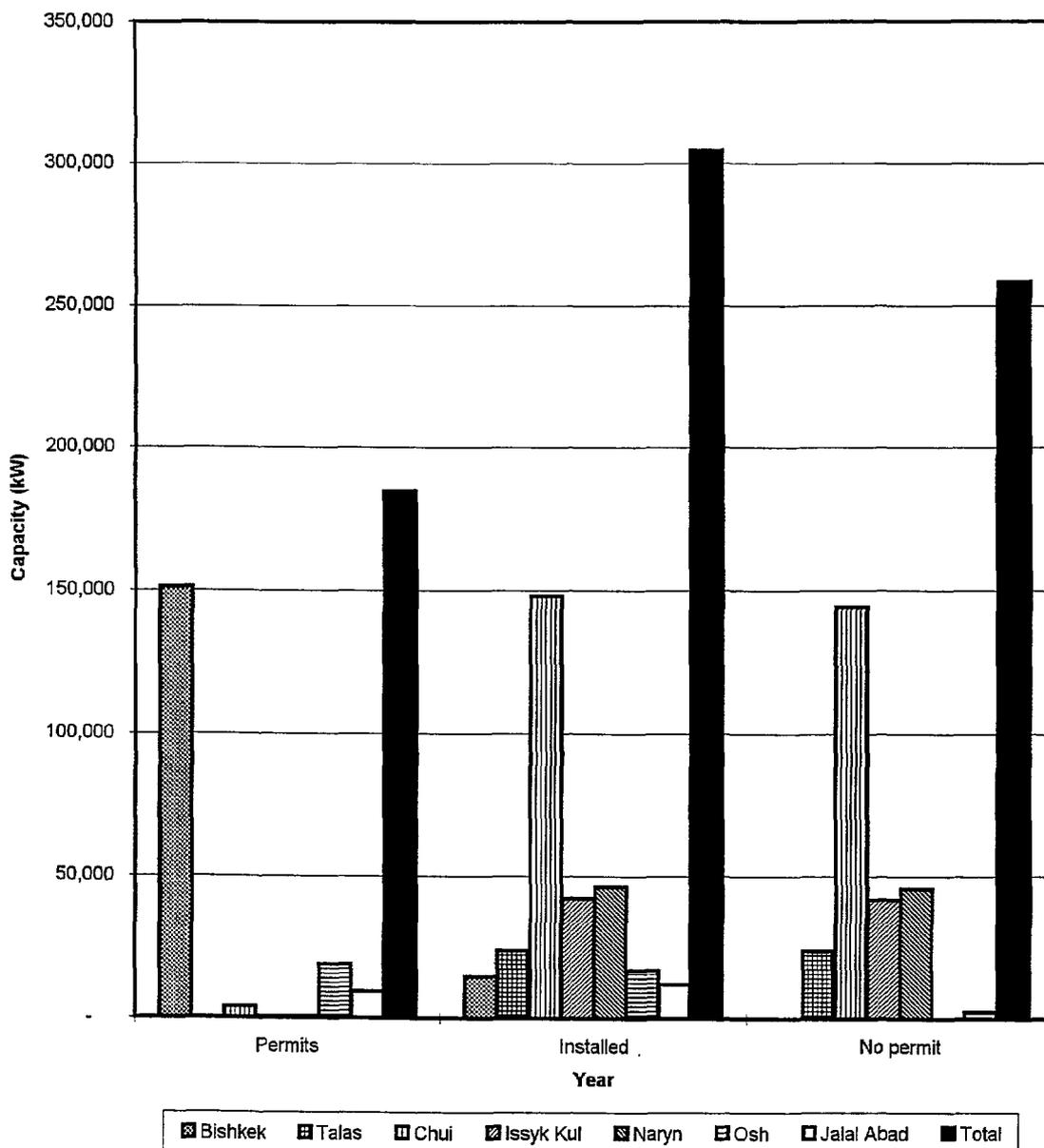


Installed

Comparison of residential permits issued (kW, 1990-97) vs. actual installations of electric heater (kW, 1992-96) by oblast

	Bishkek	Talas	Chui	Issyk Kul	Naryn	Osh	Jalal Abad	Total
Permits	151,000	31	3,830	440	623	19,060	9,500	184,484
Installed	14,849	24,060	148,015	42,180	46,256	17,042	12,055	304,457
No permit	-	24,029	144,185	41,740	45,633	-	2,555	258,142
Potential	136,151	-	-	-	-	2,018	-	138,169

Fig. 5 Comparison of residential permits issued (kW, 1990-97) vs. actual installations of electric heater (kW, 1992-96) by oblast



Analysis of Fuel Substitution from Coal to Electricity in Kyrgyzstan in 1996

<i>Indicator</i>	<i>1990</i>	<i>1996</i>
Official electricity consumption	1,110.8 mln kWh	2,747 mln kWh
Official electricity consumption per an end user	1,110.8 mln kWh / 950,000 = 1,169 kWh	2,747 mln kWh / 950,000 = 2,891 kWh
Illegal electricity consumption (from official loss statement)		2,271 mln kWh
Total (official plus illegal) electricity consumption		2,747 mln + 2,271 mln = 5,018 mln kWh
Total (official plus illegal) electricity consumption per end user (average for Kyrgyzstan)		5,018 mln kWh / 950,000 = 5,282 kWh
Total (official plus illegal) increase in electricity consumption		5,018 mln - 1,169 mln = 3,849 mln kWh
Conversion of the above number to kilocalories (multiply by 860)		3,849 mln kWh = 3,310 bln kcal
Reduce the above number by 10 % to account for "normal" increase in energy consumption		2,979 bln kcal

Calculated above is the equivalent (in kcal) of electricity consumption increase that may be attributed to space and water heating.

The next step is to determine the amount of coal burned directly that is equivalent to the above amount of electricity (expressed as 2,979 bln kcal). This amount of electricity is used with efficiency of 100 %.

Assume that coal is burned with efficiency of 30% which means that 1/0.3 is needed to deliver the same amount of heat as electricity, ie., 9,930 bln kcal.

Convert this amount of energy in tons of coal (use 1,000 kg/ton, 4,500 kcal/kg)
It amounts to **2,210 thousands ton coal**. From state statistics, the amount of coal used by residential users decreased by approximately 2,600 thousands ton coal. Given uncertainties associated with these calculations, this is a reasonably accurate calculation.

The comparison of the above two numbers indicates that the increased consumption of electricity may well be justified by a decrease in consumption of coal.

Appendix 9
to Resolution #327
of the Kyrgyz Republic Government
June 2, 1997

Social Institutions and Residents subject to Load Shedding
in the Autumn-Winter Period of 1997/98

Oblasts	Electric heating of social institutions #/kWh					Residents (# of house- holds/kWh
	Total	Health care	Public education	Administrative buildings	Other	
Bishkek	1935	2	3	116	1814	2088
	9534	266	450	5679	2139	14849
Chui	391	38	118	200	35	24498
Oblast	49083	4197	26182	16327	2377	148015
Talas	188	29	45	109	5	2556
Oblast	28214	5023	11430	11559	202	24060
Osh	1011	324	353	312	22	3037
Oblast	72361	15861	39681	14435	2384	17042
Jalal-Abad	599	95	171	302	31	1958
Oblast	53240	10108	21556	19797	1779	12055
Naryn	320	26	75	182	37	5591
Oblast	41946	5840	17513	15066	3527	46256
Issyk-Kul	269	38	99	126	6	6144
Oblast	27465	5238	12931	7960	1336	42180
Republic	4713	552	864	1348	1949	45672
Total	281843	46533	129743	91833	13734	304458

O. Abdykalykov
Head of the Prime Minister's Office

January 11, 1993

Decree of the President of the Republic of Kyrgyzstan**On Priority Development of the Energy Sector of the Republic of Kyrgyzstan**

The development of energy is the necessary requirement for the Republic of Kyrgyzstan to overcome the economic crisis. Meanwhile, the energy sector of the Republic has been in a deeper crisis than other sectors of the economy. Electric energy generation, coal mining and oil extraction continue to decrease.

Due to inappropriate use of the richest energy potential (75% of coal resources and 40% of hydro energy resources of Central Asia), the Republic has to import fuels at prices which are extremely high. It is one of the main reasons for the increasing inflation that leads to a very high growth in consumer prices and impoverishment of a major part of the population.

This situation in the energy sector can be explained by the lack of a purposeful state energy policy. At present, there is not any state institution responsible for the implementation of this policy in the Republic, its priorities are not defined yet, and energy problems are solved separately. Demands of the energy sector for investment are not met. Scientific research in energy is conducted in isolation from energy generation.

In order to develop the national energy sector, -- which includes electrical energy, coal, oil and gas industries, and non-traditional energy units, -- and in order to provide energy independence for the Republic of Kyrgyzstan I decree:

1. To consider the state energy policy to be one of the main priorities of the economic development of the Republic of Kyrgyzstan.
2. **The main tasks of the state energy policy of the Republic of Kyrgyzstan for 1993-1994 are:**
 - to achieve the level of annual coal mining not less than 3.5 M tons;
 - to increase oil extraction at the existing wells by not less than three times and to put as oil refining plant into operation with the capacity of 300 000 tons;
 - to conduct geological prospecting, geophysical and drilling activities at the potential oil fields of the Republic;
 - to complete the construction of Shamaldy-Sai HPS and make Tash-Kumyr HPS reach projected capacity;
 - to conclude inter-state and inter-governmental agreements pertaining to legal regime of mountainous rivers which provide effective generation of electric energy at hydro power stations of the Republic;
 - to complete the construction of 220 kV transmission lines "Balykchi-Naryn" and "Balykchi-Karakol";

- to accelerate the construction of 110-35 kV transmission lines (not less than 800 km) and appropriate sub-stations as well as 0.4-10 kV distribution networks (not less than 7500 km);
 - **to organize mass production of economical modern electric appliances and equipment that is necessary for the electrification of residential sector;**
 - to organize the production of small energy units within the framework of Business Project “Kun” (pertaining to the use of non-traditional renewable energy sources);
 - to introduce conservation technologies into the economy.
3. **To find the following as main long-term goals of the energy policy:**
- Increase of coal output in Kara-Kechi Basin and its processing into oil products (with foreign investors participation);
 - Development and oil extraction (in case of a positive result of geological prospecting) from long-term oil deposits with foreign investors participation;
 - Completion of the construction of Kambarata hydro power stations and high-voltage transmission lines of 500 kV “Kambarata - Kemin” that assures reliability of energy supply of the Republic and electricity export to other countries;
 - **General electrification of industrial and residential sectors, shift to electric heating;**
 - Development of non-traditional energy, broad utilization of such renewable energy sources as solar, thermal and photoelectric transformers, wind energy units.
4. To create the Ministry of Energy of the Republic of Kyrgyzstan, with the main task to develop and implement an integral State Energy Policy.
5. To entrust the First Vice Prime-Minister of the Republic of Kyrgyzstan to govern the energy sector of the Republic and implement the State Energy Policy.
6. To entrust the Government of the Republic of Kyrgyzstan:
- within 2 months, to develop and approve specific actions to bring the Republic out of energy crisis;
 - by April 15 of the current year, to prepare draft Law “On Priority Development of the Energy Sector of the Republic of Kyrgyzstan”;
 - prior to February 1, 1993, to submit proposals on use of loans of the International Monetary Fund and the World Bank in order to ensure coal output of 3,5 million tons per year and finance other tasks which relate to bringing the Republic out of the energy crisis;
 - prior to April 15, 1993, to elaborate projects of development of coal mines and quarries, oil and gas extracting enterprises, electric energy and non-traditional energy enterprises;

- to provide the construction of Tash-Kumyr, Shamaldy-Sai and Kambarata hydro power stations with the needed long-term loans in tandem with the National Bank of the Republic of Kyrgyzstan;
- to exempt coal enterprises from profit tax, with the savings allocated to reconstruction of existing enterprises and construction of new mines and quarries, dwellings and social and cultural assets;
- within the first half of 1993 to create production facilities to repair and produce mining machines and mechanisms, other mining and technological equipment on the basis of machine-building enterprises of the Republic;
- to develop a system of measures for social protection of employees of the coal industry who are involved in underground works;
- to solve the issues of the energy sector's management organization related to the creation of the Ministry of Energy of the Republic of Kyrgyzstan;
- prior to February 1, 1993, to work out the Provisions on the Ministry of Energy of the Republic of Kyrgyzstan;
- to bring resolutions of the Government of the Republic of Kyrgyzstan into conformity with this Decree.

7. This Decree shall come into force from the date of its signing.

The President of
the Republic of Kyrgyzstan

A. Akaev

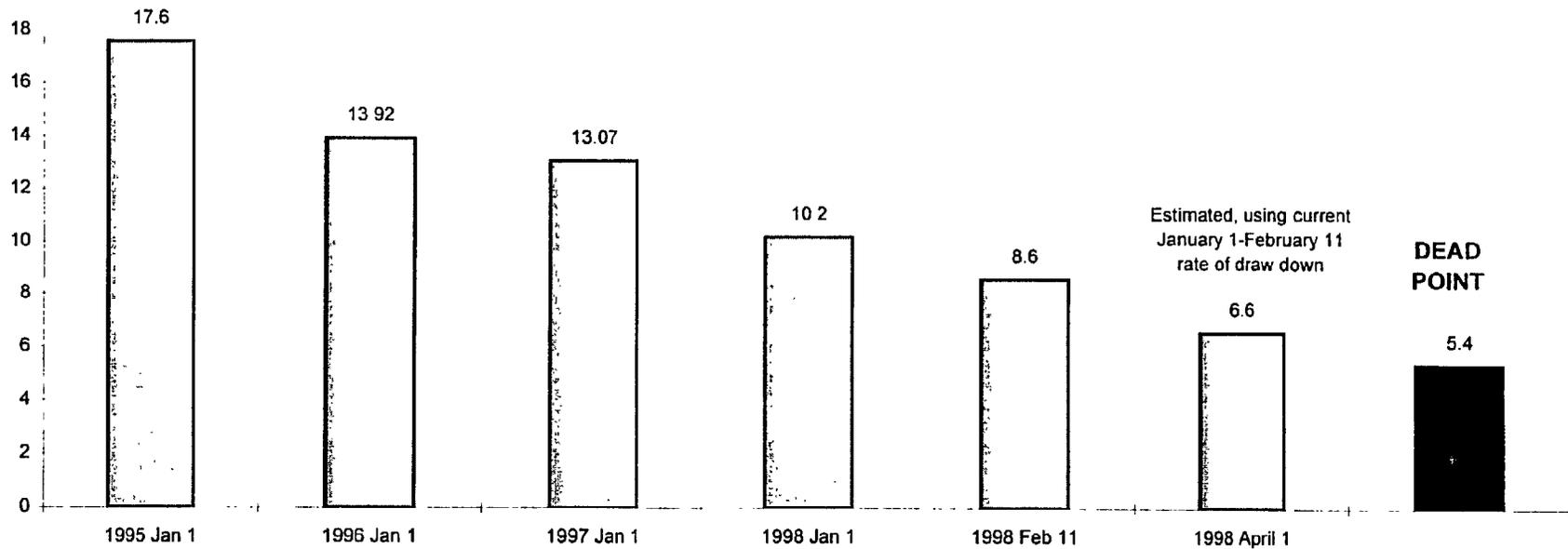
Bishkek, the House of the Government
January 11, 1993
VII-2

Comparison of actual consumption per day with limits ordered by Governmental decrees for summer-winter season of 1997-1998

	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May
1996 Actual Consumption per day	19.9	18.7	18.6	19.1	31.3	43.4	49.2	54.4	54.5	50	43.2	26.1
Decree on limits for 1997- 1998 June 2,1997												
Allowed Consumption	17	17	16	16	22	32	44	45	44	32	24	19
Decree on limits for 1997- 1998 August 29, 1997												
Allowed Consumption	17	17	16	16	20	30	40	42	42	32	24	19
% reduction from Actual Consump. for 1996 in accord with June Decree	15%	9%	14%	16%	30%	26%	11%	17%	19%	36%	44%	27%
% reduction from Actual Consumption for 1996 in accord with August Decree	15%	9%	14%	16%	36%	31%	19%	23%	23%	36%	44%	27%

TOKTOGUL RESERVOIR LEVELS

(billion cubic meters)



68

Nasha Gazeta, September 30, 1997

Love for Electricity

The leader of the world proletariat (Lenin) declared that communism is Soviet power plus electrification of the entire country. Just a few years ago we had both Soviet power and electricity although we failed with communism. Then very quietly Soviet power disappeared. We were left with electricity. Few people were bothered with such a state of affairs since there are not many people who miss communism or Soviet power. But how can a modern person live without electricity? Especially the Kyrgyz people who used to be proud of the fact that we have plenty of energy resources. Just 2 years ago newspapers wrote that "electricity streams would flow" to neighbouring countries, and in return we would be getting hard currency. Maybe projections were wrong, or maybe "streams" have really flowed over the mountains carefully avoiding local towns and villages. But last winter the south of the republic (Osh) was put in the dark, and the word "limit" has become very popular.

Osh is most likely to have existed for three thousand years because it happened to be on the route relating linking East and West. And towards its third millienium it found itself deadlocked. You can only fly to the country capital. There is no railway or good internal roads. If you want to get to Bishkek from Osh you have to cross borders and go through numerous custom posts. Information shortage is increasing. In the north of the republic all the publishing houses have been offset printing for a long time while in Osh newspapers are still printed in the same old way. Salaries in Osh oblast are lower than the average salary level in the country; food and other commodity prices are higher (except for fruit and vegetables in summer). Hot water is a luxury accessible to few people. Public transport in Osh is the most worn out.

According to Mark Twain, Prince of Wales had a boy who used to be whipped for the Prince's mistakes or mischiefs. It looks like in our country Osh performs the functions of such a boy. If the country does not pay Uzbekistan for gas, Osh gets disconnected from gas. Without gas, the sufferings of Osh residents due to power limits become even sharper. In the past, arrogant Moscovites and residents of St. Petersburg invented a contemptuous concept of "limita" for those who moved to Moscow and St. Petersburg from provinces to look for a better life, received temporary registration, rented a bed in a hostel and took dirty jobs at hazardous plants. In 5 or 10 years some of them would receive the right to permanent residence and a room in a communal apartment by the time she\he was 40. But it was almost impossible to get rid of the "limita" label and the feeling of inferiority.

At present all the provinces are starting to feel like a "limita" without rights. It is unlikely that it was somebody's vicious plan, but then how can one explain that in a country with no wars whole oblasts find themselves in a state of siege: no water for days, no heat for weeks in winter, no gas for months and outages any time of the day and night any time of the year. Only Bishkek has managed to avoid this so far. The capital may have the right to such a privilage. Or the reason might be that capital residents can elect their mayor, and the provinces cannot. I am not insisting that appointed administrators are not trying to perform well, but they say if you pay you can order music. It would be naive to expect an official appointed to protect Government interests to be an advocate for the residents. Objective circumstances require limitations on power. Most of the burden is placed on provinces. Regular brownouts twice a day cause a lot of problems: they do not only annoy people and disrupt their lives but bring financial problems as well. Electric appliances are not as strong as people, and cannot stand such impudent treatment: TV sets and fridges

break down. Most of the families cannot afford even repairs. They can probably do without TV sets but how are they, especially families with children. supposed to live without fridges in summer.

Electric switch boards break down as they are not made to work in a constant regime of "switch on and off". And all the electric equipment wears down sooner than it should. All the problems cannot be avoided but they can be alleviated.

Not a lot is required for that. The burden of the limits should be distributed evenly between everybody. The schedule of brownouts is like a sealed book. For over a month I have tried to find out what the schedule is, and have annoyed many dispatchers and officials from a municipal administration. I was not denied information about who gets disconnected and who does not and why, but I could not get the actual schedule of brownouts although it seems to make sense that it also should be public knowledge. Hospitals, bakeries, militia, prisons, pumping stations, telecommunications and local government are not subject to outages which is reasonable. But there are houses and offices which happen to be lucky enough to be connected to the same substation as these organizations. It could be just a fortunate coincidence, but they say affluent areas seem to be in such a lucky neighborhood. Those who are unlucky have to suffer both for themselves and the lucky ones. It is strange that the local administration considers such a situation reasonable.

I think George Orwell in one of his essays describes the following fact. During World War II, when Britain as many other countries were experiencing a lot of difficulties, food products including the British favourite - tea - were rationed. The same regime was observed in Windsor Palace. It is unlikely that the Royal family was limiting itself for lack of food in their store, rather, it is natural that people with good manners share the difficulties of the people. Even Bolsheviks in the times of disorder had to camouflage their "feasts during the plague" by feigned asceticism spreading myths about brown bread crusts and carrot juice in the Kremlin.

On the night of September 18 Osh militia office received a request from Matyshev, a dispatcher of Osh power distribution company, to send a group of militiamen to Substation 6 in the residential area of Amir-Timur where indignant residents were trying to get into the substation and threatening the electrician on duty. They managed to handle the residents on their own without assistance from militiamen. But that is not the only case. M Okonov, chief engineer of Osh distribution company, told that people manage to slip by the security and get into the distribution company. Sometimes they plead, sometimes they threaten. One cannot but feel sorry for energy employees that they have to answer for somebody else's decision. They are just carrying out their duties. Bishkek is too far and Akim (Governor) is too high, but fatigue and anger accumulates and splashes out at those who are more accessible.

In addition to these problems entire regions are left vulnerable to crimes and many unforeseen situations: burglary, health problems, etc. You have to deal with them on your own because emergency medical service reluctantly goes to such areas. And it is understandable.

There is no sense in using private alarm services. What should residents of area 95 do when they get cut off from the rest of the world because their telephones work on electricity.

At the moment, life for Mr Alykulov, head of Osh distribution company, is not all bear and skittles. He is not only an energy specialist, he also knows municipal problems very well!

since he used to be an Osh mayor. Under the circumstances, it would be difficult for him and his team to find an optimal solution. They have to take tough measures.

Where there are no cables

Osh oblast consumers owe KNEHC about Som 139 mln. Among debtors are Antimonial Combinat (4 mln), Housing Department of Osh Cotton Company which is now an independent company (2.7 mln), Government budget organizations (21 mln). The town is not rushing to pay its debts. And from the beginning of the academic year, there is no electricity at schools.

Private persons owe 28 mln. But you do not have to feel sorry for them because very often wealthy people do not pay for electricity. Among the biggest debtors are residents of microdistricts "Amir-Timur", "Aktilek" and "Yangi mahalya". These are areas of individual construction with big villas, not just typical small apartments. They consume a lot of power, but it is difficult to say how much because most of the houses do not have meters. They prefer electricity to gas and coal since they can use it free. Sadyrbek Ermekbaev, head of the Sales Department, says that in each room of those villas they use various heaters: from convectors to huge heaters that in the past would be used only in canteens. Those areas are the toughest for inspectors. Their residents live according to the principle: my house is my fortress. They are not surrounded by moats filled with water, but it is not easy to get into such a house. And it is almost impossible to disconnect such a house from power. The residents and their neighbours take defensive positions ready to fight. One of the inspectors had hot water poured over him. Energy people have to behave as if it is wartime. They have to organize group trips to collect bills. In the worst cases, they remove cables. In the area of "Amir-Timur" they disconnected 92 houses and managed to collect Som 23,000 out of 43,000 in one day. However, it is difficult to deal with some areas even in groups, for example, Aktilek. There are a lot of debtors there, plenty of houses with no meters. There are no organizations that are not subject to brownouts in the neighborhood. However, this area is not one of the "limita" areas.

At first sight there is no direct relation between power debts and the low level of water in Toktogul reservoir. But two numbers mentioned by Mr Alykulov make you reflect on them. The power loss rate reaches 40% and 28% of energy gets stolen. If there were no thefts, there may not have been a need for limitations. I was told several times that the price for electricity is not high in our country. You could argue with this. An average family which has a meter and pays the bills regularly, spends about 5% of the family income on electricity bills. You have to agree with me that there are few countries around the world with a higher percentage. Therefore, if the situation with debtors is not solved and strict measures are not taken, the tariffs will go up. Somebody has to repay the debts. And there will be the same vicious circle: prices, debts and limits.

"Delo No"
October 29, 1997

Ananyevo Village is in a Darkness

Dear Askar Akayevich, we strongly request you to clarify the following issue.

On your visits abroad you mention about the domestic energy sector, stating that the country has electricity in large excess and it is cheap. If it is really so, why then you deprive your own people of electricity?

Ananyevo village has been suffering from long cutoffs (outages) of electricity since December 1996. Electricity is cut off several times within 24 hours and every time at different times of the day. As a result we lose everything: no water; we now start to forget what TV is; moreover, domestic electric appliances get out of order; deep pumps of water intake are breaking down; bread is baked of poor quality. Thus, we are being ethically, culturally and physically adversely impaired by all these things. We are living in a primitive way. Food products spoil; people drink water from gutters as there is no water running in the water supply pipes; this can lead to infectious diseases. All these are caused by local administration and local energy offices.

We, people who live in Ananyevo village addressed oblast and rayon administration, but no assistance was rendered. Officials there referred it to the Government of Kyrgyz Republic.

Therefore, meeting of the people in the village decided to send a delegation to Bishkek. This delegation had a meeting with A. Jumagulov, prime minister, where they asked the Government to explain why 56 rest houses and resort places in Issyk-Kul rayon had electricity all the time at the expense of limits in the rural area and there was no light in the villages. People in the village have electricity only for 7 or 6 hours a day. A. Jumagulov clearly explained that resort places pay for electricity every month or even in advance to have light all the time. He also promised that rural people will have electricity when they pay for it.

After this meeting electricity in the village was well supplied for a month. At the moment there is again no light in one part of the village while the second part has it. Electricity is supplied within 24 hours in the area where local administration officials live.

Apas Jumagulovich, people in the village hoped for your promise. They pay for electricity while organizations and enterprises do not. The debt liabilities of the latter build up about 350 thousand soms. Then why do other ordinary people, farmers and workers have to suffer?

Dear Askar Akayevich!

We, people from Ananyevo village decided to address you, as you are the President of our country, to help us. Do help us!!! The village is experiencing an explosive-like time which has been caused ^{by} the local administration officials: Medvedev, head of Rural Committee, Abdyrakhmanov, head of Rural Kenesh, head of Ananyevo Department of Issyk-Kul Rayon Distribution Company, Dosoliyev, head of Ananyevo Department of Energy Marketing.

These people made the life intolerable in the village, dividing it into two hostile camps. One camp is supplied with electricity all the time without outages as Medvedev (head of rural committee) and administration officials live there. The other part of the village which is inhabited by ordinary people, electricity is usually cut off and the outage schedule changes every day. We, half population of the village is deprived of everything: we cannot watch TV, cannot listen to the news; we do not know when to wash linen and when children can do their lessons. Generally, human rights are being largely limited. That's why more than half of the people in the village feel extremely nervous and tense which may lead to fatal consequences and all these occur because of the fault of local administration officials. Therefore, we request you to rehabilitate justice and replace the local officials who work in their own favor.

Resort places are now closed as the summer season is over. In connection with this people of Ananyevo village request you to help to ask Issyk-Kul Rayon Distribution Company to follow the below given schedule of outages:

6 a.m. - 14 p.m.	- no outage
14 p.m. - 18 p.m.	- cutoff
18 p.m. - 00 a.m.	- no outage
00 a.m. - 6 a.m.	- cutoff

Dear Askar Akayevich!

We, below signed people hope for the positive solution of our issue and request you to let us know about the answer.

The letter is signed by more than 500 families living in Ananyevo village of Issyk-Kul oblast.

February 13, 1998

Patricia Buckles
Barry Primm
CJ Rushin-Bell/ John Bayer
Fred Huston
Mike Biddison
David Keith
Bob Archer

This is to let you know that upon my return yesterday to Bishkek from the Tashkent regional meeting, I found a phone message that Minister of Finance Koichumanov wanted to see me urgently "one on one." The message was explicit that there would only be the Minister and me and my interpreter. I tried to phone Fred, but couldn't reach him, and didn't have time to advise anyone else.

During the meeting, the Minister asked me for my frank opinion about the state of and dynamics in the sector and in Kyrgyzenergo. So I told him.

He was preparing for a Meeting of Government today at which the major agenda item is the electric sector. We also spent quite a bit of time on the fact that Kyrgyzenergo reports a profit even though (from an IAS perspective), they lose money on every kWh they generate for the domestic market. Also showed him my chart about how only 19% of production for the domestic market is billed at and paid for at full tariff. I also pointed out that the proposed tariff increase was, in fact, a tariff decrease for some levels of consumption and that this would be a problem for the World Bank and EBRD.

He then asked me to join him for a meeting with Mike Rathnam, Sartkaziev, and Mateyev. At that meeting, Rathnam focused on the problems in the proposed tariff increase (including the "hidden" decreases to which I had alerted the Banks by fax before I left for Tashkent).

Mike also raised another problem I had alerted him to: that a 30% increase in Kyrgyzenergo's calculated "average tariff" would not result in a 30% increase in real revenue, as required by the Banks. This is because Kyrgyzenergo's "average tariff" is about TWICE what Kyrgyzenergo actually collects -- on average -- for the kWh actually consumed. Rather than dividing revenue by kWh consumed to get a real average tariff, Kyrgyzenergo calculates its "average tariff" by dividing ALL billings by ONLY the kWh billed. The effect of this is to disguise both the collection problem (by treating all billings as if they were collected) as well as the theft problem (by excluding stolen kWh as if they either were never produced in the first place or cost nothing to produce and deliver.)

After Rathnam left, Minister Koichumanov asked me to stay and meet with just him and Sartkaziev to discuss the numbers and problems I had raised with the Minister privately. During this meeting I made the following points:

1 -That the Government has a key decision to make -- either A) it is going to raise tariffs (over a reasonable time) to cover costs AND let the Company collect the bills and stop the theft, or B) it has to entirely rethink how it runs the sector and either privatize it or tell the people that they can only have power for 6-10 hours a day. There is only one possible result if customers don't pay and the Government doesn't have the money to pay on their behalf: the system will continue to deteriorate and eventually run itself into the ground.

-That the Government (and the akims) think it is a benefit to give people below-cost tariffs, discounts, and special privileges and to let the people steal, but these are not "benefits" to anyone if they eventually result in system collapse.

-That the Government cannot solve the problems just by putting numbers down in a plan without hard thinking about where the money will come from to implement the plan (e.g. the cost of importing coal or increasing domestic coal production to increase output at the thermal plant).

Minister Koichumanov took me aside after the last meeting and said our discussion had been very constructive because it had helped him rethink some issues. He said he would like to meet again soon and privately.

October 20, 1997

TO: Patricia Buckles

FROM: Joellyn Murphy

RE: Building Energy Crisis

As your energy sector advisor in Kyrgyzstan, I would like to formally alert you to the accelerating problem with the Republic's electric supply that I have been discussing informally with Barry, CJ, Fred and John for the last several weeks.

From previous faxes, you are already well aware of the critically depleted state of the Toktogul reservoir, the Government's mandate to reduce load through load shedding (rolling brownouts and blackouts,) and the growing public hardship in the rural oblasts.

I would like to share with you some of the reasons why my concern continues to deepen as the weeks pass.

1. **The situation MAY be worse than the official numbers indicate.** Kyrgyzenergo's official calculations show that the Reservoir level will not fall below the "dead zone" this winter or next. However, these calculations are based on the assumption that the Government's "extreme measures" (i.e. the load shedding) will successfully halt further reduction of the reservoir and that this winter's snow pack will be "average." Furthermore, I must also express my personal skepticism that all these calculations have been made solely from a technical perspective.

2. **Even if generation doesn't hit the "dead zone," large parts of the distribution system could "crash" under winter stresses.** Distribution networks are currently so overloaded that system failure is a real possibility if this winter brings extreme weather, curtailment of gas supplies, or a coal shortage. Any one of these stresses would cause an increased use of electricity, which could, especially in Bishkek, "burn out" large buildings or entire neighborhoods.

3. **Kyrgyzenergo will likely implement the "extreme measures" in ways that will increase public outrage and be destabilizing.**

Last week I asked Mr. Sartkaziev whether the Government intended to issue additional decrees to limit loads even more than the current average 30% reduction from last year's consumption. He replied, "No, I don't think so. We are now considering closing the schools for two months this winter to save electricity." This week, he said the same thing during hearings in Parliament. That Kyrgyzenergo (and the Government?) could be considering such a dire measure indicates that we haven't hit bottom yet.

4. **People are already taking things into their own hands in ways that can further polarize the social/political situation.** Some individuals have begun to, in essence, micro-privatize the electric system by installing their own generators. (Small ones are selling in Bishkek at a rate of 3-5 per day.) So, rich people will have electricity when poor people don't. And all because the Government won't raise tariffs because it wants to protect poor people!



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February 25, 1998

Mr. Paul Pittman
Merrill Lynch, London

Enclosed is information about the Kyrgyz Energy Sector that you requested. As you review all this information, please be aware that Kyrgyzenergo calculates "profits" as billings minus costs, and that it calculates its "average tariff" by dividing its billings by only the kwh billed. Both calculations are misleading in a system where 27% of product in the domestic market is stolen and accounts receivable appear to be as high as 50% of total billings.

Based on Kyrgyzenergo data -- but using actual payments (both cash and barter) rather than billings and using total kwh actually consumed (i.e. sales plus theft) rather than just kwh billed -- we estimate that in the domestic market, Kyrgyzenergo loses about .2 tyin/kwh, even though it reports profit of 1.7 tyin/kwh.

On a total company basis, Kyrgyzenergo reported profits in 1996 of about \$33 million, although the Price Waterhouse audit reports a loss of about \$14 million (before a one-time extraordinary income of \$5 million from a Swiss Government grant.) Of the \$33 million profit, Kyrgyzenergo reports that about \$30 million is from exports. However, as best we can determine at this time, virtually all of this is either barter (gas from Uzbekistan) or an account receivable (Kazakhstan non-payment).

The fundamental problem is that there is no cash. There hasn't been for years. One result is that the entire physical system is deteriorating and requires, we estimate, at least \$400 million in capital investment just to bring it up to standards. The Government doesn't have this money, and Kyrgyzenergo can't borrow much more. (It is already in default on its current international loans because it can't meet the coverage ratios required under \$108 million in loans from EBRD, World Bank, and Asian Development Bank.) Eventually, the system has to be fixed. And eventually, the Government will recognize that strategic private investment is the only realistic source of both funds and the commercial management perspective that is needed to put the system on a self-financing basis.

This is a grim picture, but not unlike other electric systems in the former Soviet Union, as I'm sure you know. Fortunately, with 80% of its generation being hydro, Kyrgyzstan's marginal cost of generation (in wet years) is about 2 cents/kwh, and so its eventual price adjustment never has to be as truly jolting as that of its thermal-based neighbors.

Nevertheless, the Government has held electric tariffs down even while allowing prices for other essentials to go up. When tariffs did increase on paper, they were accompanied by a large array of 50% and 100% discounts for various social or geographic groups. And, of course, the non-payment and the theft problems were allowed to develop to their current size as a matter of indirect social policy.

There is an upside, but it's not the huge Kambarata hydro export project. The recent study of Kambarata 1 and 2 by the National Grid Company of the UK revealed such serious financial and technical problems with these projects that they may not be financeable, even by the international donors. Nor is it big new domestic loads, most of which (like Kumptor and the new mine in Talas) require major capital investments to upgrade transmission lines, done through project financing.

The upside comes first from about a \$1 million investment in some metering and "reengineering" of the billing system, which we think could increase cash flow by about \$75 million in three years. Based on our financial model and we show that Kyrgyzenergo could be truly profitable (from an IAS perspective) at current tariffs if it just billed, collected, and stopped the theft. That is, if it just operated on a commercial basis. This would require, in essence, a political decision by the Government to give the company "permission" to meter, bill, collect, and stop theft. It would also require a complete reorientation of Kyrgyzenergo management. Having worked with the electric sector here over three years now, I am skeptical that either of these steps will be taken without push from outside investors.

The next step to the upside would be the raising of tariffs to cover full costs by 2000, not just "running costs." We estimate that the current posted tariff of 25 tyin/kwh is only about 50-60% of full cost.

The real question is whether the Government will take these two steps in this year. If it does, it will be able to unbundle the company and bring in strategic investors at fair prices. If it doesn't, the system could experience wide-scale collapse during the '98-99 heating season, in which case strategic investors would come in for nearly "nothing down" and a promise to make the needed capital investments.

While you are here you will certainly hear much about the 15-30% load shedding now in effect due to the current supply shortage resulting from the large net draw down of the Toktogul Reservoir. I would like to emphasize that this "supply crisis" -- while exceedingly serious -- is not the system's fundamental problem. If Kyrgyzenergo had cash, it could buy enough coal to step up the thermal plant, and there wouldn't be a supply shortage, regardless of the Reservoir level.

Although Kyrgyzenergo's problems resemble other FSU utilities, the Kyrgyz electric sector does have three significant distinctive advantages relative to its neighbors:

- low marginal cost generation (at least in wet years);
- a new legal and regulatory framework in place (a new Energy Law and Electricity Law, and a new quasi-independent regulatory State Energy Agency, and
- a restructuring and privatization program that's been approved by the Government.

Here is the critical path to future value for the Government as principle shareholder:

1. Shareholders (the President) elects a Board of Directors that is not composed of Kyrgyzenergo managers, including at least one representative of outside shareholders.
2. Parliament approves the Government's program of privatization for Kyrgyzenergo. (Or, alternatively, the Government resolves the Constitutional question about whether Parliament's prior approval is needed.)
3. Government funds its already designed program to help low-income people pay their electric bills. (This is needed so #4 and #5 below can be done.)

4. Kyrgyzenergo adopts commercial business practices to reduce theft and non-payment, overseen by the State Energy Agency with solid support from the Government. (An alternative would be to turn over the metering/billing/collection function to an experienced independent company on a management contract.
5. State Energy Agency adopts a "rate path" (set increases in tariffs for the next two years that will reach full cost recovery level by 2000.)
6. State Property Fund and Kyrgyzenergo unbundle distribution companies in June-August, 1998 and sell up to 70% of their shares to strategic investors, in accord with privatization program.
7. State Property Fund and Kyrgyzenergo unbundle Generation Companies and create National Grid Company in April, 1999, and tender for strategic investors through management contracts or concessions, in accord with privatization program.

Please call any time if you need more information. My office phone is 21-28-06 or 62-15-67, my fax is 62-19-05.



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FAX COVER SHEET

Date: *7 May 1998*

of pages: 6

Subject: *Govt. Resolution on Kyrgyzenergo Financial Improvement*

From: *Judith Murphy*

To: David Keith - Hagler Bailly, Arlington
Mike Biddison - Hagler Bailly, Almaty
Barry Primm and Patricia Buckles - USAID, Almaty
CJ Rushin Bell and John Bayer - USAID, Bishkek
Fred Huston - USAID, Government House
Bob Archer - USAID, Washington
Istvan Dobozi and V. Atur - World Bank, Washington
Michael S. V. Rathnam - World Bank, Bishkek
Anil Terway - Asian Development Bank, Manila
Kenji Nakazawa and Nandita Parshad - EBRD, London
Nickolay Hadjiyski - EBRD, Bishkek
John Hambly - TACIS, Bishkek
Markus Muller - Swiss Coordination Office, Bishkek
Othmar Wutscher - GTZ, Bishkek

Following is the Resolution of the Government #219 of April 24, 1998 on "Improvement of the Financial Situation of JSC Kyrgyzenergo." This was drafted by Kyrgyzenergo. Please note:

- There is only one item aimed at increasing cash collections from non-governmental customers and nothing about reducing commercial losses (theft). (It's as if Kyrgyzenergo still doesn't make the connection between its own financial health and its collecting cash from customers for kWh actually used.) Rather than focus on disconnection for non-payment, they eliminated the exemption of residentials from late-payment penalties. (Even if they eventually do introduce residential late-payment penalties, we don't think it will help much here because the real problem with residential is theft, not late payment.)

- There is a large array of proposals on arrears, bad debts, and mutual settlements of government accounts,

including, it looks like, some that would compensate KE for the social discounts. (We have no way of estimating what the net, end result of all these items will be. But at least there is some attention begin focused on the government's own non-payment problem, but it is unlikely that much new cash well go into KE as a result.)

- The Government added to KE's draft an instruction to the State Property Fund and various Ministries to leave any dividends from their shares of KE in the sector to be used for development.

It was particularly interesting to see what paragraphs in Kyrghyzenargo's original draft the Government deleted (see last page of this fax). Specifically:

KE wanted the Government to authorize paying a 30% commission to an "external party" who would collect the \$25 million that Kazakhstan owes KE.

KE wanted to write up its assets to the estimated "replacement cost" value of \$2.5 billion that appeared in the ADB-sponsored "Tariff Valuation Study" by EdF and Econo consultants. (Under standard cost-of-service tariff methodology, such "revaluation" would have the effect of skyrocketing electric rates. Of even greater concern, it is our continuing opinion that various entities want to write up KE assets to this number because they have the mistaken notion that this means they will be able to "privatize" the vertically-integrated company by selling 5-10% of the state block of shares for 5-10% of \$2.5 billion. I'm told the same thinking is going on at Kyrghyztelecom.)

KE also proposed various income deductions and tax relief measures and an amendment to the tax code which would have created a perverse incentive for KE not to improve collections. All gimicks. No cash.



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USAID Contractor



FAX COVER SHEET

Date: *9 May 1998* # of pages: *1 + 5*

Subject: *Toktogul Water Level, 1998*

From: *Jacelyn Murphy*

To: David Keith - Hagler Bailly, Arlington
Mike Biddison - Hagler Bailly, Almaty
Barry Primm and Patricia Buckles - USAID, Almaty
CJ Rushin Bell and John Bayer - USAID, Bishkek
Fred Huston - USAID, Government House
Bob Archer - USAID, Washington
Istvan Dobozi and V. Atur- World Bank, Washington
Michael S. V. Rathnam - World Bank, Bishkek
Anil Terway - Asian Development Bank, Manila
Kenji Nakazawa and Nandita Parshad- EBRD, London
Nickolay Hadjiyski - EBRD, Bishkek
John Hambly - TACIS, Bishkek
Markus Muller - Swiss Coordination Office, Bishkek
Othmar Wutscher - GTZ, Bishkek

Following is a memo and charts about the Toktogul Reservoir that Mr. Mateev asked me to write and send to Minister Koichumanov. Given both the Government-approved 1998 production target for hydropower and an expected inflow of 105% of average, they show a net draw down of the Reservoir (as of Jan 1) for the fourth year in a row. Unless Kyrgysenergo comes up with enough cash to buy enough coal for the Thermal plant, it looks like another season of significant load shedding.



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MEMORANDUM

May 7, 1998

Dear Minister Koichumanov!

Mr. Mateev has asked me to share the following charts with you.

They show that, based on current estimates of 1998 inflow to and use of the Toktogul Reservoir, expected use will again exceed inflow for the fourth year in a row. This means that either significant load shedding will be necessary again during the 1998-99 heating season, or that there will again be a further net draw down of the Reservoir, and perhaps both, as was the case this past season.

This preliminary conclusion is based on:

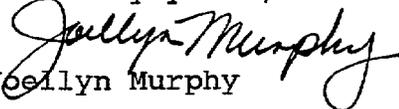
- the Hydrometeorology Agency's current estimate (April 8, 1998) of inflow to Toktogul at 105% of average, or 12.5 billion cubic meters, and
- hydro generation of 10.5 billion kWh, in accord with the Government's decree of February, which means the use of 13.4 billion cubic meters from Toktogul.

The net result would be an estimated Reservoir volume of 9.3 billion cubic meters on January 1, 1999. This would be about 1 billion cubic meters **less than** the January 1, 1998 volume.

This means it's quite possible that load shedding for 1998-99 could be even greater than during 1997-98.

Although there will be more accurate information available after the June 1 measurements, Mr. Mateev thought you should see this information now.

Sincerely yours,

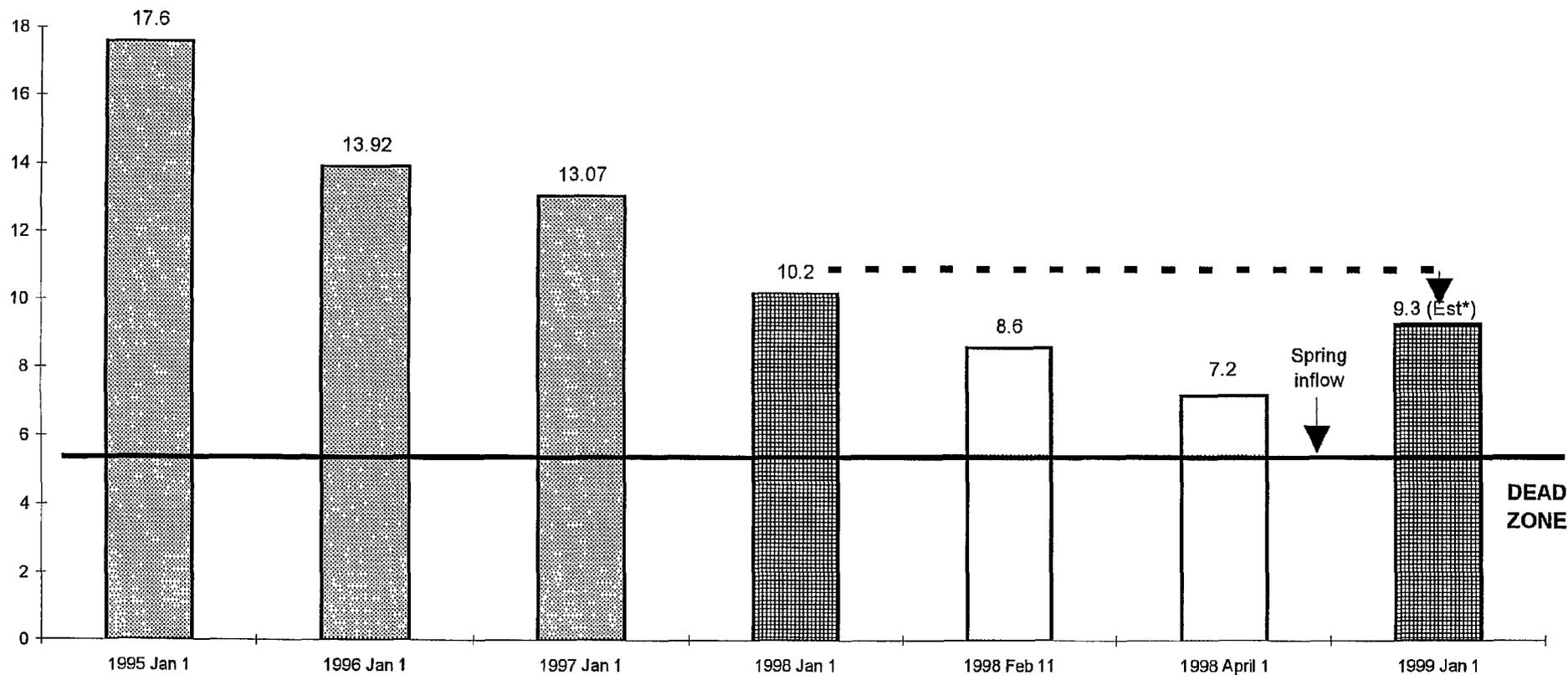

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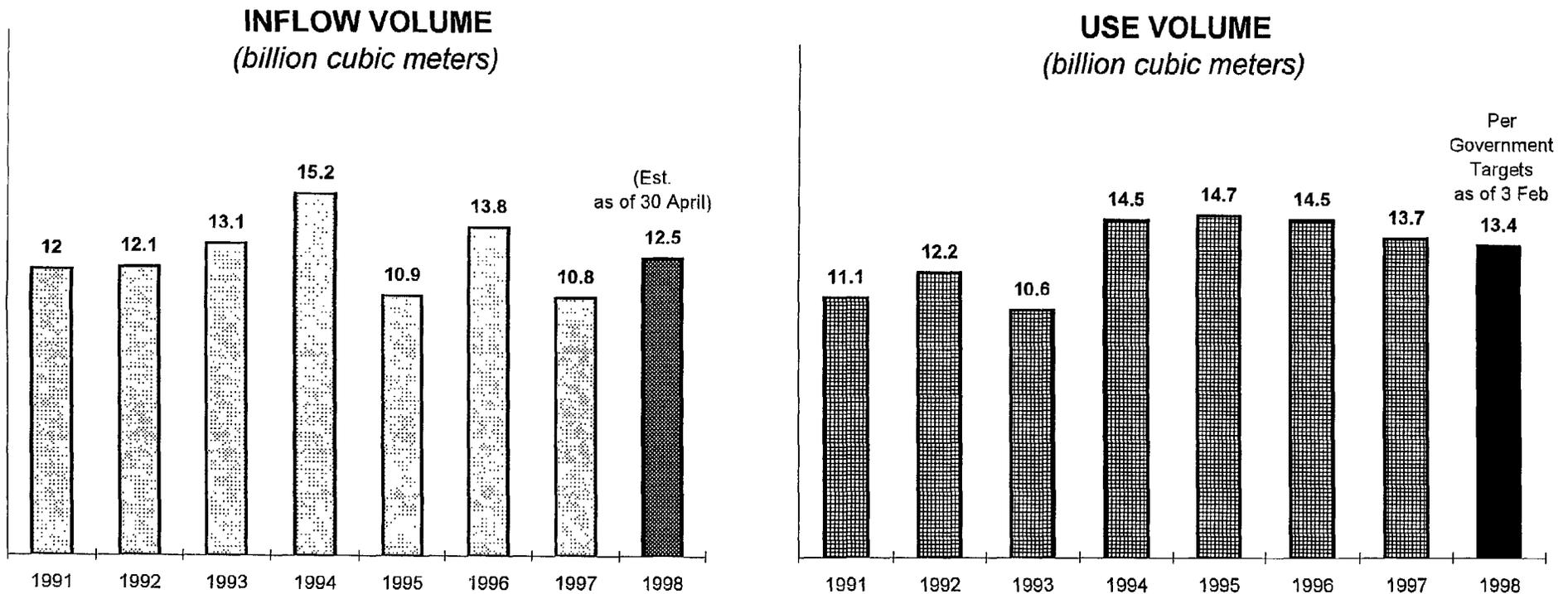
TOKTOGUL RESERVOIR LEVELS

(billion cubic meters)

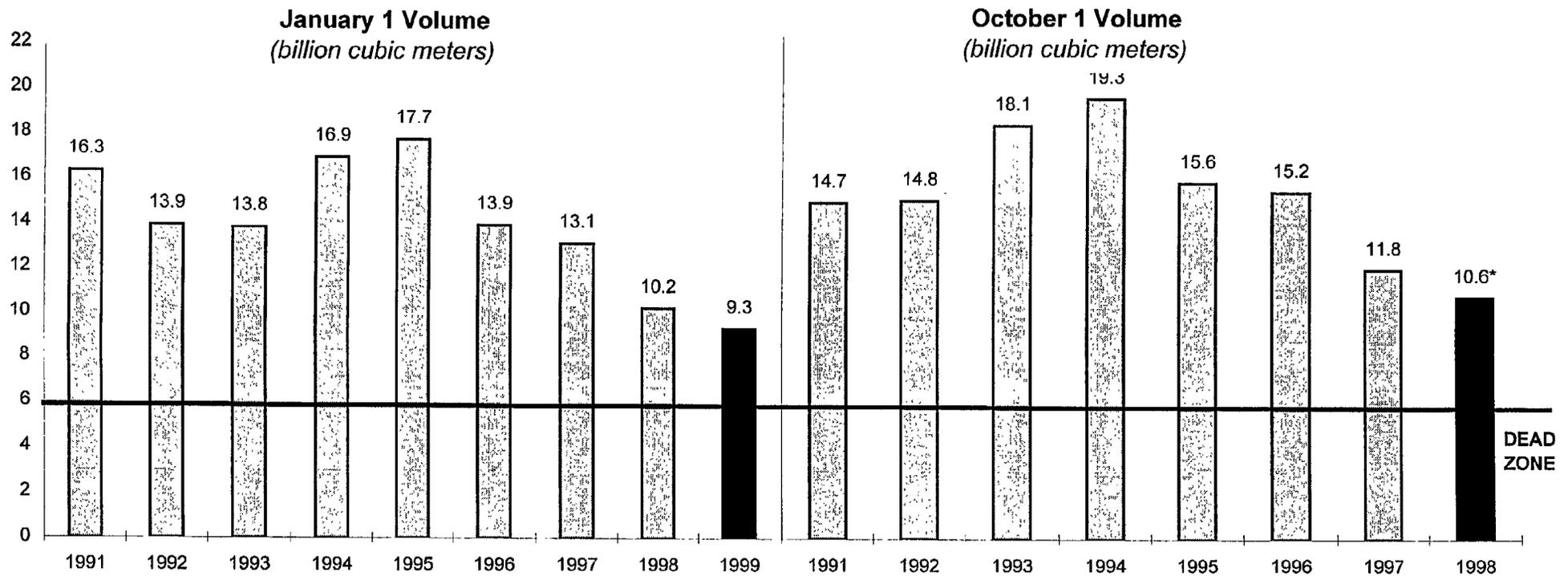


* Current estimate (as of April 30, 1998) is that the level will be about 9.3 on January 1, 1999, based on inflow this spring of 105% of average and the Government - approved production target for 1998 of 10.5 bln kWh

Scheduled Use of the Toktogul Reservoir for 1998 Would Again Exceed This Year's Inflow, Even Though Inflow is Expected to Be Above Average

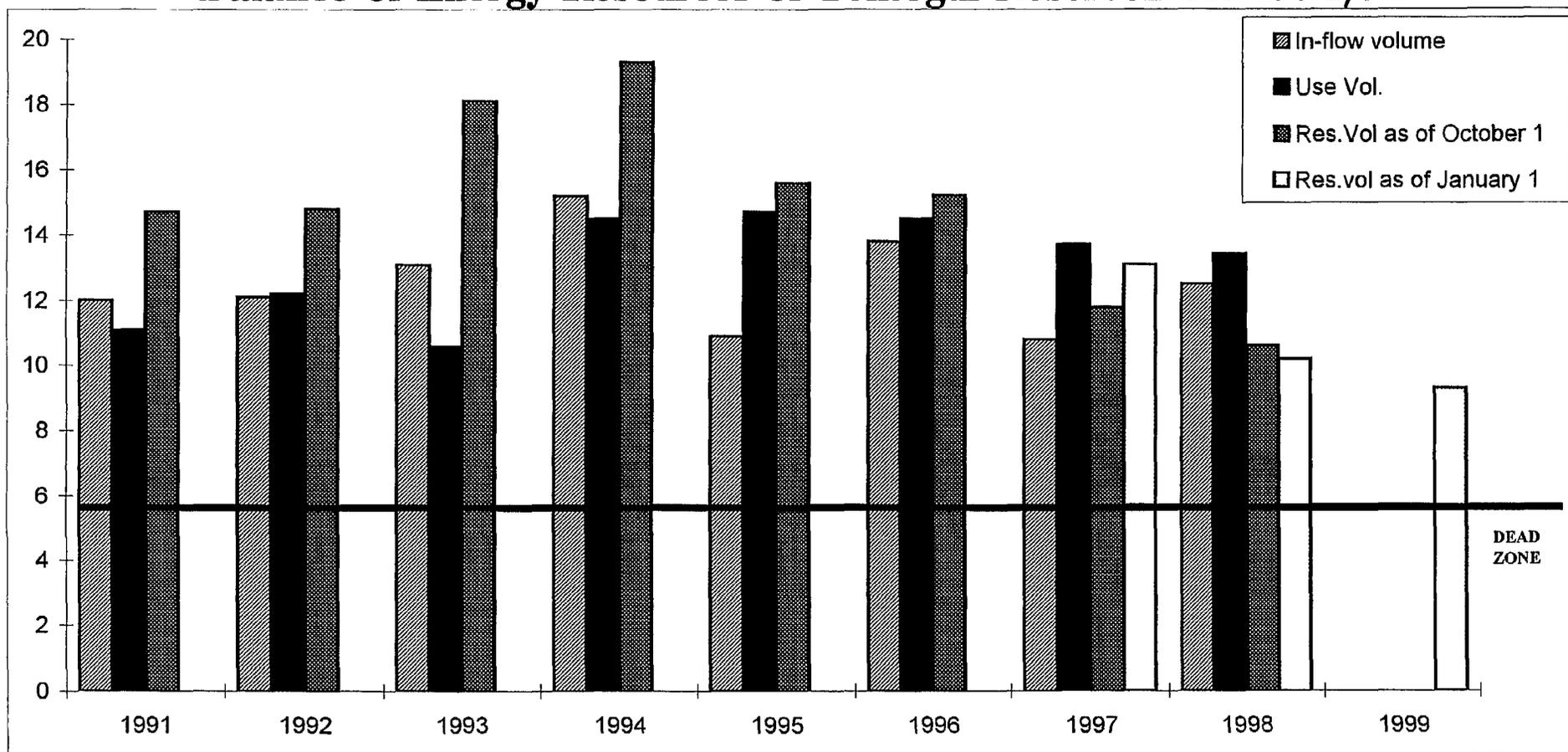


**With Currently Scheduled Use of the Toktogul Reservoir And Estimated Inflow,
There Will Either Be a Net Loss in Volume Again,
or There Will Be a Need for Load-Shedding in 1998-1999**



* Estimate. Based on Hydrometeorologic Agency's Estimate of inflow at 105% of average, on the Government's February 3, 1998 hydro electricity production target of 10.5 billion kWh for 1998, and compliance with irrigation flows in accord with the March, 1998 international agreement on water/energy use.

Balance of Energy Resources of Toktogul Reservoir for 1991/98



	1991	1992	1993	1994	1995	1996	1997	1998	1999
Res.vol as of January 1	16.3	13.9	13.8	16.9	17.7	13.9	13.1	10.2	9.3*
In-flow volume	12	12.1	13.1	15.2	10.9	13.8	10.8	12.5*	
Use Volume	11.1	12.2	10.6	14.5	14.7	14.5	13.7	13.4**	
Net change (2-3)	0.9	-0.1	2.5	0.7	-3.8	-0.7	-2.9	-0.9	
Res.Vol as of October 1	14.7	14.8	18.1	19.3	15.6	15.2	11.8	10.6*	

* - Estimate as of 30 April, 1998
 ** - Estimate assuming Government approved production targets for hydro plants of 10.5 bln. kWh

Summary of Various Government Decrees Related to the Reduction of Kyrgyzenergo's Technical and Commercial Losses

The Government issued its first decree related to the winter 1997-1998 supply shortfall on June 2, 1997. It took note of estimates that inflow to the Toktogul Reservoir would be only 76% of average.

The June Decree noted that the "economic situation of the sector is complicated by the fact that enterprises, budget organizations, and the population do not pay for electricity, thermal energy and natural gas consumption." However, the decree did not include any action items related to reducing losses (theft) or to increasing collections or to raising tariffs.

If undertaken at that time, in all likelihood these three measures could have reduced demand by enough to avoid the need for load shedding. Furthermore, even if they didn't reduce demand quickly, they would have provided Kyrgyzenergo enough cash to buy the coal needed to step up the thermal plant and compensate for the reduction in hydro generation.

Nor were there any action items related to reducing losses, increasing collections, or raising tariffs in the follow-on decree of August 29, 1997, which deepened the load shedding measures.

In the Government's November 21, 1997 Decree on preparations for winter, Kyrgyzenergo was ordered to "develop a mechanism for "selective disconnection of consumers with accounts receivable in order to increase collections." And the State Agency was ordered to submit a tariff methodology.

Meanwhile, both Kyrgyzenergo's losses and the load shedding continued to increase, the former being the real cause of the latter.

On December 1, 1997, the Parliament issued a Resolution entrusting the Government to:

- prohibit outages except for non-payment,
- resolve Kyrgyzenergo's old (1992-1996) accounts receivable from budget agencies and from closed or restructured collectives and agricultural enterprises, and
- collect Kyrgyzenergo's lai-ge (\$25 million) receivable from Kazakhstan.

On December 25, Resolution #6 of the President's Security Council noted that Accounts Receivable and Payable had reached "a critical level" and that Kyrgyzenergo's losses were increasing.

In that Resolution, Kyrgyzenergo was ordered to "develop and implement feasible measure to drastically reduce non-technical losses in generating, transmitting, and distributing energy, and to collect accounts receivable. It should work out a mechanism to foster energy conservation in the Republic."

On December 29, the Government issued resolution to organize a working group to implement the Security Council's Decisions, requiring the Government to submit before January 20 1) the Energy Program to 2000, a Financial Model of Kyrgyzenergo, an Electricity Supply Program, and Rules of using electric and thermal energy.

It also required the Government to submit a draft resolution on decreasing technical and commercial losses, reducing accounts receivable, construction 0.4-10 kV lines, increasing production, increasing coal mining and construction of Tash-Kumyr and Shamaldy-Sai and new high voltage transmission lines.

On February 3, 1998 the Government issued Decree # 59, "On Major Measures for Providing Reliable Operation of the Fuel-Energy Complex," noting that:

- accounts receivable were about \$30 million from domestic customers, and about \$30 million from export customers;
- losses in 1997 were 6% higher than in 1996, and
- "work of Kyrgyzenergo on reducing technical and commercial losses within the electric system must be recognized as unsatisfactory."

Kyrgyzenergo was ordered to:

- improve metering at all voltage levels,
- reduce technical losses to 14% in 1998 and to 12% in 1999,
- reduce commercial losses to 12% in 1998 and 10% in 1999,
- begin targeted installation of meters for electric and thermal energy and hot water.

Bishkek and oblast administrations were ordered to:

- develop a schedule for reducing accounts receivable for electricity and thermal energy,
- jointly with Kyrgyzenergo, reach agreements with rayon-level distribution enterprises and village committees to "determine mutual obligations for electricity sales and consumption"

(Note: this is the "disco demo" on community-based efforts to reduce theft through "self-control" as codified in various contracts outlining responsibilities.)

The State Energy Agency was ordered to raise tariffs, which it did on March 1, 1998.

The General Prosecutor, the Ministry of Internal Affairs, the Ministry of Finance, local administrations, and Kyrgyzenergo were ordered to "take required actions to prevent energy theft, reduce electricity and thermal losses and collect accounts receivable."

On April 24, 1998 the Government approved the "Program for Financial Recovery of Kyrgyzenergo" which provides for:

- writing off some old accounts receivable from the agriculture sector,
- paying 23 million Som in budget agencies' arrears on electric and heating bills and committing to fund the payment of bills for 1998,
- an arcane array of mutual settlements related to discounts, social protection, and Kyrgyzenergo taxes, and
- making heads of oblasts, ministries, and state companies personally responsible for repayment of their entities' accounts receivable and for limiting their consumption to the level authorized to be paid for from budget funds.

Other than a provision to repeat the exemption of residential customers from penalties for late payment, there was nothing in this decree regarding Kyrgyzenergo's responsibility for stopping theft and increasing collections, which, of course, is the surest route to financial recovery.

Kyrgyz Republic Government Resolution # 327**On Preparation of Economy and Population of the Republic
for Autumn and Winter Period of 1997/98**

June 2, 1997

The Kyrgyz Republic Government stresses the need to provide for the reliability of the energy system. Stable supply of electric and thermal energy are the most critical requirements for the stable functioning of all sectors of the national economy during the coming autumn-winter season of 1997/98.

The energy situation is complicated by the violation of supply agreements on fuel resources; lack of long term agreements with neighboring CIS republics on mutual supply of fuel, hydro-resources and electric energy; decline in coal extracting in the Republic; and continuing decrease of hydro-resources in the Toktogul water reservoir.

According to the data of the State Agency on Hydro-meteorology of the Kyrgyz Republic, the current year in Naryn basin is going to be arid. The water supply in Toktogul water reservoir will be 76% of the average statistical norm which will cause energy generation reduction in hydro-electric stations during the forthcoming autumn-winter period, and additional organic fuel will be needed.

Further increase in electric energy consumption is restricted by the existing capacity of 35-500 k/V electric power transmitting lines and sub-stations, as well as 0.4-10 k/V distribution network and substations.

Electric network construction during recent years has been lagging behind the rates of electric energy consumption due to restricted funding.

Enterprises, organizations and the population have purchased insufficient stocks of coal.

The economic situation in the fuel-energy complex is complicated by the fact that enterprises, budget organizations, and the population do not pay for electricity and thermal power and natural gas consumption.

To ensure normal functioning of the Republic's economy during winter and autumn under the condition of restricted hydro-resources, the Government of the Kyrgyz Republic decrees:

1. Heads of oblast government administrations, of Bishkek city administration, JSC "Kyrgyzenergo", "Kyrgyzzhylkommunsouyuz", the Ministry of External Trade and Industry of the Kyrgyz Republic, heads of ministries, administrative departments, enterprises and organizations:
 - to prepare industrial and communal boilers and to rehabilitate laid-up boilers for 1997/98 winter-autumn period by September 15, 1997 in accord with the assignment in Appendices 1, 2, 3, 4.

2. Ministry of External Trade and Industry of the Kyrgyz Republic, the State Energy Holding Company of the Kyrgyz Republic, State Holding Company "Kyrgyzkomur":
 - to provide required stocks of coal for people in accord with the assignment stated in Appendix 7;
 - to provide the delivery of coal, natural gas and lubricants to heating stations and boilers of "Kyrgyzenergo" in accord with the assignment of Attachment No. 7.
3. Osh Oblast government administration, Bishkek city administration, JSC "Kyrgyzenergo" should ensure the storage of lubricants and coal for Osh and Bishkek heating plants to increase the production of electric energy.
4. Chairman of the Board of Directors of "Kyrgyzenergo" Koichumanov T. D., the Mayor of Bishkek Silaiev B. I., the Director of the Bishkek Thermal Plant Vassilyev L. A., and Minister of External Trade and Industry of the Kyrgyz Republic Jordan A. A. should consider and solve the issues connected with financing seasonal storage of fuel, and within one week submit the results to the Government of the Kyrgyz Republic.
5. Ministry of Finance of Kyrgyz Republic is responsible for fulfilling the following assignments in 1997:
 - to release funds to Boiler 1 of "Mailu-Suu Electric Bulb Plant" (State Holding Company) and "Kyrgyzzhilcommumsoyuz" (Union of Residential Utilities/Assets) to cover the costs which result from heating the social assets in Mailu-Suu city;
 - to timely allocate funds to procure seasonal stocks of fuel, and for major repairs of the equipment within the scale provided by the republican budget for 1997; heads of government offices in the regions and local municipal offices in Bishkek should regulate adequate use funds allocated to provide for seasonal stocks of fuel;
 - to develop in collaboration with ministries, administrative agencies, enterprises and organizations a schedule of reduction of the payables to coal mining companies of the Republic.
6. Jalal-Abad Oblast Government Office, Ministry of the Emergency Situations and Civil Defense should start mining coal in the "Tulek" deposit of "Kok-Jangak Mine" from July 1, 1997 as prescribed in the schedule.
7. Ministry of Emergency Situations and Civil Defense of the Kyrgyz Republic should fulfill works connected with moving distribution lines and poles of Tash-Kumyr HPS - "Crystal" sub-station out of the area of landslides by September 1, 1997.
8. State Property Fund shall find necessary resources to fund the construction of 500 k/V sub-station "Ala-Bel" in Talas Oblast and 200 k/V electric transmission line Alai-Batken-Kara Burak with 220/110/10 k/V sub-station in Batken.
9. Bishkek city administration shall allocate 3.5 million Soms to the JSC "Kyrgyzenergo" for the completion of construction of "Kyrgyzskaya" sub-station in Bishkek.

10. Administrations of the Issyk-Kul, Jalal-Abad, Osh Oblasts, JSC "Kyrgyzenergo" shall solve the issue of boiler-houses in Kara-Kol, Kyzyl-Kiya, Tokmok and transfer them from the balance sheet of the company by July 15.
11. Ministry of Finance of the Kyrgyz Republic, heads of oblast administrations every month shall monitor and carry out mutual clearances of budget agencies payables to JSC "Kyrgyzenergo" and these companies' payable to the Republican budget.
12. JSC "Kyrgyzenergo" shall stick to the approved schedule of electric energy supply during autumn-winter 1997/98 in compliance with Attachment No. 8 by limiting energy consumption at night and during peak load hours, according to Attachment No. 9.
13. Heads of oblast government administrations and Bishkek city administration shall provide:
 - the construction and reconstruction of 10-0,4 k/V electric networks in 1997 in accordance with Attachment No. 10;
 - consider monthly liquidation of accounts payable to "Kyrgyzenergo" and other enterprises;
14. Osh Oblast administration and "Kyrgyzenergo" shall put into operation 110/10 k/V sub-station "Anar" in Osh by way of joint financing.
15. Joint Stock Company "Kyrgyzenergo" shall:
 - provide for the readiness of thermal and hydroelectric stations, electric and heating networks of the system by the autumn-winter period 1997/98 in accordance with the schedule and the Attachment No. 11;
 - by 1997 complete the construction of head sector of distribution lines Bystrovka - Naryn and the first turn of sub-station 220 kV in the town of Naryn;
 - generate at the Tash-Kumyr HPS 1.3 billion kWh and at the Shamaldy-Sai HPS - 0.6 billion kWh of electric power.
16. Ministries, administrative agencies, and physical and legal bodies, regardless of their type of ownership, shall develop and implement a program of energy savings, keep plausible accounts of electric and thermal energy and other types of fuel consumption. In doing this, it is necessary to use measurement tools and prevent use of electric appliances that do not meet standards and technical requirements.
17. The State Holding Company "Kyrgyzgazmunaizat" is:
 - to get gas companies, gas distribution stations and gas pipes prepared for 1997/98 heating season;
 - to take measures, in collaboration with the Apparatus of the Minister on Liaisons with CIS, to complete the construction of the second gas pipeline Gazli - Shimkent - Bishkek - Almaty.

18. Ministry of External Trade and Industry shall process the issue about transferring oil and gas deposits "North Sokh", "Changara-Galcha" and underground gas store "North Sokh" over to the jurisdiction of the Kyrgyz Republic
19. State Agency of Standards and Meteorology under the Government of the Kyrgyz Republic is to analyze the energy efficiency of electric-driven heaters, appliances, boilers which have registered technical characteristics. These technical characteristics of electric and heating appliances are invalidated if they do not meet modern requirements of energy efficiency.
20. State Property Fund of the Kyrgyz Republic and Joint Stock Company "Kyrgyzenergo" should start project implementation on construction of distribution lines 500 kV Frunzenskaya - Kemin and a 500 kV sub-station in Kemin, and 220 kV distribution lines Alai-Batken and a sub-station in Batken by attracting foreign investments.
21. Ministry of External Trade and Industry of the Kyrgyz Republic should provide stable supply of 150,000 tons of coal from the Agulak mining deposit to Bishkek Thermal Plant in the second half of 1997 and in the first quarter of 1998; to obtain this, Bishkek Thermal Plant and the Ministry of Finance of the Kyrgyz Republic should schedule allocation of funds to Agulak to remove the overburden of the deposit and provide for stable coal supplies.
22. Republican and regional offices in charge of preparations for autumn and winter period of 1997/98 should regularly inform people through mass media what the preparations for the winter season are and how the heating season is progressing in the Republic. They should cover these issues in the newspapers under special headings.
23. To vest personal responsibility for fulfilling these assignments on heads of oblasts, head of Bishkek administration, Minister of External Trade and Industry of the Kyrgyz Republic, Minister of Finance of the Kyrgyz Republic, General Director of "Kyrgyzenergo" and the Chairman of Kyrgyzzhylcommunsoyuz.
24. Joint Stock Company "Kyrgyzenergo" and "Kun" Joint Stock Company should submit their proposals to the Government of the Kyrgyz Republic on covering the costs of electric energy losses, and on introducing energy-saving equipment and non-traditional sources of energy by August 1, 1998.
25. Offices in the regions and in Bishkek should submit to the Government of Kyrgyz Republic information about the implementation of this Decree every month (not later than the 1st of each month).
26. State Property Fund together with the applicable ministries, administrative departments, local administrations, enterprises and other organizations should draw up an inventory of boilers and submit proposals on their denationalization and privatization.
27. To take into consideration that the Government of the Kyrgyz Republic created a Commission on stable supply of electric and thermal energy for economic entities and residents of the Kyrgyz Republic for the 1997-98 heating season.

28. To consider at the meetings of the Government of the Kyrgyz Republic in August and in October an item on fulfillment of this Resolution to control readiness for the heating period.
29. To vest control and coordination for implementation of this Resolution on Mr. Nanayev, the Chairman of the Governmental Commission, First Vice Prime-Minister of the Kyrgyz Republic.

A. Jumagulov

Prime-Minister

Appendix 7
to the Resolution # 327
of the GKR
June 2, 1997

Assignment on coal, mazout and gas supply to thermal stations of JSC "Kyrgyzenergo" for winter 1997/1998

/Unit: '000 tons for coal, mazout & million m for gas/

	Expected balance as for 01.04.97	Required to supply within II-IV quarters of 97 and I quarter, 98	Schedule of delivery																Responsible for delivery
			1997												1998				
			04	05	06	II quart.	07	08	09	III quart.	10	11	12	IV quart.	01	02	03	I quart.	
JSC KE																			
Coal total "000 tons	0	600.0	26	46.5	53.0	125.5	41.0	45.0	52.0	138.0	72.5	69	58.0	199.5	53.0	42	42	137	KNEHC, KKH
including:																			
imported	0	325.0	20	30	35	85.0	20.0	20.0	20.0	60.0	40	40	30.0	110.0	30.0	20	20	70.0	KNEHC
local	0	275.0	6	16.5	18.0	40.5	21	25	32	78.0	32.5	29	28	89.5	23	22	22	67	KKH
Mazout	20	50.0	1	1	1.0	3.0	6.0	5	5	16.0	8	7	7	22.0	3	3	3	9	KGM, KO
Gas		500.0	20	20	20	60	20	20	20	60	50	60	70	180	80	70	50	200	KNEHC, KGM
Bishkek TP																			
Coal total	0	560.0	25	45	50	120.0	38.0	43.0	49.0	130.0	65.0	63.0	52.0	180.0	50.0	40	40	130.0	KNEHC, KKH
imported	0	325.0	20	30	35	85.0	20.0	20.0	20.0	60.0	40.0	40.0	30.0	110.0	30.0	20	20	70.0	KKH
local	0	235.0	5	15	15	35	16	23	29	70	25	23	22	70	20	20	20	60	KGM
Mazout	10	10.0	0	0	0	0	4	3	3	10	0	0	0	0	0	0	0	0	KNEHC, KGM
Gas	0	485.0	20	20	20	60	20	20	20	60	48	37	67	172	77	68	48	193	
Osh TP																			
Mazout	10	40.0	1	1	1.0	3.0	2.0	2	2	6.0	8	7	7	22	3	3	3	9	KO
Gas		15.0									2	3	3	6	3	2	2	7	KGM, KNEHC
Karakol boiler																			
local	0	40.0	1	1.5	3.0	3.5	3	2	3	6	7.5	6	6	19.5	3.0	2	2	7	KKH

Note: KNEHC - JSC "Kyrgyzenergo"; KGM - "Kyrgyzgasmunaizat"; KKH - "Kyrgyzkomurholding" (coal); KO - "Kyrgyzoil"

O. Abdykalykov
Head of Prime Minister's office

16

Appendix 8
to Resolution # 327
of the GKR
June 2, 1997

Permitted Values of 24 hour Electricity Consumption and Limit Capacity during Peak Loads for the 1997-1998 Heating Period

Indicators	1997																		1998					
	April		May		June		July		August		September		October		November		December		January		February		March	
	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW	kWh	MW
Total within the KR, including:	24000	1680	19004	1385	17014	1222	17003	1262	16003	1222	16023	1100	22004	1650	32005	2100	44003	2320	45002	2355	44000	2375	32006	2150
The North of KR	15200	1032	11390	807	9880	695	9710	709	9240	691	9350	630	14350	1019	20810	1303	28060	1415	28810	1427	28090	1442	20480	1307
Bishkek	3200	225	2550	185	2380	168	2350	174	2360	175	2400	166	3050	225	3980	262	5190	274	5290	276	5150	280	3740	255
Chui Oblast, including:	6700	450	4800	330	4250	292	4200	298	3900	285	4040	261	6650	476	9780	618	12570	639	12840	644	12500	649	9290	601
Chui PES	5200	345	3750	252	3400	232	3330	233	3050	220	3190	201	5200	367	7630	477	9820	493	10030	497	9760	501	7370	472
Kemin PES	1500	105	1050	78	850	60	870	65	850	65	850	60	1450	109	2150	141	2750	146	2810	147	2740	148	1920	129
Issyk-Kul Oblast	3050	202	2200	158	1800	132	1770	134	1720	134	1700	118	2600	188	3920	248	5330	272	5480	275	5360	278	3880	251
Naryn Oblast	1350	92	1250	91	950	67	930	69	820	63	780	54	1250	75	1890	100	3120	140	3250	142	3180	145	2210	120
Talas Oblast	900	63	590	43	500	36	460	34	440	34	430	31	800	55	1240	75	1850	90	1950	90	1900	90	1360	80
The South of KR, including:	8300	623	7290	563	6800	512	6970	538	6440	516	6290	455	7170	611	10460	767	15070	865	15320	888	15015	893	10720	808
Osh Oblast	5300	378	4650	322	3950	275	4180	290	3890	280	3840	266	4650	355	6630	426	9220	466	9370	473	9115	477	6500	428
Jalal-Abad Oblast	3000	245	2640	241	2850	237	2790	248	2550	236	2450	189	2520	256	3830	341	5850	399	5950	415	5900	416	4220	380
Bishkek Thermal Plant's	500	25	324	15	334	15	323	15	323	15	323	15	383	15	484	20	735	30	873	40	872	40	895	40

O. Abdykalykov
Head of Prime-Minister's Office

Appendix 9
to Resolution # 327
of the GKR
June 2, 1997

Social Institutions and Residents subject to Load Shedding
in the Autumn-Winter Period of 1997/98

Oblasts	Electric heating of social institutions #/kWh ('000)					Residents (# of house- holds/kWh)
	Total	Health care	Public education	Administrative buildings	Other	
Bishkek	1935	2	3	116	1814	2088
	9534	266	450	5679	2139	14849
Chui	391	38	118	200	35	24498
Oblast	49083	4197	26182	16327	2377	148015
Talas	188	29	45	109	5	2556
Oblast	28214	5023	11430	11559	202	24060
Osh	1011	324	353	312	22	3037
Oblast	72361	15861	39681	14435	2384	17042
Jalal-Abad	599	95	171	302	31	1958
Oblast	53240	10108	21556	19797	1779	12055
Naryn	320	26	75	182	37	5591
Oblast	41946	5840	17513	15066	3527	46256
Issyk-Kul	269	38	99	126	6	6144
Oblast	27465	5238	12931	7960	1336	42180
Republic	4713	552	864	1348	1949	45672
Total	281843	46533	129743	91833	13734	304458

O. Abdykalykov
Head of the Prime Minister's Office

Appendix 10
to Resolution # 327
of the GKR
June 2, 1997

Assignment to Oblast Administrations and Bishkek Administration on Construction of
0.4-10 kV Lines and 10/0.4 kV Transformer Substations in 1997 funded by local budgets

	Assignment for 1997	including assignment for the following months		
		Jan.-June	July-September	Oct.-Dec.
Bishkek				
0.4-10kV line (km)	45.1	20	15	10
10/0.4 transf. substation	53	20	18	15
Cap. invest. (mln. Som)	12.0			
Chui Oblast				
0.4-10kV line (km)	33.1	40	50	31
10/0.4 transf. substation	80	70	70	31
Cap. invest. (mln. Som)	41.8			
Jalal-Abad Oblast				
0.4-10kV line (km)	36	10	16	10
10/0.4 transf. substation	41	10	21	10
Cap. invest. (mln. Som)	12			
Issyk-Kul Oblast				
0.4-10kV line (km)	18.6	5	10	3.6
10/0.4 transf. substation	47	20	18	9
Cap. invest. (mln. Som)	4.4			
Talas Oblast				
0.4-10kV line (km)	52.4	15	22.4	15
10/0.4 transf. substation	47	20	17	10
Cap. invest. (mln. Som)	15.1			
Osh Oblast				
0.4-10kV line (km)	96	20	50	26
10/0.4 transf. substation	70	20	30	20
Cap. invest. (mln. Som)	26.2			
Naryn Oblast				
0.4-10kV line (km)	18	4	10	4
10/0.4 transf. substation	79	29	30	20
Cap. invest. (mln. Som)	8.5			
Total Republic				
0.4-10kV line (km)	387	114	173.4	99.6
10/0.4 transf. substation	508	189	204	115
Cap. invest. (mln. Som)	120			

O. Abdykalykov
Head of the Prime Minister's Office

Kyrgyz Republic Government Resolution #492

on

Implementation of Decree of the Government of the Kyrgyz Republic #327 of June 2, 1997 "On Preparation of Economy and Population of the Republic for Autumn and Winter Period of 1997/98"

August 29, 1997

In order to control implementation of Decree of the Government of the Kyrgyz Republic #327 as of June 2, 1997 "On Preparation of Economy and Population of the Republic for Autumn and Winter Period of 1997/98" and to prevent release of water at Toktogul reservoir due to unfavorable hydrological conditions in the basin of the Naryn River and in order to keep hydroresources and energy capacity for 1998-99, Government of the Kyrgyz Republic decrees:

1. Oblast government administrations, local authorities of Bishkek city, ministries, administrative entities, enterprises and organizations shall:
 - complete preparation of boilers that work on organic fuel within the set time;
 - mobilize all material, technical and financial resources and create fuel reserves for population and for boilers at educational, scientific, cultural and public health care establishments;
 - strictly comply with the electricity consumption limits.
2. Issyk-Kul oblast government administration shall:
 - set up a continually working headquarters to prepare Ton and Tyup Rayons for autumn and winter of 1997/98;
 - speed up accumulation of fuel resources for population, educational and public health care establishments;
 - before October 1, 1997 complete preparations for operation of all boilers paying special attention to boilers that provide services to educational and public health care establishments.
3. Jalal-Abad oblast government administration shall provide for import of coal in the necessary amount to Chatkal and Togooz-Torous Rayons before October 1, 1997.
4. Ministry of Finance and Tax Inspection under the Ministry of Finance of the Kyrgyz Republic shall not impose any fines for delays in payment of taxes and customs duties on imported fuel resources and equipment destined for preparation for autumn and winter period of 1997/98.
5. Ministry of Transport and Communications of the Kyrgyz Republic, Joint-Stock Company (JSC) "Kyrgyzenergo" and Ministry of Trade and Industry of the Kyrgyz Republic within one week shall submit to the Government weekly schedule of coal supply for Bishkek Thermal Plant from Kara-Keche mine with transportation cost specified.

6. JSC "Kyrgyzenergo" shall:
 - provide funds for Bishkek Thermal Plant to transport coal from Kara-Keche mine;
 - prevent further release of water at Toktogul reservoir to stay above the critical level;
 - weekly report to the Government about Kara-Keche coal supply to Balykchy and about coal supply to Bishkek Thermal Plant from Tash-Kumyr, Kok-Jangak, Jyrgalan, Kara-Keche and Karaganda.
7. To approve the allowed amounts of daily consumption of electricity and marginal capacity during peak hours for all oblasts of the Kyrgyz Republic for the heating season of 1997/98 (Attachment #1).
8. Oblast government administrations and local authorities of Bishkek city as well as JSC "Kyrgyzenergo" shall strictly follow the approved norms of daily consumption of electricity and marginal capacity during peak hours of autumn-winter period of 1997/98.
9. Heads of ministries, administrative entities, enterprises and organisations within 10 days shall develop a program on reduction of daily consumption of electricity and capacity and on organisation of technological processes that will assure maximum use of boilers that work on organic fuel and be in accord with the schedule of outages.
10. JSC "Kyrgyzenergo" shall ban issue of permits to use electricity for heating and cooking to stabilize water-energy balance in the basin of the Naryn River and accumulation of water at Toktogul reservoir.
11. State Joint Stock Company (SJSC) "Kyrgyzgazmunaizat" shall assure regular supply of natural gas that is imported from Uzbekistan according to the intergovernmental agreement for Bishkek Thermal Plant and Osh Thermal Plant during the end of 1997 and first quarter of 1998.
12. Chairman of Board of Directors of SJSC "Kyrgyzgazmunaizat" shall develop and submit to the Government proposals on construction of the second natural gas pipeline Uzbekistan-Bishkek-Almaty.
13. Chui oblast government administration together with local authorities of Bishkek City within one week shall provide Bishkek Thermal Plant with land for ash storage.
14. SJSC "Kyrgyzkomurholding" shall assure regular supply of coal from "Ak-Ulak" mine to Bishkek Thermal Plant in amount of 150 000 tons during the end of 1997 and first quarter of 1998.
15. Local government of Bishkek shall pay 16 million Soms from its outstanding payables to the Joint Stock Company "Kyrgyzenergo" to develop Kara-Keche deposit coal for use at Bishkek Thermal Plant, that is: in August 1997 - 4 million Soms, in September 1997 - 4 million Soms, in October 1997 - 4 million Soms, in November 1997 - 4 million Soms.

16. Officials who unreasonably interrupt service to customers or disconnect consumers who pay for electricity and thermal energy will bear responsibility in accordance with the legislation of the Kyrgyz Republic.
17. Heads of the oblast administrations and Bishkek local government, ministers, heads of administrative institutions, of JSC "Kyrgyzenergo", of "Kyrgyzzhylkommunsoyuz", of the SJSC "Kyrgyzgazmunaizat" and "Kyrgyzkomurholding" are to submit information on the implementation of this Resolution, including information on the electricity consumption schedule, the marginal capacity limits, and the assignments on creation of fuel reserve for the heating season of 1997/1998 on a monthly basis, not later than the 10th of each month.
18. Attachment 8 of the Kyrgyz Government Resolution # 327 dated June 2, 1997 "On the Preparation of the Economy and Population of the Kyrgyz Republic for the 1997/1998 Heating Season" should be considered invalid.
19. Coordination and control over the implementation of this Resolution should be taken by the head of the State Committee on the stable supply of electric and thermal energy for economic entities and residents of the Republic for the 1997/1998 heating season - the First Vice-Prime-Minister of the Kyrgyz Republic, Mr. Nanayev K. K., the Chairpersons of the Board of the Directors of the JSC "Kyrgyzenergo", Mr. Koichumanov T. D., and of the State Joint-Stock Corporation "Kyrgyzmunaizat", Mr. Sultanov M. A.

Appendix
to Resolution # 492
of the GKR
August 29, 1997

Authorized Amount of Time-of-Day Energy Consumption and Marginal Capacity in Peak-Load Hours in the Regions of Kyrgyz Republic
for 1997-1998 Heating Season

Oblasts	1997												1998					
	July		August		September		October		November		December		January		February		March	
	'000 kwh	mw																
Total for Kyrgyz Republic, including:	17000	1262	16000	1222	16000	1100	20000	1310	30000	1669	40000	1984	42000	2059	42000	2083	32000	1877
1. North, including:	9710	709	9240	691	9350	630	12120	802	19660	1110	25526	1275	26930	1326	26872	1329	20493	1207
Bishkek	2350	174	2360	175	2400	166	3038	200	3988	247	4697	256	5030	266	5101	253	3785	224
Chui Oblast	4200	298	3900	285	4040	261	5228	343	9024	493	11343	552	11899	571	11846	582	9273	539
Issyk-Kul Oblast	1770	134	1720	134	1700	118	2163	148	3758	213	5000	250	5181	257	5111	258	3873	237
Naryn Oblast	930	69	820	63	780	54	1031	68	1745	95	2816	136	3012	145	3014	148	2205	128
Talas Oblast	460	34	440	34	430	31	660	43	1145	62	1670	81	1808	87	1800	88	1357	79
2. South, including:	6970	538	6440	516	6290	455	7396	488	9605	529	13601	669	14198	693	14233	714	10700	635
Osh Oblast	4180	290	3890	280	3840	266	4677	302	6153	337	8436	410	8800	424	8684	431	6477	381
Jalal-Abad Oblast	2790	248	2550	236	2450	189	2719	186	3452	192	5165	259	5398	269	5549	283	4223	254
3. Unit auxiliaries in the Central heating plant of Bishkek	320	15	320	15	360	15	484	20	735	30	873	40	872	40	895	40	807	35

O. Abdykalykov
Head of Prime-minister's office

Kyrgyz Republic Government Resolution # 676

on
Preparation of Economy and Population of the Republic
for Autumn-Winter Period of 1997/1998

November 21, 1997

The Government of the Kyrgyz Republic emphasizes that provision of reliable and steady operation of the energy system and fuel-energy complex and uninterrupted electric and heat supply for the consumers of the Kyrgyz Republic is the most important condition for the stable functioning of the economy of the Kyrgyz Republic, especially in winter.

In 1997 the situation of the fuel-energy complex is complicated by the violation of supply agreements on primary fuel resources, lack of long-term contracts with the CIS countries on mutual fuel supply, and decrease of coal mining activities in the Republic. It is more intensified due to shallowness of the Naryn river, which started in 1997, and the inflow of water in the Toktogul reservoir, which is only 76% of the annual average norm. Electric consumption has reached a peak, and its further increase is limited by the carrying capacity of the existing system of transmission lines, junction substations and distribution networks.

On the whole, the economy and population of the Kyrgyz Republic are prepared for November 1, 1997, in accord with previous resolutions of the Government of the Kyrgyz Republic.

JSC "Kyrgyzenergo" has prepared 268,000 tons of coal and 29,500 tons of mazout. There is an agreement on additional supply of natural gas in the volume of 302 mln m³, including 110 mln m³ for Bishkek District Heating Plant and 20 mln m³ for Osh District Heating Plant in 1997.

Karaganda coal has been supplied in the volume of 229,700 tons, Tash-Kumyr coal - 11,500 tons, Kok Jangak coal - 4,200 tons, Kara Keche coal - 18,700 tons, 25,700 tons of mazout for Osh District Heating Plant, for Kara Kol boiler - 18,100 tons.

In the Republic, electricity consumption has been 2% more than the fixed limit.

Capital repairs of hydro units and steam boilers, energy boilers and 100% of heat networks and electric networks of 35-500 kV and 86% of distribution networks of 0,4-10 kV have been done. Repair of transformers has been implemented.

The Ministry of Finance of the Kyrgyz Republic has allocated 74.925 mln Soms to "Kyrgyzzhilcommunsyuz" for preparatory works for the 1997/98 autumn-winter, 21.7 mln Soms for the coal industry, including 6.8 mln Soms from the Ministry of Emergency Situations and Civil Defense of the Kyrgyz Republic. By the decision of the Government of the Kyrgyz Republic a total of 89.3 mln Soms were allocated in order to clear off debt for power and thermal energy consumed by budget organizations.

The Ministry of Finance of the Kyrgyz Republic put forward a proposal to the Jogorku Kenesh of the Kyrgyz Republic on additional allocation of 9.3 mln Soms to "Kyrgyzzhilcommunsoyuz" for heating of social facilities. In addition to this 4.1 mln Soms from scheduled 16 mln Soms was allocated for the seasonal fuel reserves for the Bishkek District Heating Plant by the Bishkek local authorities. State JSC "Kyrgyzkomurholding" extracted 290,000 tons of coal within nine months, including 222,800 tons for supplies, 59,800 tons for the State JSC "Kyrgyzenergo", 32,300 tons for "Kyrgyzzhilkomunsoyuz", 47,800 tons for industrial enterprises, 12,700 tons for the budget organizations, 19,300 tons for residential customers, and 10,800 tons for other organizations. Coal exports were 40,100 tons, including 32,800 tons to Uzbekistan, 3,100 tons to Kazakhstan and 4,200 tons to the Republic of Tajikistan. Coal reserves of the State JSC "Kyrgyzkomurholding" are 172,000 tons, with total of 34.3 mln Soms.

Taking into account the state of the fuel-energy complex of the Kyrgyz Republic in 1997 and the readiness of energy facilities to provide stable heat supply for the 1997/98 heating season, the Government of the Kyrgyz Republic decrees:

1. Heads of oblast government administrations, Bishkek local authorities, the JSC "Kyrgyzenergo", "Kyrgyzzhilcommunsoyuz", Ministry of External Trade and Industry of the Kyrgyz Republic, heads of ministries, administration units, enterprises and organizations should provide uninterrupted heat supply for the 1997-98 season, and the department responsible for the preparations for the autumn-winter season should efficiently decide and control the heat supply period.

To provide absolute execution of the Kyrgyz government's assignments in accordance with Attachments 2, 3, 4, 5, 6, 7 to the Resolution of the Government of the Kyrgyz Republic # 327 of June 2, 1997 "Preparation of economy and population for the autumn-winter period of 1997/1998".

To provide uninterrupted operation of boilers, thermal and hydropower stations, electrical and thermal networks during heat supply period.

2. The Ministry of External Trade and Industry of the Kyrgyz Republic should provide for the mining at Kara-Keche deposit of 20,000 tons of coal in October 1997, 25,000 tons in November 1997, and 30,000 tons in December 1997.
3. Before January 1, 1998 government oblast administrations and Bishkek local authorities should develop the balance of the fuel-energy complex for 1998 and submit it to the Government of the Kyrgyz Republic in accordance with the templates of Attachments 1 and 2.
4. The JSC "Kyrgyzenergo" shall
 - develop the mechanism of selective disconnection of the consumers with accounts receivable in order to increase collections for electric and thermal energy consumed;
 - increase electric capacity of thermal stations in Bishkek up to 300 MW in November 1997, up to 400 MW in December 1997 - January 1998; in Osh up to 35 MW in November 1997, and up to 45 MW in December 1997-January 1998;
 - within 10 days develop regimes of limited consumption for electricity-intensive customers, enterprises and administrative departments in order to follow fixed consumption limits for the 1997/98 heating season;

- prepare and submit to the Government a proposal to rehabilitate and put small hydropower stations into operation on the territory of the Kyrgyz Republic.
5. The Ministry of Finance of the Kyrgyz Republic should allocate a 15 mln Som loan for one year with 10% annual interest to the Bishkek District Heating Plant # 1 of the JSC "Kyrgyzenergo" from envisaged funds for the fuel energy complex.

The Ministry of Finance of the Kyrgyz Republic and the JSC "Kyrgyzenergo" should ensure control over the targeted use of the allocated funds.

6. The State Energy Agency under the Government of the Kyrgyz Republic should submit the methodology of tariff definition for electric and thermal energy for consideration of the Government of the Kyrgyz Republic in one month.
7. The State JSC "Kyrgyzgazmunaizat" should supply and distribute natural gas, taking into consideration economic interests of the state and on the basis of options and competition of suppliers.
8. To find invalid:
 - points 1, 2, 3, 6, 12, 14, third paragraph of point 5, second paragraph of point 15 of the Resolution of the Government of the Kyrgyz Republic #327 of June 2, 1997 "Preparation of the economy and population for the autumn-winter period 1997/98".
 - first paragraph of point 2 of the Resolution of the Government of the Kyrgyz Republic # 492 of August 29, 1997 "Implementation of the Resolution of the Government of the Kyrgyz Republic # 326 of June 2, 1997 "Preparation of the economy and population of the Republic for the autumn-winter period of 1997/98."
9. Mr. Nanaev K., First Vice-Prime Minister of the Kyrgyz Republic shall control the execution of the Resolution.

Prime Minister

Mr. Jumagulov A.

Attachment 1
to Resolution # 676
of the GKR
November 21, 1997

Need for Fuel-Energy Resources
according to the Oblasts of the Kyrgyz Republic for 1998

Months	Coal	Electricity	Mazout
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

Junushaliev T.
First Deputy Head
of the Prime-Minister's Office

Attachment 2
to Resolution # 676
of the GKR
November 21, 1997

Need for Fuel-Energy Resources
according to the Oblasts of the Kyrgyz Republic for 1998

Months	Coal			Electricity			Mazout		
	popu- lation	schools	public health	popu- lation	schools	public health	popu- lation	schools	public health
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									

Junushaliev T.
First Deputy Head
of the Prime-Minister's Office

December 1, 1997

RESOLUTION

of the Meeting of Peoples' Representatives of Jogorku Kenesh of the Kyrgyz Republic on Energy Supply Status of the Republican Economy and Readiness of the Energy System for Autumn and Winter Period of 1997-98

Having heard the information of the Government of the Kyrgyz Republic on energy supply of the Republican economy and readiness of the energy system for autumn and winter period of 1997-98, the meeting of Peoples' Representatives of Jogorku Kenesh of the Kyrgyz Republic decrees:

1. To take into consideration the information of the Government of the Kyrgyz Republic on measures taken to provide industry, social facilities and population with electricity, and on readiness of the energy system of the Republic for winter and autumn period of 1997-98.
2. To entrust the Government of the Kyrgyz Republic:
 - to ensure non-interruptible electricity supply of industry, social facilities and population, and to prohibit disconnection of customers during autumn and winter period of 1997-98, except for debtors;
 - to solve the repayment of JSC Kyrgyzenergo's accounts receivable through set-off by budget organizations for electric and thermal energy consumption during 1992-1996;
 - to confirm the list of collective farms and soviet collective farms as well as agricultural business entities which have been liquidated and restructured during land and agricultural reforms and to solve the issue of repayment of their indebtedness to JSC Kyrgyzenergo for electric energy consumption in 1992-1996;
 - to develop the mechanism of debt repayment for electric energy delivered to the Republic of Kazakhstan;
 - to prepare a report pertaining to the implementation of this resolution and the State Program on development of the fuel and energy sector to the year 2005 for the III stage of the XI Session of Peoples' Representatives Chamber's meeting of the KR Jogorku Kenesh.
3. To publish this resolution in mass media.
4. The control over the implementation of this resolution shall be entrusted to the Committee on industrial issues of the People's Representatives Chamber of the Kyrgyz Republic Jogorku Kenesh.

A. Erkebaev,
Chairman of the Peoples' Representatives Chamber
of the Kyrgyz Republic Jogorku Kenesh

Kyrgyz Republic Security Council Resolution # 6

on Performance of the Energy Sector of the Republic and Measures to Provide for Its High Degree of Security

December 25, 1997

After having listened to and discussed the report of Mr. Mateev, Director of SEA under Kyrgyz Republic, on energy security of the Kyrgyz Republic, the Security Council of the Kyrgyz Republic notes that specific work has been done in the recent years to keep the energy security of the country on a proper level.

Demonopolization and corporatization of the fuel and energy sector has started. The "Energy Law" and "Electricity Law" of the Kyrgyz Republic have been adopted. There are ongoing measures to streamline performance of the energy sector and to enhance work related to tariffs and price setting in the energy sector.

However, there are serious pitfalls and omissions in the work aimed at providing a high degree of security for energy sector of the republic.

Currently, the fuel and energy sector does not meet necessary requirements.

The subsectors are having technical and financial difficulties. Depreciation of equipment in the oil and gas sector is more than 60%, and it is 56% for gas pipelines. Over 60% of the equipment in power stations has been operated for more than 15 years. Equipment in Bishkek heating plant that was installed in the 60's is 65-70% worn out. Other utilities are in no better state either.

JSC "Kyrgyzenergo", JSC "Kyrgyzoilgas", SJSC "Kyrgyzgasmunaizat" SJSC "Kyrgyzkomurholding" do not consider enhancement of the financial state of the subsectors and utilities, and the reconstruction and technical rehabilitation of the existing facilities.

Accounts receivable and payable have reached a critical level. By March 1, 1997 receivables of JSC "Kyrgyzenergo" were 604,000,000 Som whereas payables were 867,900,000 Som and increased by 14% compared to 1996. These figures at SJSC "Kyrgyzgasmunaizat" were 314,000,000 and 776,000,000 Som. Coal industry is experiencing similar difficulties.

The volume of building and reconstructing electric, oil, gas and coal utilities have fallen short year after year. Losses of energy resources are generally increasing. For example, in 1996 such losses increased to 33.9% at JSC "Kyrgyzenergo".

Relevant sectoral ministries, agencies and local government offices do not render actual support to these utilities and withdrew themselves from the solution of these issues.

The Government Commission on providing stable supply of electric and thermal energy to rural entities and residents of the country for the 1997-98 heating season failed to accomplish its assignment to completely solve problems related to energy supply in the Republic.

Having considered the above stated issues and to provide a higher degree of energy security, the Security Council of Kyrgyz Republic resolves:

1. To find **dissatisfactory** the work of the Government of Kyrgyz Republic, "Kyrgyzenergo", SEA under the Government of the Kyrgyz Republic, local government offices, ministries and agencies in providing high degree of energy security in the Republic.
2. The Government of the Kyrgyz Republic must:
 - 2.1 take relevant measures towards high officials of ministries and administrative units who failed to provide reliable operation of fuel and energy utilities.
 - 2.2 adopt a special resolution on "Emergency Measures to Enhance Reliable Operation of Fuel - Energy Complex and Efficient Use of Energy Resources within 1998-2000" before February 25, 1998. In doing this, provision is to be made for development of energy balance of the Republic with due regard for even utilization of electricity, coal, gas and other alternative sources of energy.
 - 2.3 the State Commission on stable supply of electric and thermal energy for economic entities and residents of the Republic for the 1997-1998 heating season must develop (within a month) a program of stable operation, reconstruction and modernization of fuel and energy utilities, repair of transmission lines now in operation and construction of new ones showing funding sources.
 - 2.4 pursue policy of close and mutually advantageous collaboration with other countries in the field of fuel and energy supply.
 - 2.5 develop general energy policy for 1998-2000 and find additional funds to implement it.
 - 2.6 develop a Development Program for the whole infrastructure of "Agulak" coal mine and for transportation of coal from "Kara-Keche" mine.
 - 2.7 submit to the Jogorku Kenesh of the Kyrgyz Republic draft laws on "Oil and Gas", "Coal" and "Energy Conservation".
3. The State Property Fund of the Kyrgyz Republic must propose (within a month and as prescribed by the order) to the Jogorku Kenesh of the Kyrgyz Republic the Concept of Denationalizing and Privatizing Basic Subsectors of the Fuel - Energy Complex.
4. Ministry of External Trade and Industry of the Kyrgyz Republic must make provisions for sustainable and reliable operation of coal, oil and gas utilities in the fuel - energy complex.
 - 4.1 increase production output at Kara-Keche coal mine up to 1,000,000 tons a year within coming years; to supply Bishkek heating plant with 120,000 tons of coal from Kara-Keche mine for the 1997-1998 heating season.
5. Ministry of Transport and Communications must start construction in 1998 of "Bishkek-Kara-Keche" railway using the funds allocated for this purpose.

6. Oblast government offices and Bishkek mayor must develop a program for building and reconstruction of 10/04 kV distribution lines, defining funding sources with due regard to possibilities of using local energy sources.

7. The State Energy Agency under the Government of Kyrgyz Republic must finalize in 1997 licensing all types of energy activity in accordance with the Law of the Kyrgyz Republic on "Licensing".

It must develop a single tariff policy and starting from 1998 introduce economically justified and socially acceptable tariffs for electric and thermal energy.

8. JSC "Kyrgyzenergo" must:

8.1 develop and implement feasible measures to drastically reduce non-technical losses in generating, transmitting and distributing energy, and to collect accounts receivable. It should work out a mechanism to foster energy conservation in the Republic.

8.2 develop (within two months) a development program for small HPSs and submit it for consideration by the Government of the Kyrgyz Republic.

8.3 increase electricity export by reducing losses and increasing production output.

8.4 ensure stable and reliable operation of all energy utilities. It must generally reinforce control over thrifty use of energy and collection of payment for electricity released.

9. Mr. Ishimov B. B., Secretary of the Security Council of Kyrgyz Republic will undertake responsibility to control implementation of this Resolution.

Akayev A.
Head of the Security Council of the Kyrgyz Republic

Ishimov B. B.
Secretary of the Security Council of the Kyrgyz Republic

2. Working group before January 20, 1998 shall:

a) submit for approval of the Government of the Kyrgyz Republic:

- Energy Program up to 2000;
- Financial Model of the JSC "Kyrgyzenergo";
- Electricity Supply Program;
- Rules of using electric and thermal energy;

b) develop and submit to the Government of the Kyrgyz Republic a draft resolution which should include the following issues:

- provision of population, public health facilities, and schools with fuel-energy resources;
- use of non-traditional sources of energy;
- increase of energy generation at hydro- and thermal stations;
- reconstruction of Bishkek Heating Plant TES-1 and thermal network;
- construction of Tash-Kumyr and Shalmaldy-Sai HPS;
- increase of coal mining and supply of coal and gas paying attention to coal mines Kara-Keche, Ak-Ulak, Tash-Kumyr, Kok-Jangak;
- decrease of technical and commercial losses of electric and thermal energy;
- reduction of accounts receivable and realization of mutual payments;
- construction of 0,4-10 kV lines;
- construction of main transmission lines "Ala-Batken", "Frunzenskaya-Kemin", "Alabel-Talas" with appropriate substations.

A. Jumagulov
Prime Minister

BW

Kyrgyz Republic Government Decree # 59

On the Kyrgyz Republic's Security Council's Decision
and Governmental Decrees
Regarding Major Measures
for Providing Reliable Operation of the Fuel-Energy Complex

February 3, 1998

The Government of the Kyrgyz Republic notes that proper work for maintaining energy security is being implemented within the Republic.

At the same time, the technical and financial situation within the fuel-energy complex is still uneasy.

As of January 1, 1998, gas pipelines in the Kyrgyz Republic were worn out by 56%, oil and gas equipment - by more than 60%, mining equipment - 55-60%. Approximately 60% of power stations equipment of "Kyrgyzenergo" company have been in operation for more than 15 years. Bishkek Heating Center equipment is worn out by 65-70%. Other power objects are in the same condition.

Joint Stock Company "Kyrgyzenergo", "Kyrgyzneftegas", State Joint Stock Company "Kyrgyzgazmunaizat", State Joint Stock Company "Kyrgyzkomurholding" do not pay enough attention to reconstruction and technical refurbishment of the existing capacities of sector enterprises and entities.

The work on increasing power generating capacities by Joint Stock Companies "Narynhydroenergostroy" and "Kyrgyzenergo" is unsatisfactory.

Some items of the Kyrgyz Governmental Decree No. 123 dated March 4, 1997, "On Implementation of Laws on Energy and Electricity of the Kyrgyz Republic," related to commission of Power Transmission Lines (PTL) and transformer substations and to preparation of fuel resources were not implemented by state regional administrations, Bishkek local administration, Ministries and administrative departments.

In 1997 JSC "Kyrgyzenergo" didn't provide reliable and sustainable supply to residents and enterprises; power generation was reduced by 9%.

Power balance at the 10-0.4 kV lines was not achieved due to lack of consequent electric power metering.

Independent experts' study showed that metering at 10-0.4 kV transformer points is generally absent, and more than 25,000 customers still don't have meters.. Due to these reasons, technical and commercial losses reached 39%, an increase of 6% compared to 1996.

Due to the fact that the State Energy Inspection structurally is within "Kyrgyzenergo", it does not provide adequate control on the precision of meters, on the accurate level of technical and commercial losses, on safety or on energy saving measures within the energy system.

Between May 1 and December 1, 1997, the Republic received only 419.99 m³ or 66% of planned 636 m³ of gas.

Installation of gas meters by State Joint Stock Company "Kyrgyzgazmunaizat" is not proceeding satisfactorily, which prevents the proper accounting of gas consumed.

One of the main reasons for under-delivery of gas to Kyrgyz consumers was late payments for the gas being consumed.

Work on reducing both payable and receivable debts for consumed electric and thermal energy has been weak.

Thus "Kyrgyzenergo" had 488.00 million Som of accounts payable, while its accounts receivable were 530.60 million Som from domestic customers and 518.00 Som from export consumers. State JSC "Kyrgyzgazmunaizat" had 80.70 million Som of accounts payable and 117.80 million Som of accounts receivable; while in the coal mining industry - 51.30 and 64.40 million Som, and in the oil and gas sector - 22.00 and 28.00 million Som respectively.

Appropriate sector Ministries and administrative departments and local government administrations actually eliminated themselves from solution of those problems.

Kyrgyz Ministry of Finance didn't provide adequate financing for assets of the fuel and energy complex.

Denationalization work and introduction of corporate governance principles into the sector does not conform with today's requirements.

Regional state administrations, Bishkek local administration, and Kyrgyz Ministry of Labor and Social Protection did not allocate sufficient regional and city budget funds for residents' subsidies, and did not develop direct subsidy mechanisms for vulnerable families and citizens covering minimal amount of electric and thermal energy and gas.

The Status of the Republic's fuel and energy complex in 1991-1997 generally demonstrated continuing deterioration, reducing the level of power supply.

In order to provide energy security and reliable operation of the fuel-energy complex, the Government of the Kyrgyz Republic decrees that:

1. Working Group shall draft and submit before February 10, 1998 Decree of the Government of the Kyrgyz Republic "On Main Actions to Assure Reliable Operation of the Fuel-Energy Complex between 1998 - 2000."
2. Work of JSC "Kyrgyzenergo" on reducing technical and commercial losses within the electric system must be recognized as unsatisfactory.

3. JSC "Kyrgyzenergo" shall:

- within two months, develop small HPP master program and submit it for approval by the Government;
- provide reliable and sustainable supply to national residents by increasing electric power generation up to 13.5 billion kWh, including TPP generation of 3.0 billion kWh in 1998, and up to 14.0 billion kWh, including 3.6 kWh by TPP, in 1999;
- work out a set of measures to improve electric power metering at all voltage levels;
- work out a set of measures to reduce technical losses down to 14% in 1998 and to 12% in 1999, and to submit them to the Government for consideration before February 10, 1998;
- restructure the energy sale system in order to reduce commercial losses down to 12% in 1998 and to 10% in 1999;
- increase electric power export by at least 11% by reducing losses and increasing generation;
- take necessary measures to assure that 180,000 tons of Kara-Keche coal are used by Bishkek CHP in 1998;
- take appropriate measures to utilize 34.0 million USD at Tash-Kumyr and Shamaldy-Sai HPP works between 1998-2000;
- provide general building works and their finance for the 1 stage of Tash-Kumyr and Shamaldy-Sai HPP under Attachments # 1 and 2;
- start implementing investment projects for 1998 building according to Attachment #3: Alabel-Talas SS-500kV and HVPL-220 kV, Alay - Batken HVPL-220 kV and SS-220 kV, Frunzenskaya - Kemin HVPL-500 kV and SS in Kemin;
- continue project implementation for electric supply system and thermal network of Bishkek CHP reconstruction in 1998-2000 at a cost of 98.5 million USD;
- take necessary measures to increase capacity of 220 kV transformers "Oktiabrskaya", "Uzlovaya" and "Kara-Balta";
- submit a proposal to the Government about residential electric meters to be reflected on the balance sheet of energy customers.

4. The State Inspection on Energy and Gas shall be created from former branches of the JSC "Kyrgyzenergo" and JSC "Kyrgyzgazmunaizat". The State Energy Agency under the Government of the Kyrgyz Republic shall develop and submit the Provisions on the State Energy Inspection to the Government of the Kyrgyz Republic for approval.

5. The Ministry of External Trade and Industry before February 1, 1998 shall:
 - develop the Development Program of Coal Industry of the Kyrgyz Republic, in general and separately on Kara-Keche mine;
 - provide stable and reliable work of coal, oil and gas industries in the fuel-energy complex of the Republic;
 - define financial-and-technical needs to increase mining of Kara-Keche coal to design capacity in the near future;
 - in 1998, jointly with the JSC "Kyrgyzenergo", provide coal supplies in the volume of 920,000 tons, of which 560,000 tons from Karaganda and 260,000 tons from the mines of the Kyrgyz Republic;
 - organize production of transformer substations of 10-0,4 kV in the JSC "Oreme";
6. The Ministry of Finance of the Kyrgyz Republic, before February 1, 1998 shall:
 - secure funds to increase coal mining at Kara-Keche mine;
 - consider and solve the issue of allocating funds for Tash-Kumyr and Shamaldy-Sai HPS;
 - consider and submit to the Government proposals for financing priority facilities in the energy sector of the Republic;
7. The State JSC "Kyrgyzgazmunaizat" within one month shall:
 - develop and submit a detailed program on financial improvement of the gas industry, continue gas supply of all customers of the Republic agreed upon with appropriate ministries and administrative bodies and also with local government authorities of the Kyrgyz Republic;
 - conduct analysis of natural gas supply by all categories and propose recommendations on transition of certain gas boilers into other types of fuel (coal, mazout);
 - during winter season, ensure reliable natural gas supply in sufficient amount to Bishkek thermal plant, residents and boilers of "Kyrgyzzhilkomunsoyuz", including boilers transferred to Kyrgyzzhilkomunsoyuz from JSC "Ainek";
 - install gas meters for all consumers of natural gas;
 - provide sufficient supply of condensed gas for residents who do not use natural gas;
 - rehabilitate underground equipment to supply residents with condensed gas.

8. Oblast administrations and Bishkek municipal administrations shall:
 - develop a program for the construction of 10-0,4 kV distribution lines upon securing funds, taking into account possibilities of using local energy resources.
 - before February 1, 1998 develop a schedule of reducing accounts receivable for electric and thermal energy in the first quarter of 1998.
 - before March 1, 1998, jointly with JSC "Kyrgyzenergo", rayon and municipal administration shall make agreements with rayon distribution companies and village committees which would determine mutual obligations for electricity sales and consumption;
 - provide a supply of coal to meet the needs of residents and boilers transferred to organic fuel.
9. The State Energy Agency under the Government of the Kyrgyz Republic shall:
 - complete licensing all types of energy activities by 1998;
 - introduce economically justified and socially acceptable tariffs for electric and thermal energy;
 - before February 1, 1998 develop methodology of defining tariffs for electric and thermal energy;
 - develop norms of acceptable volumes of electricity consumption per customer taking into account energy resources and norms of technical losses;
 - before February 1, 1998 develop program of electrical and thermal energy tariff increase.
10. The State Energy Agency under the Government of the Kyrgyz Republic, JSC "Kyrgyzenergo", Kyrgyz Research and Technical Center "Energia", Ministry of External Trade and Industry of the Kyrgyz Republic shall present Draft Laws on Coal and Energy Conservation to the Kyrgyz Government in accord with the plan of draft laws.
11. JSC "Narynhydroenergostroi" shall carry on construction and assembly works at Tash-Kumyr and Shamaldy-Sai HPSs to achieve a target of 620 meters at Tash-Kumyr HPS and 564 meters at Shamaldy-Sai HPS.
12. General Prosecution office of the Kyrgyz Republic, Ministry of Internal Affairs, Ministry of Finance, local administrations and JSC "Kyrgyzenergo" shall take required actions to prevent energy theft, reduce electricity and thermal losses and retrieve accounts receivable.

13. Ministries, administrative agencies and JSCs of the Kyrgyz Republic shall develop and implement organizational and technical activities to reduce all types of energy losses in the 1st quarter of 1998.
14. Kyrgyz Research and Technical Center "Energiya" shall regularly propagate energy conservation policy through media.
15. JSC "Kyrgyzenergo and Kyrgyzgazmunaizat" shall develop a targeted program of installation of meters for electric and thermal energy, gas and hot water within a month.
16. Tash-Kumyr Municipal Administration shall monitor the progress of construction at Tash-Kumyr and Shamaldy-Sai HPSs.
17. Adbubachaev Sh. M., Deputy Head of Chui Oblast Administration, and Kolbaev A. S. , First Deputy Head of Bishkek Municipal Administration, shall be reprimanded for poor performance in continuous energy supply of Chui oblast and Bishkek and warned that they will be made answerable if they don't take measures to restore reliable energy supply.
18. Nanaev K. K., First Vice Prime Minister of the Kyrgyz Republic shall be responsible for implementation of this resolution.

Nanaev K. K.
First Prime Minister

Attachment 1
to Decree # 59
of the GKR
February 3, 1998

Schedule of the First Stage Construction and Financing for Tash-Kumyr Hydro to Assure
Water Increase to the Level of 620 meters above the Sea Level

Timeline	LIST OF WORKS						Amount of Investment (000 Som)
	Concrete Laying		Protection from Soil Flow (Embankment)		Water Release		
	m ³	000 Som	m ³	000 Som	m ³	000 Som	
1	2	3	4	5	6	7	8
TOTAL	8000	32790.5	1400	11065.1		1600	45455.6
including:							
Dec '97	300	1230	3000	2370		200	3800
1998:							
January	700	2870	6000	4740		200	7810
February	900	3590	5000	3955.1		200	7845.1
March	1250	5000				200	5200
April	1400	5700				200	5900
May	1300	5580.5				200	5780.5
June	1200	4920				200	5120
July	950	3800				200	4000
TOTAL	8000	32790.5	1400	11065.1			45455.6

Additional capacity = 60 MW. Investment financed from the Republican budget = 7,000,000 Som.. Sources of financing - Republican Budget and JSC "Kyrgyzenergo". Ministry of Finance and JSC "Kyrgyzenergo" are responsible for financing. "Narynhydrostroj" is responsible for construction.

Abdykalykov O.
Head of the Prime -Minister's Office

Attachment 2
to Decree # 59
of the GKR
February 3, 1998

Schedule of the First Stage Construction and Financing for Shamaldy-Sai Hydro to Assure
Water Increase to the Level of 564 meters above the Sea Level

Timeline	LIST OF WORKS									Investment (000 Som)	
	Concrete Laying		Dam								
	# of m ³	Cost Esti- mate	Total 000 Som	Including							
				Fill of the Dam		Filter		Reinforced Concrete Collector			
				m ³	000 Som	m ³	000 Som	m ³	000 Som		
1	2	3	4	5	6	7	8	9	10	11	
Dec '97	300	916		7000	1050						1966
1998:											
including											
January	300	916		7000	1050						1966
February	300	916		7000	1050						1966
March	350	1068		7000	1050	10000	3720	150	540		6378
April	400	1220		6000	900	10000	3720	300	720		6560
May	400	1220		6000	900	10000	3720				5840
June	535	1630				10000	3720				5350
July	535	1630				10000	3720				5350
August	340	1036		6000	900	10000	3720				5658
September	340	875		6000	900	10000	3720				5658
October	283			3000	450	6000	2232				3557
November						6000	2245				2245
December						6000	2245				2245
TOTAL	4083	12467	42272	55000	3250	88000	32762				54739

Additional capacity = 80 MW. Investment financed from the Republican budget = 8,000,000 Som. Sources of financing - Republican Budget and JSC "Kyrgyzenergo". Ministry of Finance and JSC "Kyrgyzenergo" are responsible for financing. "Narynhydrostroj" is responsible for construction.

Abdykalykov O.
Head of the Prime -Minister's Office

Schedule of Implementation of the Investment Projects on Development of
Essential Electric Networks in the Kyrgyz Republic

Tasks	Measures to achieve the task	Form of implementation	Timeline	Responsible
1	2	3	4	5
Improvement of Power Supply for the Talas Oblast				
Assure validity of the Loan agreement with EBRD	Ratify loan and guarantee agreements	Decree of the President or Resolution of Jogorku Kenesh (JK)	1 quarter 1998	MoF, MoJ, JSC "Kyrgyzenergo" (KE)
	Assure completion of feasibility study and tender documents and get them coordinated	Feasibility study, tender package, conclusions and coordination	1 quarter 1998	JSC KE, Ministry of Environmental Protection (MEP), Ministry of Architecture and Construction, SEA
	Set up Project Implementation Unit	Order of JSC "Kyrgyzenergo"	January 1998	JSC "Kyrgyzenergo"
	Prepare legal opinions on behalf of guarantor and borrower	Legal Opinion	January 1998	Ministry of Justice, JSC "Kyrgyzenergo"
	Assure appropriate level of payments for electricity consumption by the time of the agreement validity	Monthly report	February-March 1998	Ministry of Finance, JSC "Kyrgyzenergo"
Timely implementation of commitments	Pay one-time commission to the Bank	Payment order	7 days after the agreement goes into effect	Ministry of Finance, JSC "Kyrgyzenergo"
Improvement of power supply for the Talas Oblast				
One-time and other payments	Pay commission and the interests to the Bank	Payment order	in accord with Loan Agreement	Ministry of Finance, JSC "Kyrgyzenergo"
Start design, construction and purchase of equipment	To carry out international tenders to choose contractors	Contracts	3 quarter 1998	JSC "Kyrgyzenergo"
Put into operation	Carry out construction, purchases and financing in accord with the schedule	Certificate of Operational Readiness	1 quarter 2000	JSC "Kyrgyzenergo"
Alai-Batken 220 kV line with Batken Substation				
Appointment of consultants for the project of Islamic Development Bank and Kuwait Fund	Choose consultants for Alai-Batken 220kv line	Contract	March 1998	JSC "Kyrgyzenergo"
	Negotiate appointment of consults for substation Batken with Kuwait Fund	Decision of Kuwait Fund	February 1998	JSC "Kyrgyzenergo"
Validity of Agreements	Ratification of agreements	Decree of the President or Resolution of JK	1 quarter 1998	IBD office in KR and JSC "Kyrgyzenergo"
Suppliers and Contractors Tender	Preparation of tender specifications	Feasibility study and specifications	3 quarter 1998	JSC "Kyrgyzenergo", Ministry of Architecture and Construction, SEA, MEP
Beginning of construction and purchases	Carry out tender and sign contracts with suppliers and contractors	Contracts	1 quarter 1999	JSC "Kyrgyzenergo"
Alai-Batken 220 kV line with Batken Substation				
Put into operation	Carry out construction, purchases and financing in accord with the schedule	Certificate of Operational Readiness	1 half of 2000	JSC "Kyrgyzenergo", MoF, Osh Oblast Local Administration
Frunzenskaya-Kemin 500 kV Line with Substation Kemin*				
Negotiate loans with Governments of Germany and Japan	Finish negotiations with German bank KfW and OECF Fund (Japan) and sign loan agreements	Loan agreements with OECF and KfW bank	2 quarter 1998	Goscominvest, Ministry of Finance, SEA, JSC "Kyrgyzenergo"
Preparation and implementation of the project	Ratify loan agreements, carry out tenders, design and construction of the line. Put into operation	Feasibility study, project, specifications, contracts and others	2 quarter 1998 2 half of 2000	Goscominvest, Ministry of Finance, SEA, JSC "Kyrgyzenergo"

* Schedule of this project will be modified after signing of the loan agreements.

Kyrgyz Republic Government Resolution # 219**On the Improvement of the Financial Situation
of Joint Stock Company "Kyrgyzenergo"**

April 24, 1998

The Government of the Kyrgyz Republic points out that the financial and economic situation of the energy system of the Kyrgyz Republic is difficult. The debt of consumers of the Republic for electrical and thermal energy consumed was Som 586.8 million, as of February 1, 1998. At the same time the accounts payable to JSC "Kyrgyzenergo" amount to Som 447.7 million, as of the above date, including tax debt of Som 14.3 million, debt to suppliers of Som 292 million, salary arrears of Som 44.8 million and deductions for the Social Fund of the Kyrgyz Republic of Som 28.6 million.

The extremely high number of social sector assets in JSC "Kyrgyzenergo" results in considerable losses and distracts energy staff from fulfilling their main responsibilities. Due to the low tariff for electrical and thermal energy as well as the low cost of fixed assets on which depreciation deductions depend, every year the coefficient of energy equipment depreciation increases.

To improve the stable and reliable operation of the energy complex and strengthen its financial and economic situation, the Government of the Kyrgyz Republic resolves:

1. The Ministry of Finance of the Kyrgyz Republic shall:

- as the documents for mutual settlement are modified and verified, complete the redrafting of bad debts of agricultural consumers to the Ministry of Agriculture and Water Resources of the Kyrgyz Republic and write them off from JSC "Kyrgyzenergo" in accordance with the January 4, 1997 (sic) Government Decree # 2 "On the Implementation of the December 25, 1997 Presidential Decree of the Kyrgyz Republic "On the Declaration of 1998 as the Year of Rural Development";
- submit a proposal to the Government of the Kyrgyz Republic on repayment of budget organizations' arrears for electric and thermal energy to JSC "Kyrgyzenergo" in the amount of Som 22.95 million, as of January 1, 1998;
- finance budget consumers to pay for electric and thermal energy consumed within fixed limits approved by the Ministry of Finance for 1998;
- together with the Ministry of Labor and Social Protection of the Kyrgyz Republic, make mutual settlement (offset) of discounts actually provided in 1997 in accordance with the Government Decrees # 348 of July 31, 1996 "On Measures on Implementation of the Law of the Kyrgyz Republic on War Veterans, Military Forces and Rear Workers" and # 282 of May 15, 1997 "On Measures to Ensure Social Safety of Servicemen of the Kyrgyz Republic";
- together with the Ministry of Labor and Social Protection of the Kyrgyz Republic, make mutual settlement (offset), on a monthly basis, with JSC "Kyrgyzenergo" or carry out financing to compensate discounts of disabled and participants of the Great Patriotic War and persons of the same category in accordance with the Laws of the Kyrgyz Republic "On War Veterans, Military Forces and Rear Workers" and "On

Status of Military Servicemen” and repay the debt of JSC “Kyrgyzenergo” to the budget respectively;

- together with the State Tax Inspectorate under the Ministry of Finance of the Kyrgyz Republic, JSC “Kyrgyzenergo” shall:
 - before May 1, 1998, define the procedure and schedule of mutual debt repayment of organizations financed by local and national budgets for energy consumed and debt of JSC “Kyrgyzenergo” to the budget;
 - in order to reduce the difference between design and actual capacities of Tash-Kumyr hydropower station by 60 MW and Shamaldy-Sai hydropower station by 80 MW, in 1998, allocate to JSC “Kyrgyzenergo” the funds from the national budget in accordance with the February 3, 1998 Government Decree # 59 “On Implementation of the Security Council Decision of the Kyrgyz Republic and Government Decrees of the Kyrgyz Republic on the Main Measures to Ensure Reliable Operation of Fuel and Energy Complex”.
2. Before June 30, 1998, the heads of oblast state administrations, local self-government of Bishkek City, ministries, administrative departments and joint stock companies shall be personally responsible for the repayment of accounts receivable of their agencies, divisions, and enterprises for electrical and thermal energy, as of February 1, 1998 (within the limits approved by the Ministry of Finance for 1998) and for ensuring that budget organizations consume electric energy within the limits of fixed budget allocations for that purpose.
 3. To implement the April 23, 1997 Government Decree # 239 “On Denationalization and Privatization Program for JSC “Kyrgyzenergo,” before January 1, 1999, the heads of oblast state administrations shall overtake social sites owned by JSC “Kyrgyzenergo”, as shown in the Attachment.
 4. JSC “Kyrgyzenergo” shall:
 - before October 1, 1998, install and replace old meters of consumers in outcoming feeders and complete transformer substations;
 - in 1998, find a source of financing Som 70 million to develop capacities of Tash-Kumyr and Shamaldy-Sai hydropower stations.
 5. The State Property Fund of the Kyrgyz Republic, the Ministry of Labor and Social Safety of the Kyrgyz Republic, the Social Fund of the Kyrgyz Republic and the Ministry of Finance of the Kyrgyz Republic shall leave the dividends from the state share of JSC based on the financial and economic performance in 1997 at the disposal of JSC “Kyrgyzenergo” to be used for development of the energy sector.
 6. Recognize as null and void the provisions of the September 22, 1994 Government Decree # 720 On the Introduction of Amendments and Addenda into the February 15, 1993 Government Decree # 69 “On the Stabilization of the Financial Situation of Energy Complex of the Republic” that exempt residential customers from penalties for untimely payment for electricity, thermal energy and hot water.

Jumaliev K.
Prime Minister

Attachment
to the GKR Resolution # 219,
April 24, 1998

**Social Sector Assets of JSC "Kyrgyzenergo" Transferred to
Local State Administrations**

№	Local state administrations	Asset to be transferred
1	Karakol city state administration, Issyk-Kul Oblast	boiler house in Karakol City
2	Kyzyl-Kiya city state administration, Osh Oblast	boiler house in Kyzyl-Kiya City
3	Kara-Kul city state administration, Shamaldy-Sai, Jalal-Abad Oblast	Public utilities of Kara-Kul City and Shamaldy-Sai, boiler houses of Kara- Kul City and Shamaldy-Sai
4	Kemin rayon state administration, Chui Oblast	boiler house of Nur
5	Naryn Oblast state administration	boiler houses of At-Bashy hydropower station, "Naryn", # 2 in Dostuk
6	Alamedin rayon state administration, Chui Oblast	boiler houses of hydropower station-2 and hydropower station-3

Junushaliev T.
First Deputy Head of Prime Minister Office
Kyrgyz Republic

ITEMS DELETED BY THE GOVERNMENT FROM KYRGYZENERGO'S
DRAFT OF THE "PROGRAM ON IMPROVING KYRGYZENERGO'S
FINANCIAL SITUATION"

Before July 1, 1998, the National Statistics Committee of the Kyrgyz Republic, the Ministry of Finance of the Kyrgyz Republic, the State Property Fund of the Kyrgyz Republic together with JSC Kyrgyzenergo shall submit to the Government of the Kyrgyz Republic for approval the coefficients of fixed asset reevaluation of JSC Kyrgyzenergo taking into account the evaluation of independent experts of "Econo Energy" (Finland) and EDF (France) consultation companies.

Authorize JSC Kyrgyzenergo to attract external legal and physical entities to take measures on the repayment of debts accumulated before January 1, 1997, from the consumers of the Kazakh Republic.

In accord with international practice, set a discount rate (commission fee) up to 30 percent of actual receipts for the collection of debts accumulated before January 1, 1997 from the consumers of the Kazakh Republic.

Write off financial funds from the settlement account of JSC Kyrgyzenergo after notification of and authorization by the Government of the Kyrgyz Republic.

Before July 1, 1998, submit to the Government of the Kyrgyz Republic for the future submission to Jogorku Kenesh of the Kyrgyz Republic proposals on the introduction of amendments and addenda to the Tax Code of the Kyrgyz Republic to identify that for taxable goods which do not have a material and tangible form (electrical and thermal energy) the taxable basis will be energy sales proceeds.

Allocate the expenses on housing and public utilities, boilers and social sector sites of Kara-Kul to the cost of electricity generated by the Cascade of Toktogul HPS until they are transferred to the balance of the local state administration and deduct the full expenses on housing and public utilities, boilers and social sector sites of Kara-Kul from the aggregate annual income of JSC Kyrgyzenergo.

Exempt JSC Kyrgyzenergo from the payment of financial and penalty sanctions for untimely tax payment due to the untimely financing of budget organizations irrespective of the time when the arrears occurred, as of January 1, 1998.