

Regional Aspects of Kyrgyzstan Energy Security

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Energy independence, one of the principal elements of any system of national security, is an unconditional priority in the economic policy of any state. The energy sector in Kyrgyzstan cannot expect in the short term to become a significant source of economic growth for the country, but this sector itself has sufficient potential to contribute to general economic growth and fiscal stability in the medium and long –terms. In addition, the energy sector could promote the integration of the state into the world community as well as defend its national interests.

At present it is not possible for the Kyrgyz Republic to reach complete energy independence. A rupture in former economic relations, an economic crisis that has struck the industrial sector, market reforms, a significant worsening in the structure for manufacturing energy carriers in the country, and an increase in energy consumption have all negatively affected the formation of a Kyrgyz energy market. Today we cannot completely satisfy our own energy needs with our own energy resources. As a result Kyrgyzstan has found itself dependent on petroleum products from Russia, gas from Uzbekistan, and coal and crude oil from Kazakhstan, which together represent more than 50 percent of the fuel consumed in Kyrgyzstan. All of this requires tremendous funding, and with the country's negative energy trade balance, the energy sector adds significantly to the national debt.

Kyrgyzstan must accept a situation where the delivery of energy carriers is unreliable. That is why the security factor has become one of the main factors defining its foreign energy policy. The main goal here is to undertake the appropriate adjustment measures at a rate that outpaces the growth of risk factors.

Any economic activity is impossible without a steady supply of both electricity and water. At this point, the fuel-and-energy complex and water resources are not only the core of the process of the integration of Central Asia, but are also the main factors that provide energy security to Kyrgyzstan. Ensuring balanced and rational usage of the fuel-and-energy and water resources that the region possesses as well as ensuring a reliable energy supply to consumers should become the main goal for cooperation between energy systems in Central Asia.

The significant problems confronting the entire region of Central Asia—lack of water, lack of cultivated soil, boundary issues—are by their very nature prone to dispute. Among these problems the problem of water ranks first in the region. The Syrdarya River, whose source is in Kyrgyzstan, is one of the biggest waterways in Central Asia and supplies water to Uzbekistan, Kazakhstan, and Tajikistan. The

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main water reservoirs fed by the Syrdarya are located in the territory of Kyrgyzstan. If it decides for any reason to punish its neighbors and cut them off from water resources, the indignation of the latter would be so great that it would dwarf any operation of the notorious Vakhabits (the Islamist radicals of Central Asia).

At the moment the situation as a whole still remains quite complicated. In order to manage the situation the states of Central Asia must initiate the development of unified approaches and principles for water-sharing reflecting both national and regional interests. This would help avoid social and political destabilization in the region.

The hydro resources of the Kyrgyz Republic are being used both for the production of electricity and for irrigation purposes. Kyrgyzstan is interested in energy use of water resources, while irrigation is of paramount importance to its neighbors Kazakhstan and Uzbekistan. This situation is quite clear, because the irrigation systems of both Kazakhstan and Uzbekistan depend on the hydro system and water reservoirs located in Kyrgyz territory. Another important factor is that the frontier regions of neighboring states use electricity from Kyrgyzstan. Thus, water resources are powerful levers in establishing political and economic relations with neighboring states. In light of this, the intergovernmental agreement on the use of the water and energy resources of the Naryn River (part of the Syrdarya Basin) is to be revised.

The foremost area where the interests of these newly independent states overlap is Fergana, the most densely populated part of the region as well as the poorest one. In the face of lack of fertile farmland, unresolved redistribution of energy and water resources, and a sudden population explosion (resulting in a considerable increase in population density in the Fergana Valley), ethnic conflicts have begun to sprout up that in the future could turn into an interethnic opposition. These conflicts are outlined in the table below.

Only the maintenance of the status quo will preserve relative calm in the Fergana Valley in the near future. Any attempts to change this situation are fraught with repercussions.

For the moment, work is being conducted on developing a project of integrated management of water resources in the Fergana Valley. The project is aimed at effectively solving the whole spectrum of water problems in the Fergana region. Its outlook is unique in that it considers water resources to be a uniting factor for a number of areas in Uzbekistan, Kyrgyzstan, and Tajikistan that are located in this region. Its purpose is to increase the efficiency of water use and to introduce new forms of water resources management.

Uzbekistan and Kyrgyzstan have concluded their first agreement on the joint distribution of water resources and energy power. The countries have already concluded various agreements on coordinated water use—in particular, the Agreement of February 1992, the Nukus Declaration, and others. Kazakhstan has also signed the Agreement of Joint Operation of some hydro facilities in Kyrgyzstan.

Spring 1989	Pogroms of Turkish Meskhetins
Summer 1990	Kyrgyz-Uzbek Conflicts
May 1996	Military conflict on Kyrgyz-Tajik border. The conflict was caused by attempts to gain control over a strategic water resource. Kyrgyzstan and Tajikistan failed to divide the irrigation facilities located in the territory of both republics.
1996–1997	New clashes over water. The problem reached a climax when Uzbekistan started demanding that Kyrgyzstan pay in freely convertible currency based on world prices for Uzbek gas. The Bishkek authorities reminded Tashkent that it held a trump card: it would not allow the irrigation of the Fergana Valley of Uzbekistan and other regions of the Syrdarya River Basin with water from the Tortugul Water Reservoir. Moreover, Kyrgyzstan reminded its neighbor that it would be compelled to release the water from Toktogul in the winter to receive electric power in case Uzbekistan refused to supply gas.
Since 1995	To resolve the conflicts, interstate agreements on the use of water and energy sources were negotiated. However, the results of ten years of coordination between the two countries have clearly demonstrated that a resolution is not possible.

At the moment, a draft of the tripartite agreement is being prepared. There is hope that the disputes over use of irrigation water from the Kyrgyz water reservoirs will be resolved. The neighboring states will partially reimburse Kyrgyzstan for the costs of maintaining hydraulic engineering structures. These reservoirs constitute the largest part of all the water resources in Central Asia. Kyrgyzstan uses just seven percent of the total volume for irrigation. The rest goes to its neighbors, who have expanded their farmland by half a million hectares. However, all costs of the maintenance of channels and dams have been borne by Kyrgyzstan. This is several times the cost of the natural gas supplied by Uzbekistan, and of the furnace fuel oil and coal from Kazakhstan. Now the parties have agreed to cover the maintenance expenses, and they have been guaranteed water for irrigation of their arable land.

These efforts have resulted in the acceptance of a series of particular agreements and the development of specific approaches for their implementation. However, the conclusion of these agreements only for the current year and the absence of long-term contracts on mutual deliveries of energy resources have resulted in substantial instability in Kyrgyzstan's energy situation. That is why the conclusion of *long-term contracts* on an equal, mutually advantageous basis, which would

take into account the interests of Kyrgyzstan and its citizens, is the principal issue of energy security for Kyrgyzstan.

Kyrgyzstan's debts also stem from ineffective use of water and hydro energy resources, which is connected to the problem of gas vulnerability. Until recently, the hydro-and energy systems have worked more for Kyrgyzstan's neighbors than for the Kyrgyz Republic, but Kyrgyzstan has maintained exclusive rights to water, which is one of the main sources of tension in its relationship with its neighbors. Complicated agreements on the mutual use of water resources have become the subject of intense debate. Kyrgyzstan's standpoint is that it has to receive compensation for its water supply, whereas Kazakhstan and Uzbekistan believe they have full rights to water access. Kyrgyzstan has a reasonable basis to expect payment for the maintenance of water reserves. (For instance, according to estimates, Uzbekistan would need to invest \$3 billion to build dams and water reservoirs that would replace the water resources it relies on that are located in the territory of the Kyrgyz Republic).

At this stage, the accepted decision represents a necessary compromise according to which bilateral negotiations for a final agreement on the sale of electricity together with water supply can take place. Payment is being made in the form of mutual offsets for gas supply from Uzbekistan and coal from Kazakhstan. The problem is that the price for all energy carriers within the framework of this process is subject to inflation, which leads to certain problems:

1. None of the countries is satisfied with the compromise achieved; the neighboring states feel compelled to acquire electric power that they do not really need, and they consider the price excessive, while Kyrgyzstan feels that it is overcharged for gas and coal.
2. Despite the fact that Kyrgyzstan delivers its electricity to Uzbekistan and Kazakhstan, they are not dependent on such deliveries, and thus there is an imbalance in the relationship between these countries as to their interdependence on energy and energy carriers' supply.
3. The lack of transparency connected to barter operations stimulates the growth of corruption.

Kyrgyzstan suffers certain losses in the exportation of its energy power. As a matter of fact, Kyrgyzstan finances Uzbekistan and Kazakhstan without receiving immediate payment, because they are not paid with currency. Payment for electric power is made within one year by barter, in the form of gas, crude oil, and coal. For example, Uzbekistan insists on paying its gas remittance on a monthly basis by currency or material assets, whereas Kyrgyzstan supplies electrical energy for almost one year in advance without payment. Thus, in 2000 the Kyrgyz Republic supplied electricity to Uzbekistan for \$60 million. If the payment were made in

currency, it would significantly reinforce the Kyrgyz economy. By having convertible currency, employees of the power sector could considerably increase the purchase of local coal and acquire gas and crude oil from private companies in Kazakhstan and Uzbekistan for a lower price. Thus, it would be possible to improve the economic situation both for power-engineering employees and for the state and to increase the import replacement of coal and crude oil.

For the last six to seven years, the energy system has covered annually around 70 percent of actual operation expenses for the production of heat-energy as well as a small volume of capital investments and debt repayment for the energy system, all at the expense of export income (mainly as compensating fuel). The existing situation of electric energy export shows that export income fluctuates and consequently cannot be guaranteed. The analysis shows that, regardless of the volume of export supply, total costs for maintaining the energy system do not change. The reduction of exports decreases the income necessary for covering the costs.

Kyrgyzstan needs the input of large energy capacities to fulfill its obligations to Kazakhstan and Uzbekistan concerning the export of water-and-energy resources. It would probably be expedient if the income from electric energy export were invested in the construction of new capacities (new electric power stations, electricity transmission lines, etc.). This is important because the Kyrgyz energy resource base has potential for more significant local production that could help in creating jobs and in resolving the problem of the negative trade balance at the expense of improving regional cooperation.

The Kyrgyz energy system is characterized by some particularities. One of them—and the most important—is that the production of electric energy from Kyrgyz hydro stations could probably be the cheapest in the world. In recent years, the Kyrgyz hydropower complex has been able to support the stable production of electric energy. In addition, during this time there has been a reduction in the number of thermal stations for the production of electricity, which has raised the efficiency of the energy system. We have begun to import less coal, gas, and crude oil for burning in thermal power stations. Among the CIS countries, Kyrgyzstan is the only country that has not reduced production, while this parameter has decreased considerably in other countries.

At the same time, changes in the production structure have occurred. For the last ten years the production of electric power has significantly increased in the hydroelectric power stations and has significantly decreased in the thermal power stations. The reason for this is that the structure of fuel consumption, whose main portion is imported fuel at prices close to those in the world market, is not at all cost-effective and is economically not feasible for the republic. Additionally, the failures of supply contracts based on international agreements have become more frequent, causing significant increases in the cost of electric energy production, which is fifteen to sixteen times more expensive than hydroelectric power stations.

The increase in thermal power cost for heating and hot water supply has resulted in nearly 80 percent of the consumers becoming insolvent.

The Kyrgyz Republic is certainly capable of providing itself with its own electric energy. Its potential stock of power resources is approximately as high as 162.5 billion kw/h, of which no more than ten percent is being used for this purpose. Input of additional energy capacities will be required for electrical heating and electric stoves for food preparation. Without such development, the deficit in energy capacities will increase, which could lead to shortages in energy supply.

The forecast for more intensive usage of electric energy has revealed problems associated with the capacities of transmission and distribution systems. According to estimates, the rate of increase of electric energy consumption will be between 15–17 percent between 2000 and 2010.

For the time being, the capacities of existing electric stations are not capable of meeting growing needs because they have exhausted their reserve capabilities. The energy sector is suffering from a reduction in quality of customer service because of the deterioration of the electric energy transmission and distribution networks. To change this situation, significant investments will be needed. According to the “Policy Description in the Energy Sector” report made by the World Bank in 2000 and government estimates, around \$250 billion of investment will be needed, for instance, just for the restoration and upgrade of electric energy transmission and distribution capabilities.

To sum up, Kyrgyzstan can only achieve energy security when the economy and society, using efficiently its fuel-and-energy capacities, maintains the following:

1. The level of energy consumption necessary for social and economic development;
2. The optimum level (from the standpoint of commercial criteria) for export to global energy markets;
3. The level (sufficient for Kyrgyz interests) of interaction with thermal power stations in Central Asia.

In order to establish an efficient market of energy carriers in Central Asia, it is expedient to create an economic, legal, and organizational base ensuring mutually beneficial cooperation. The development of international cooperation in the energy system is one of the most important issues facing Kyrgyzstan today.