Eurasian Development Bank
Resources Manager of EurAsEC Anti-Crisis Fund

APPRAISAL REPORT

on Preliminary Application

of the Ministry of Finance of Kyrgyz Republic

for Investment Loan
to be provided by the EurAsEC Anti-Crisis Fund for the project
“Rehabilitation of Energy Sector. Phase 2” Component "Rehabilitation of Toktogul HPP: Replacement of second and fourth power units with replacement/repair of auxiliary systems and powerhouse equipment"
in the amount of US$ 75 million

June 2014
Kyrgyz Republic
Fiscal year: 1 January – 31 December

National currency exchange rate
as of 01/06/2014

<table>
<thead>
<tr>
<th>Currency</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>KGS</td>
<td>1 RUB</td>
</tr>
<tr>
<td></td>
<td>1 KZT</td>
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<tr>
<td></td>
<td>1 US$</td>
</tr>
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<td></td>
<td>1 EUR</td>
</tr>
</tbody>
</table>

System of weights and measures: Metric

Acronyms and Abbreviations
ACF, Fund – Anti-Crisis Fund of the Eurasian Economic Community
ADB – Asian Development Bank
EBRD - European Bank for Reconstruction and Development
EDB, Manager - Eurasian Development Bank
EurAsEC – Eurasian Economic Community
FS - Feasibility Study
GDP - gross domestic product
GNI - gross national income per capita
IDB– International Development Banks
IFI - International Financial Institutions
KR - Kyrgyz Republic
Minenergoprom - Ministry of Energy and Industry of the Kyrgyz Republic

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1. **KEY PARAMETERS OF LOAN RECOMMENDED BY MANAGER**

<table>
<thead>
<tr>
<th>Borrower</th>
<th>Kyrgyz Republic</th>
</tr>
</thead>
</table>
| **Amount and conditions of funding** | - Requested amount of ACF loan: US$ 75 million, 39.5% of the total cost of the Project (the total amount required for the Project is US$ 190 million, co-financing by the Borrower - US$ 10 million (5.3%), co-financing by ADB - US$ 105 million (55.2%).
- Currency of loan: US dollars.
- Interest rate: 1% per annum
- Risk premium: amount to be determined following preparation of the detailed feasibility study.
- Front-end fee: 0.5% (toward partial funding of operating costs of the Manager).
- Commitment fee: amount to be determined following preparation of the detailed feasibility study for the Project.
- Loan maturity, including grace period: 20 years.
- Grace period for principal repayment: 8 years.
- Size of the grant-element - 36.49% (equation in Appendix 3).
- The recommendations on financial conditions will be specified in the process of project preparations with due consideration of the long-term sustainability of KR and recommendations by the IMF program, which will be running in KR on the date of the loan approval by the ACF Council. |

<table>
<thead>
<tr>
<th>Type of transaction</th>
<th>Investment loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector</td>
<td>Power engineering</td>
</tr>
<tr>
<td>Key performance indicators</td>
<td>Improved productivity, increase in output of electricity, higher percentage of zero downtime operation of the Toktogul HPP, enhanced safety of the power generation facility.</td>
</tr>
</tbody>
</table>
| Main objectives     | Rehabilitation of the HPP by replacing worn down and obsolete equipment will allow to:
- increase energy security of Kyrgyzstan;
- reduce acute winter shortages of electricity supply in the country;
- enhance reliability and stability of supplies to power consumers. |
| Project company     | Open Joint Stock Company "Electric Power Plants" (OAO "Electric Power Plants", EPP) |
| Principal risks and mitigation techniques | The project is exposed to operational, regulatory, legal, financial and fiduciary risks. During working on the feasibility study, in order to reduce the project risks, the Manager recommends seeking advice from the Asian Development Bank on whether or not it is possible to apply EDB and ADB compliance control and security guidelines, as well as on engaging independent technical evaluation experts, on procurement, on disbursement, on environmental and social safeguards to see how monitoring can be organized on the project implementation site. |
2. MANAGER'S APPRAISAL OF PRELIMINARY APPLICATION

This Appraisal Report provides an assessment of the preliminary application of the Ministry of Finance of the Kyrgyz Republic (hereinafter the Application). The main stated purpose of the Loan consists in financing of the project "Rehabilitation of Energy Sector. Phase 2. Component "Rehabilitation of Toktogul HPP: Replacement of second and fourth generator units with replacement/repair of auxiliary systems and powerhouse equipment" (hereinafter - the Project).

Section 2 of this document contains the rationale for the Appraisal of the preliminary application by the ACF Resources Manager's (hereinafter - the Manager).

Having examined the Application, the Manager hereby requests the ACF Council to consider the following recommendations and the Appraisal conclusions:

1. *The Application conforms to the mission of the Fund, its funding objectives, lending policy as defined by the Treaty on the Establishment of the Fund, the Fund Statute, and the Regulation on ACF Investment Loans.* Meanwhile, the Manager wishes to indicate that the conditions tendered by the Borrower, differ from the indicative terms for provision of investment loans by the Fund. According to the World Bank’s classification, the Kyrgyz Republic is a low-income country, and this category, as provided in the Regulation on the Use of ACF Resources for Providing Investment Loans (see para 12 and Appendix 1 thereto), requires application of IFI standards to financing such countries. In particular, with due regard to the IMF Program in the Kyrgyz Republic, the Manager proposes to grant the request of the Ministry of Finance of the Kyrgyz Republic to extend the drawdown period of the Investment loan to 20 years, and the grace period for the loan - to 8 years to comply with the requirement, which goes along with the grant element as provided by the IMF Program for the Kyrgyz Republic. Also, the Manager suggests that the requested amount of co-financing by the Borrower (5.3% of the total cost of the Project) should be agreed upon.

2. *The Application is executed in full compliance with the requirements of the Fund.* The depth of elaboration of the Application in terms of the submitted data required for assessment purposes, and supporting documentation to enable a preliminary approval of the project is deemed satisfactory.

3. *The Project is consistent with the ACF mission.* The Project contributes to improving the sustainability of the Kyrgyz economy (growth of production and exports of electricity), further mutual integration of the economies of the ACF member countries (provision is made for increased reciprocal investments and trade between ACF member states). The Manager has developed a matrix of project compliance with ACF mission objectives (Appendix 1 hereto), which shows compliance of the Project (highlighted in green) with 11 criteria in all the categories (anti-crisis, integration, sustainable development).

4. *The Kyrgyz Republic has met all the requirements defined by the Treaty on the Establishment of the Fund, the Statute of the Fund and decisions of the ACF Council.* The requirement to make an initial cash contribution and in the form of a bill of exchange has been met in full. Kyrgyzstan was required to make a partial payment against its bill of exchange in the amount of US$ 100,000; it was cashed in due course, and there are no outstanding liabilities on the said BE. According to the information available to the Manager, the Kyrgyz Republic has no outstanding debts either to any of the Fund member states, or to any international financial institutions. By the date of the Fund Council approval of the Loan, all the relevant supporting letters will have been received. The requested amount is within the country eligibility limit,
established by the ACF Council for the Kyrgyz Republic. The level of debt sustainability of the Kyrgyz Republic enables us to make a positive conclusion about the financial solvency of the Borrower.

5. To ensure due quality control of the project design documents and proper use of the loan the Manager recommends a thorough scrutiny to be performed on the proposed Project by engaging independent evaluation experts and by specific project preparatory work, to be funded by the ACF. In case the Fund Council approves the Loan, the ACF resources, used for the Project preparation work, should be compensated by the Borrower by payment of a front-end fee.

According to commonly practiced EDB investment project preparation procedures, the Manager will need to recruit independent experts for technical, legal and environmental consultancy, as well as for procurement support and monitoring proper use of the Loan funds.

The total amount of such expenses is estimated at about US$ 500,000 (up to 0.7% of the Project cost), including:

- Technical and environmental consultancy - up to US$ 300,000;
- Legal and procurement consultancy - up to US$ 200,000.

The Borrower has suggested that the amount of expenses equal to US$ 375,000 should be funded by the front-end fee (0.5% of the ACF loan amount).

6. As defined by the Agreement on Management of the Fund Resources, the Manager is required to exercise control over procurement of goods, services and work funded by the ACF in accordance with its in-house procurement policies and regulations, and make provision for compliance commitments of borrowers in ACF lending agreements. With due regard to the procurement transparency guidelines for ACF projects, as well as reduction of corruption risks, the Manager suggests to examine potential application of the ADB Procurement Policy, subject to exclusion of the requirement providing access to competitive bidding only to suppliers from the ADB member countries, which rules out participation of suppliers from some of the ACF member countries.

7. Monitoring and evaluation of the Project will be performed by the Manager in accordance with the guidelines for strategic monitoring and project evaluation of the Manager, and as required by the Manager's Project Cycle Regulation. The monitoring procedures will require continuous collection of data on the Project implementation progress, risk assessment to be carried out by the Manager on an on-going basis, regular field trips of the Manager's officers to visit the Project sites.

8. In the process of the Project implementation, the Manager recommends relying on ADB Safeguard Policy Statement. The preliminary evaluation of the Project has shown that its implementation is unlikely to have any environmental and social impact, but even if it arises, the ADB has the experience and expertise in mitigating such consequences. The Environmental and Social Policy of the Manager provides additional requirements to be imposed on ACF-funded projects, including in terms of enforcing compliance with relevant safeguard policies of other IFIs.

The Project is expected to be implemented through a co-financing scheme together with the ADB.
3. RATIONALE OF APPRAISAL

Social and economic status of Kyrgyz Republic

The Kyrgyz Republic is a low-income country with a population of 5.6 million people and a gross national income (GNI) per capita at around US$ 1,500\(^1\). The poverty level in the country in 2012 was 38\(^2\) (compared to 52\% in 2000). Despite a reduction in the level of extreme poverty (from 17.8\% to 4.4\%\(^3\)), its overall level in 2010-2012 demonstrated an upward trend. The low-income level, high poverty and unemployment are conducive to generation of significant flows of labor migrants: about one-third of the working-age population is looking for jobs to earn money in the neighboring countries, mainly in Russia and Kazakhstan.

The economic growth in the country for the entire period since its independence is characterized by high volatility. During the first five years (1991-1996), after the disintegration of the Soviet Union, as a result of economic disarray and transformation-induced recession, the national GDP shrank by almost 50\%. Starting from 1996, the GDP growth began to pick up. From 1996 to 2008, the GDP grew by an average of 6\% per year\(^4\). The rate of economic growth in the Kyrgyz Republic is primarily contingent on the growth in the gold mining sector, which accounts for about 8\% of GDP and about 40\% of the overall industrial output, as well as cash remittances of labor migrants from countries where they make money, which make up about 30\% of GDP. On the demand side, growth was supported by the above cash transfers of labor migrants from Russia and Kazakhstan.

In the context of the global financial crisis, the GDP growth in 2009 slowed down to 2.9\%, compared to 8.4\% in 2008\(^5\). During the 2008 crisis, the growth trend was extremely volatile, owing to the political crisis of 2010, and because of the significant decline in gold production in 2012 at the Kumtor Mine. The resumption of Kumtor's operations in 2013 led to a 10.5\% increase in the GDP (amounting to US$ 7.09 billion). The GDP growth volatility has a negative impact on domestic investment funding sources.

Kyrgyzstan largely depends on the external market environment, owing to the large share of gold in the total volume of exports of goods and services (about 40\%), and very much so on imports: imports of goods and services in recent years have reached 100\% of GDP (see Fig. 1). More than one-third of imports is accounted for by fuels and food. The principal trading partners are Russia, China, and Kazakhstan.

\(^1\) According to calculations of the ACF, based on data of the Statistical Committee of the Kyrgyz Republic and the National Bank.
\(^2\) According to the National Statistical Committee of the Kyrgyz Republic.
\(^3\) Source: The Kyrgyz Statistical Committee.
\(^4\) The calculations did not factor in the data for 2002 and 2005; the negative growth rates of 0.02\% and 0.2\%, respectively, in those years, were caused by an industrial accident at the largest gold mine Kumtor in 2002, and by the political turmoil of 2005, which brought about a change of the government.
\(^5\) The downturn in the growth was mainly due to a 7\% drop in exports, a 30\% decline in cash remittances and a 3\% reduction of business in the retail banking sector.
Narrow export base and the high dependence of the Kyrgyz economy on imports are responsible for its strong reliance on the external markets and exposure to internal production-related shocks, and constitute the main factors of the significant foreign trade deficit. In the past 5 years, the deficit of the foreign trade balance amounted to about 39% of GDP with a manifest upward trend in 2012-2013 to 55.1% of GDP and 49.8% of GDP, respectively. This was due to technological problems, which materialized in 2012 in the gold mining sector, gold being the main export commodity, and due to the increase in global prices for some import items in 2013. Moreover, the accelerated implementation of government-sponsored projects, funded by its development partners, served as an incentive for a significant influx of foreign direct investments. The inflow of current cash remittances offsets the negative foreign trade balance and payments of investment dividends by 75%. However, the current account deficit still remains high, on average in 2009-2013 equal to about 14% of GDP, 26% of GDP in 2012, and 23.1% of GDP in 2013.

The trends in global prices for energy resources and food are the key drivers of the price level variations in the country. The rate of inflation in Kyrgyzstan promptly stabilized at the beginning of 2000, as a result of the moderate monetary and fiscal policy. The high dependence on imports of food and energy resources, as well as the increase in prices for these items, boosted the inflation in 2007-2008 and 2010 up to 20% (compared to an average of 4.7% in all previous years). In 2000 - 2013, the average increase in consumer prices was 7.9% per year.

Kyrgyzstan is characterized by a chronic and volatile budget deficit, averaging at around 4% of GDP in 2000-2011. At the same time, if in 2000-2005 the deficit exceeded 5.5% of GDP, as a result of consolidation its value in 2006-2008 dropped to 0.8%. As a result, the national external debt was under control, while prior to 2009 it had varied within the range of 33-37% of

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6 Four commodities (gold, mineral products, metals, and agricultural products) account for about 80% of total exports.
the GDP. The impact of the global financial crisis in 2009 and the political turmoil in 2010, which required expansion of spending on social support for the population, resulted in an increase in the deficit in these years up to 3.6% of GDP and 6.3% of GDP, respectively. Moreover, the expenditures were increased in industries characterized by highly depreciated fixed assets or poor condition of the infrastructure (in particular, power and roads sectors), which were financed primarily by foreign investors. External borrowings, the slowdown in GDP growth and weakening of the national currency exchange rate led to a heavier external debt service burden, which rose to the level of 47.5% of GDP by the end of 2011. In 2012, observers registered an aggravation of the situation, caused by the reduction in GDP, followed, as a result, by a drop in the tax base. The situation improved somewhat after the debt had been written off, pursuant to the relevant bilateral agreements with the Russian Federation, signed in 2012, and the ratio of the total external debt to GDP was equal to 83.3%, including to the public debt - 43.8%. Despite the high level of the external public debt, the repayment curve is subdued. The ratio of payments on the external public debt to the budget revenues is way below the threshold level: 3.7% in 2013, compared to 20%. According to the IMF, in the medium term, this indicator will stay at about 5%. The ratio of debt to the amount of export earnings and cash remittances of migrant workers is equal to about 110%, which, according to the IMF Guidelines, amounts to the average level of risk.\footnote{The average risk ranges from 100 to 150\%.}

The pending structural problems hinder the economic growth. The trend toward downturn of the ranking of the Kyrgyz Republic in the Global Competitiveness Scale (World Economic Forum) in 2006-2012, when the country moved 17 steps down (127th out of 148 participants), in 2013-2014 changed only somewhat, when it stepped into the 121st place.\footnote{World Economic Forum, Klaus Schwab, Xavier Sala-i-Martín, «The Global Competitiveness Report 2013-2014», p.15 (http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf).} Thus, it can be concluded, that the Kyrgyz economy is in the first phase of development, and is characterized by a poor institutional and infrastructural capacity. Quality of business environment is the only indicator out of the commonly known development indexes, which rates the Kyrgyz Republic in the midrange and not at the bottom amongst the CIS countries. At the same time, in recent years, the Kyrgyz Republic has been losing its standing in the World Bank Doing Business ranking. Moreover, the quality performance of public institutions is low. Given all the ambiguity of ratings, their low level is indicative of the lack of progress in the last decade. The poor business environment rating constitutes a serious constraint for the inflow of foreign investments, and thus suppresses opportunities for diversification and modernization of the national economy.

The weakness of the domestic production facilities compelled the economy to start refocusing toward growth, based on domestic demand, including on support by migrant workers' cash remittances. The high level of dependence on imports and cash remittances increases the risks for the balance of payments sustainability in the event of exposure to negative developments in the host countries for Kyrgyz migrant workforce (mainly the Russian Federation).

The increase in external labor migration also results in distortions of incentives for the domestic labor market. The incoming cash remittances more often than not significantly exceed the level of wages in the local economy, which leads to the degradation of incentives to work and puts constraints on wage increases. In general, in 2004 to 2013, the growth of wages in real
terms exceeded GDP growth by a factor of 1.7. This is a factor, which reduces competitiveness of the economy and puts additional pressure on the balance of payments.

To increase the economy's resilience to shocks and restore the trend towards poverty reduction in the context of natural growth of the population, it is extremely important to ensure creation of new jobs, especially in export-driven sectors. Despite the relatively high share of investments in fixed assets in the GDP structure (about 30% in 2012), about half of them end up in the mining and construction sectors. These sectors are not adequately equipped to deal in principle with the problems of employment and resilience of the Kyrgyz economy to adverse developments. The investment capacity of the government is limited both by the need to ensure tight fiscal policies and by its commitment to maintain the level of social spending. In 2013, the volume of budget investments was less than 1% of GDP. Besides, there is a significant requirement to provide funds for ensuring maintenance of the existing infrastructure, especially in the roads and energy sectors.

The problem of the gap of funding the investments also stems from the limited capacity for raising capital from domestic sources, which is due to the inadequate condition of the financial market. The cost of borrowing in the domestic market for the private sector substantially exceeds the rate of inflation (given inflation of about 4%, the interest rates on national currency loans are about 20% per annum), the interest on foreign currency loans are also high - over 16% per annum, which keeps away private investors. Bottom line, the volume of loans issued by the banking system (net of mortgage and consumer loans), as well as lending of working capital to retail outlets, in 2013 accounted for about 7% of GDP.

As is the case with most low-income countries, Kyrgyzstan, given its high investment requirements, is unable to provide adequate funds to finance them on its own.

One more factor holding up the development of Kyrgyzstan is its land-locked status, as well as predominantly mountainous terrain. It explains its high dependence on the condition of the road network infrastructure and constitutes a deterrent to the expansion of domestic and transboundary traffic flows. The southern and northern regions of the country are linked up by only one road (Bishkek-Osh), which passes across mountainous areas, and it creates problems for traffic in wintertime. According to the World Bank Logistics Performance Index, in 2012 Kyrgyzstan ranked 130th out of 155.

Increased economic security and sustainable economic growth can be achieved in the country through commercialization of the comparative advantages of Kyrgyzstan: its unique geographical location, improvements in the efficiency of traditional sectors, as well as by creating new points of economic growth in the context of Kyrgyzstan's plans to join the Customs Union.

The current economic condition of the Kyrgyz Republic demonstrates its inability to provide financial support for large-scale investment projects by mobilizing its domestic resources, while the capacity to attract FDIs for these purposes is extremely limited.

The Project can not be financed by the funds offered by commercial banks, due to the high cost of funding and the small amounts proposed as loans, as well as short terms of lending.

9 As a result of the obsolescence and physical deterioration of the assets in 2014, Kyrgyzstan will for the first time experience a shortage of power supply, despite the availability of significant hydropower resources.
10 According to calculations of the ACF, based on the data of the Statistical Committee and the National Bank of Kyrgyzstan.
11 On 12 May 2014, the Government of Kyrgyzstan endorsed the “road map” for Kyrgyzstan's accession to the Customs Union.
Replacing obsolete equipment will improve the reliability of the national energy systems, which will actually enable addressing the emerging problem of electricity shortage in the Kyrgyz Republic. In particular, the implementation of the Project will reduce the dangerous level of demand for electricity in the country, which is more acute in the winter season.

In the event of power outages in winter, the population is forced to switch over to more expensive heating methods, which increase the share of such expenses in the total budget of the households, and this growth is especially sensitive for the poorest groups of the population. Thus, the implementation of the project will have a direct impact improving the condition of the poor in the country.

The second, no less important factor will be the restoration of the export capacity for electricity, which will have a positive effect on the current account status. In addition, the improvements in the balance of payments will also contribute to potential termination of importing electricity from other countries and/or using more expensive fuels. Considering the considerably more cost-effective export operations, their increase will have a positive impact on the financial condition of the sector, which will promote not only to its growth, but also greater volumes of inbound investments, and as a consequence, provide a leeway for more effective management of the tariff policy. In particular, to ensure the break-even status for the sector, the increase in tariffs may be minor, which will improve the real incomes of the population, and hence the trend of the poverty level.

Participation of Kyrgyzstan in the common power supply network (Kazakhstan - Kyrgyzstan - Uzbekistan - Tajikistan) promotes positive integration effect by increasing the generation of electricity for the countries of the region.

The impact of the Loan on debt sustainability is estimated as negligible. The Loan will increase the external public debt by 2.4%, which is less than 1% of the GDP in 2013. Despite the significant ratio of the level of external public debt to GDP (43.8%), its repayment will proceed in a smooth mode. The ratio of payments on the external public debt to the budget revenues is way below the threshold level: 3.7% in 2013, compared to 20%. According to the IMF, in the medium term, this indicator will stay at about 5%. The ratio of debt to the amount of export earnings and cash remittances of migrant workers is equal to about 110%, which, according to the IMF Guidelines, amounts to an average level of risk. The approval of the ACF Loan in the amount of US$ 75 million to be provided on the proposed extremely soft terms, will not lead to any significant increase in the debt service burden of the country.

12 The average risk ranges from 100 to 150%.
**Status of energy sector**

The energy sector is one of the most important in the national economy; it accounts for about 2.5% of GDP and 16.0% of its industrial production. The bulk of the currently available power generation capacity (more than 95%) falls on hydraulic power facilities: an average of 14.7 billion kWh of electricity is generated annually, of which about 14 billion kWh is produced by hydropower plants (Fig. 2).

![Figure 2. Power production, billion kWh](image)

Access to electricity consumption is provided to 98% of the population of Kyrgyzstan. The sector employs more than 15% of those working in the production industries (about 1% of the total workforce).

The Kyrgyz Republic controls 2% of energy and 30% of the hydropower resources of Central Asia, as well as large reserves of coal. The theoretical hydropower capacity of the country's rivers, according to various estimates, is up to 163 billion kWh per year, of which the hydropower resources of small rivers and watercourses account for about 5-8 billion kWh per year. The availability of power generation resources is one of the strategic comparative advantages of Kyrgyzstan. In terms of hydropower capability, Kyrgyzstan ranks third in the CIS after Russia and Tajikistan. Only one-tenth of the capacity of all hydropower resources of the country has been put into operation.

**Structure of market:**

- **Production (generation)** of electricity is carried out by hydroelectric power plants (HPPs) and thermal (co-generation) power plants (TPPs). All generation facilities on the market are owned by OAO "Electric Power Plants" (7 HPPs, 2 TPPs, and 12 small HPPs).
- **Transmission (transportation and export)** of electricity and operational dispatching power control is the responsibility of OAO “National Electric Network of Kyrgyzstan” (the production base of the power transmission system includes power lines (power transmission lines) of a total length of 70,000 km, with a voltage of up to 500 kV).
- **Distribution** of electricity, i.e. delivering it to the end user, is carried out via distribution companies - independent enterprises with government ownership.

Power generating plants (HPPs, TPPs) sell electricity on the wholesale market to distribution companies and large end-users, and the transmission of electricity is effected along high-voltage power networks owned by OAO "National Electric Network of Kyrgyzstan" (NENK). OAO
“Electric Power Plants” invoices the distribution companies on the basis of the balance report on the actually sold electricity, received from NENK. At the same time, technical power losses of OAO "Electric Power Plants" are compensated by NENK, whereas commercial losses are allocated as overheads of the distribution companies.

Control over the energy sector is the responsibility of the State Department for Regulation of Fuels and Energy, which establishes and approves tariffs for electricity, heat, gas, licensing of relevant activities and monitors compliance with fuels and energy legislation.

Production and consumption balance

The production of electricity generated by HPPs depends on the flow of water in rivers; its variations during 2005-2013 were characterized by volatile behavior:

| Balance of production and consumption of electric power in Kyrgyz Republic, million kWh |
|---------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Indicators                      | 2005    | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    |
| Production                      | 14,687  | 14,326  | 14,645  | 11,789  | 11,083  | 12,063  | 15,158  | 15,168  | 13,991  |
| Consumption                     | 12,230  | 12,063  | 12,451  | 11,244  | 10,049  | 10,504  | 12,370  | 13,580  | 13,616  |
| Export                          | 2,576   | 2,437   | 2,380   | 552     | 1,034   | 1,635   | 2,794   | 1,589   | 375     |
| Import                          | 0       | 0       | 0       | 7       | 7       | 7       | 0       | 0       | 0       |

The decline in production in 2008-2010 caused a reduction in consumption caused by the establishment of certain consumption limits for specific areas and regions of the country, whereas the current volume, channeled to the domestic market, increased from 83% in 2005 to 90% on average for 2008-2010.

| Structure of consumption of electric power in Kyrgyz Republic, % |
|---------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Indicators                      | 2005    | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    |
| Domestic market, including losses | 83      | 84      | 85      | 95      | 91      | 87      | 82      | 90      | 97      |
| Export                          | 34      | 33      | 31      | 31      | 25      | 25      | 20      | 21      | 20      |

The per capita electricity consumption and tariffs in the Kyrgyz Republic are the lowest in Central Asia and almost the lowest in the world, within the range of 2.11 cents (for population) - 2.91 cents (for industry) per kWh.

Due to a decline in production volumes, the share of exports decreased from 13% in 2004 to 3% in 2013, relative to the total electricity production in the Kyrgyz Republic. The principal destination of exports is Kazakhstan, which is due to the shortage of electricity in its southern regions during the summertime, and because of the need to ensure approved water releases from the Toktogul reservoir during the vegetation period for purposes of irrigation in the downstream countries.

The growth of domestic consumption, given the existing generating plants, acts as a significant deterrent to the export capacity of the energy sector of Kyrgyzstan. In 2010-2013, the growth of consumption averaged about 8% per year; for 2014 the growth of demand is projected at about 10%.

The electricity generating capacity is critically affected by the volume of water accumulated in the reservoirs. The significant reduction of the water content in the Syr Darya river in 2008-2010, 2013 and the current year, and the required drawdown of water in the Toktogul reservoir to meet the domestic electricity requirements in winter, significantly cut
down on both generation of electricity and export opportunities. The subsequent decrease in water levels in 2013, led to a significant reduction in electricity exports, and in 2014 Kyrgyzstan suspended its exports and faced a shortage of electricity even in summer. Further increase in consumption will bring about serious shortfalls in electricity supplies - according to the World Bank forecasts by 2020 the power shortage will reach 30% of the level of domestic consumption in 2012. In order to ensure growth of the domestic consumption and to enable the recovery and growth of export earnings, it is critically important to put into operation new power generation facilities. In the context of limited domestic resources, after accession to independence, since 1991 Kyrgyzstan has commissioned only one generating plant, which is Kambarata HPP-2, where only one hydraulic generator unit is installed and operating, though according to the design plan there should be three such units. The capacity of newly built small-scale hydropower plants has its positive impact only on local communities, and don’t deal with the problem as a whole.

Development plans

With a view to improving the efficiency of operation of the power sector and ensure reliability of electricity supply for domestic consumption, the Government of the Kyrgyz Republic is currently considering for adoption a strategy for development of fuel and energy industries to 2025, and public discussion is underway to evaluate the medium-term electricity tariff policy of the Kyrgyz Republic for the period 2014-2017. In order to meet the current consumption requirement, eliminate winter energy shortages and increase exports, the above strategy makes provision for construction of new plants totaling US$ 5 billion. In order to meet the current consumption requirement, eliminate wintertime energy shortages and increase exports, the Strategy makes provision for construction of new plants for a total amount of US$ 5 billion. Starting from 2010, investors have been invited in the power sector: investments were made to power generation facilities (beginning of the construction of the Verkhne-Narynsky cascade of HPPs, Kambarata HPP-1, a number of small-scale HPPs, upgrading of the TPP in Bishkek, feasibility study for the Kara-Kechinskaya TPP, upgrading of the Toktogul HPP, At-Bashinskaya HPP, etc.), power transmission systems (Datka and Kemin substations, Datka-Kemin and Datka-Khujand transmission lines, cascade replacement of a number of transformers), and power distribution and sale processes (replacement of worn down cables and overhead lines, installation of advanced electronic meters, including prepayment devices, automated power consumption monitoring and metering systems).

Limitation of financing constitutes a major deterrent not only for putting into operation of additional capacity, but also in terms of ensuring safety of operation of the sector. In general, during 1991 - 2010, the energy industry absorbed about US$ 370 million worth of investments, which is less than US$ 20 million per year. According to some experts, the amount of investments needed for maintaining depreciation of fixed assets at the level as required by relevant regulatory documents, should be about US$ 40 million per year throughout this period. The lack of investments resulted in wear increase up to 50%, given the critical level in the industry equal to 25%.

14 In the economy of the USSR, the average amount of annual investments in the energy sector is estimated at US$ 65 million.
In 2011-2013, there was a significant growth of investments in the sector (on average about US$ 130 million per year), spurred by process of implementation of several projects of power lines and modernization of existing and commissioning of new facilities. These investments were financed mainly by soft loans provided by international organizations\(^{15}\) and foreign countries.

Despite the growth of investments in recent years, the shortage of funds for financing the sector is a key constraint for development of both the sector, and the economy of Kyrgyzstan as a whole.

The main root causes of the shortage of financial resources lie in the inefficiency of the sector and the limited ability to engage private investors. The non-efficiency of the energy sector is largely a result of the tariff policy aimed at subsidizing power consumers, primarily households. According to the Ministry of Energy, the cost of electricity generation in 2013 was KGS 1.24 per kWh, and the average tariff equaled to KGS 0.88 per kWh. Furthermore, despite the positive trend, the level of losses in the energy sector in recent years was very high, amounting in 2013 to about 20% of the generated electricity.

One more factor, limiting the efficiency of the sector, is the shortage of domestic power lines. The main sources of electricity in the country, i.e. the largest 5 HPPs, which account for 80 percent of the country's electricity generation capacity, are located in the Jalal-Abad region. From there, only a certain portion of electricity is supplied to the regions of the country through its territory. The rest of it is delivered via Uzbekistan, Kazakhstan and partly Tajikistan. As a result, Kyrgyzstan incurs losses in the transportation of electricity across its external perimeter. In addition, this adversely impacts on energy security issues, since in the event of a breakdown in the power supply networks, the northern regions would fall short of about 40-50% of electricity, the Osh region - about as much, and Batken region would lose 85%. The shortage of domestic networks is also a deterrent to the development of industrial production facilities in these regions of the country.

It results in loss-making performance of the energy sector: according to the report of the Ministry of Energy and Industry, the income of the energy sector in 2013 was KGS 11.4 billion (about US$ 235 million), the expenditures were equal to about KGS 16 billion (about US$ 330 million). The estimated loss in 2014, confirmed by the Anti-monopoly Committee of Kyrgyzstan, is expected to be equal to KGS 6.3 billion (about US$ 130 million)\(^{16}\).

The inflow of capital into the energy sector helped only halt the degradation of the infrastructure. The chronic shortage of funds hampers not only new construction and modernization projects, but also prevents ensuring comprehensive maintenance and repairs of the facilities. According to the Ministry of Energy, the equipment wear rate is currently 46%. It results in deterioration of the quality of services provided by the sector. According to the Ministry of Energy, in 2013 about 10 thousand emergency outages in the distribution networks were reported\(^{17}\), as well as 36 emergency shutdowns of the power plants, of which 30 happened due to equipment failure.

In fact, with its availability of significant potential hydropower resources, Kyrgyzstan, failing to put into operation additional capacity, becomes an energy-deficient country that cannot guarantee its own energy security.

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\(^{15}\) Predominantly by the Asian Development Bank and the World Bank Group.

\(^{16}\) At the current rate

The draft Medium-Term Tariff Policy lays down the principles of self-sufficiency of the energy sector, requirements for phased elimination of cross-subsidies in tariff policies and for annual improvement of the key performance indicators of the energy sector, and tariff increases. In order to mitigate the adverse impact that abrupt tariff hikes may have on vulnerable groups of the population, it provides certain social norms for electricity consumption.

Thus, the Toktogul HPP Rehabilitation Project, which requires replacement of the second and fourth generator units with replacement and/or repair of auxiliary plant systems and equipment, will have a positive impact on the electric power production sector of the Kyrgyz Republic, expanding its export capacity, increasing electricity generation for domestic consumption, and will enable further modernization of the country’s hydropower system.

**Foreign economic relations of Kyrgyz Republic with Anti-Crisis Fund member-states**

According to the official statistical data, EurAsEC countries account for almost 50% in the export-import structure of the Kyrgyz Republic, and the balance 50% - for the rest of the world. Re-export of Chinese goods at reduced prices takes up a substantial proportion in the volume of exports to EurAsEC countries.

Imports from the ACF member states in 2009 amounted to a total of about US$ 1.4 billion. Exports from the Kyrgyz Republic in the context of its current market saturation in most cases satisfies only an insignificant portion of requirements of the ACF member countries in relevant products\(^\text{18}\). The total of imports to Russia from the Kyrgyz Republic in 2011 amounted to US$ 289.3 million\(^\text{19}\).

It should be indicated that a substantial portion of foreign trade of the Kyrgyz Republic with ACF member countries is accounted for by the input of migrant labor and their cash remittances. In 2011 about 1 million Kyrgyz migrants were located in the ACF member countries. In 2011, the total amount of cash remittances reached US$ 1.7 million\(^\text{20}\).

The performance indicators of the Kyrgyz Republic are given in Appendix 4.

**Purpose of Project**

The Toktogul HPP is one of the hydroelectric power plants of the cascade of Toktogul HPPs and the largest of the operating hydropower plants in the country. The installed capacity of the power plant is 1200 MW (4 units of 300 MW each). The plant was put into operation in 1975, the design storage capacity of the reservoir is 19.5 billion m\(^3\), the dam height is 215 meters, and its average annual power production output is 4,400 million kWh.

The Project envisages funding by the EurAsEC Anti-Crisis Fund in the form of an investment loan provided to the Kyrgyz Republic to enable replacement of the second and fourth generator units with replacement/repair of the existing auxiliary systems and powerhouse equipment of the Toktogul HPP to ensure:

- Enhanced reliability and stable supply to power consumers and availability of electricity for the population;
- Improved energy security and sustainability of the power supply system of Kyrgyzstan;
- Increased surplus power export capacity of the Kyrgyz Republic for sale to the ACF member countries to improve the balance of payments of the Kyrgyz Republic;

\(^{18}\) http://www.eabr.org/general/upload/docs/resume_kr_ts.pdf  
\(^{19}\) http://www.kyrgyz.mid.ru/torgec.html  
- Expanded trade with the ACF member countries, including in supplies of equipment and services;
- Mitigated winter shortages of electricity supply in the country.

**Current status of Project (as of 1 May 2014)**

In early 2014, the Fund Resources Manager received an application from the Ministry of Finance of the Kyrgyz Republic requesting an ACF investment loan in the amount of US$ 75 million to finance implementation of the project “Rehabilitation of Energy Sector. Phase 2. Component "Rehabilitation of Toktogul HPP: Replacement of second and fourth generator units with replacement/repair of auxiliary systems and powerhouse equipment".21

The project “Rehabilitation of Energy Sector” is nominally divided into 3 phases. Currently, as part of the Project, the ADB is financing the first phase of the Toktogul HPP rehabilitation works, which requires replacement of the electromechanical equipment, including generator circuit breakers, excitation and control systems, 500 kV cable lines, etc. The second phase of the rehabilitation process envisages replacement of the second and fourth generator units with replacement/repair of auxiliary systems and powerhouse equipment. The third phase makes provision for replacement of the first and third generator units of the power plant.

The financing agreement for the first phase of the Project was signed between the Ministry of Finance of the Kyrgyz Republic and the ADB on 12 September 2012, ratified by the Parliament of the Kyrgyz Republic and entered into force on 7 December 2012. The budget of the Project amounted to US$ 62 million, of which ADB would provide US$ 55 million, and the Kyrgyz Republic - US$ 7 million US.

In February 2013, in preparation for the implementation of the Project, the ADB funded the development of the feasibility study for the first phase of the Toktogul HPP rehabilitation for US$ 40 million, and aggregated tentative cost estimates were provided for the second (US$ 190 million) and third (US$ 100 million) phases.

Currently, with the funding provided by the ADB, the first phase of the rehabilitation of the Toktogul HPP is underway. At the same time, the ADB endorsed the concept and is preparing a feasibility study for the second phase of the rehabilitation of the Toktogul HPP. The ADB has recruited the German engineering company Fichtner to carry out this work. A preliminary draft of the feasibility study is expected to be delivered in July, and its final version is scheduled to be made available in Q4 of this year.

On 27 May 2012, the Government of the Kyrgyz Republic adopted a medium-term strategy for development of the electric power industry for 2012-2017. The plan of action for the implementation of the Strategy includes the Project "Rehabilitation of Energy Sector", one of its components being the "Rehabilitation of the Toktogul HPP".

**Project funding requirements**

The ACF loan will be used for financing the proposed replacement of the second and fourth generator units with the replacement/repair of the auxiliary systems and powerhouse equipment; the full list of works/goods/services will be determined after the preparation of the Project feasibility study.

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21 Letter of the Ministry of Finance of the Kyrgyz Republic dated 17 January 2014 Ref. # 16-2-2-505 with a concept of the investment project attached thereto.
In the course of implementation of the first phase of the project “Rehabilitation of Energy Sector”, the ADB confirmed its preliminary cost estimates for the second phase. According to the above estimates of the ADB, the budget for the second phase of the Project would be equal to US$ 190 million, of which US$ 105 million would be allocated by the ADB, US$ 75 million - by the ACF, and US$ 10 million - by Kyrgyzstan. The ADB has provided TASF funding for the preparation of the feasibility study for the 2-nd phase of the Project.

The Project will be implemented as part of co-financing with the ADB of Phase 2 of the Project "Rehabilitation of Energy Sector" in the form of parallel funding.

Table 3. Sources of financing for Phase 2, "Rehabilitation of Energy Sector", US$ ,000

<table>
<thead>
<tr>
<th>Source of funding</th>
<th>Amount (US$ ,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACF</td>
<td>75,000</td>
</tr>
<tr>
<td>ADB</td>
<td>105,000</td>
</tr>
<tr>
<td>Government of Kyrgyz Republic</td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>190,000</strong></td>
</tr>
</tbody>
</table>

**ACF financing terms**

Requested amount of ACF Loan: US$ 75 million
Loan maturity, including grace period: 20 years;
Grace period: 8 years;
Interest rate: One (1) percent per annum
Currency of loan: US dollars;
Grant-element is 36.49%

The terms of borrowing are similar to those of the Asian Development Bank for raising ADB funding for Phase 2.

**Expected economic benefits of Project**

The estimates of the expected economic benefits of the Project are as follows:

- Increase in capacity of the Toktogul HPP by 90 MW by 2019;
- Higher ratio of zero-downtime operation of the Toktogul HPP from 80% in 2014 to 90% by 2019;
- Enhanced economic security and independence of the country from external electricity supplies;
- Mitigation of winter shortages of electricity supply in the country;
- Higher reliability and more stable supply to power consumers;
- Increased safety of operation of the power plant.

Detailed forecasts will be presented based on the feasibility study report, which is being prepared by the engineering company Fichtner.
Project compliance with Fund mission objectives

The Project promotes improved economic resilience of Kyrgyz Republic and aims to ensure:

- Improvement of the trade balance through expansion of electricity exports;
- Upgrading of the existing electric power generation assets;
- Improvement in productivity and increased output of electricity;
- Increase in energy security of Kyrgyzstan.

In full compliance with the Regulation on ACF Investment Loans, the Project is classified as 'National' on the following grounds:

- The Borrower under the Project is the Government of the Kyrgyz Republic;
- It is implemented by a Project Company;
- It is implemented in one member state of the Fund;
- It aims at modernizing and renovation of fixed assets.

The Project is designed as promoting integration, because its implementation will lead to the following integration results:

- Increase in interstate investments and trade by expanding the imports of machinery, equipment and services to the Kyrgyz Republic;
- Improvement of trade between member states of the ACF by expanded exports of electricity from the Kyrgyz Republic.

The current economic condition of Kyrgyzstan constitutes a serious constraint for the inflow of foreign capital, which suppresses the opportunities for potential market-driven investments.

The Project cannot be financed by commercial market actors, because in view of the limitations, inherent in the current IMF Program in the Kyrgyz Republic, for imposed on non-preferential funding of the energy sector, investments in energy projects may be carried out on the basis of grants and very soft loans, whereas banks of the Kyrgyz Republic lack adequate resources for financing such projects.

Project funding scheme

The ACF Loan is provided to the Kyrgyz Republic for subsequent on-lending to the Project Company (OAO "Electric Power Plants"). Debt service liabilities to ACF will be sovereign liabilities of the Kyrgyz Republic.

The Kyrgyz Republic will enter the funds borrowed from ACF in its national budget as a source of funding its budget deficit and as an expenditure item for financing the Project, as well as it will post into the national budget the outlays allocated for repayment and service of the loan borrowed from the ACF.

The funding scheme of the Project conforms to the Regulation on the Use of ACF Resources for Providing Investment Loans (Fig. 3).

In the context of rapid growth of external borrowings and debt exposure to external shocks, a zero limit for non-preferential lending was agreed upon under the current IMF Program in the Kyrgyz Republic for the total portfolio of external sovereign and government-guaranteed borrowings. The Kyrgyz Republic has undertaken to refrain from borrowing and issuance of guarantees for loans that may reduce the average grant-element for the above portfolio below 35%. The lending terms proposed by the Manager are in line with the recommendations of the IMF.
Figure 3. Project implementation flowchart

Ministry of Finance of Kyrgyz Republic

Budget loan

Repayment of budget loan

OAO “Electric Power Plants”

Replacement of 2nd and 4th units of Toktogul HPP/Replacement and repair of equipment

Cash proceeds from sale of electricity

Transmission

Investment Loan

Repayment of Investment Loan

EDB

PROJECT FLOWCHART

OAO “National Electric Power Network” of Kyrgyzstan

Power

Replacement of units, installation, start-up
### Preliminary risk assessment

<table>
<thead>
<tr>
<th>Risk group</th>
<th>Description</th>
<th>Risk rating</th>
<th>Impact on Project</th>
<th>Risk mitigation</th>
<th>Risk rating following mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction risks</td>
<td>Risks of exceeding the original project cost estimates, poor-quality installation and construction works, non-compliance with work completion schedules.</td>
<td>High</td>
<td>High</td>
<td>The Manager in cooperation with the ADB plans to ensure &quot;turn-key&quot; delivery of all construction/repair/replace operations, which in turn will require higher responsibility of the contractor; also to specify additional penalties/sanctions, thereby reduce potential performance risks.</td>
<td>Medium</td>
</tr>
<tr>
<td>Operational risks</td>
<td>Performance reduction risks associated with high technical losses, lower production capacity, obsolete equipment and poor maintenance.</td>
<td>Medium</td>
<td>High</td>
<td>Continuous monitoring of the Project, its progress, by engaging experts, job compliance monitoring of the Project participants.</td>
<td>Low</td>
</tr>
<tr>
<td>Financial risks</td>
<td>Sovereign financial risk of potential delays, underpayments or total failure by the Kyrgyz Republic to make interest and/or principal payments. Financial risks of the Project Company in respect of the budget loans, associated with the risks of high commercial losses due to poor financial accounting or operational efficiency, and tariffs that are below the cost of electricity production.</td>
<td>Low-Medium</td>
<td>Medium</td>
<td>This investment loan is classified as sovereign, therefore by definition is characterized as 'low-risk'. One more factor of reduction of this risk lies in the provision of cross-default conditions in the draft Agreement. Similar conditions are imposed on KR by other leading MDBs. For the second phase of the Project, it is expected that the ADB would allocate funds for financial audit and review of corporate governance of energy companies, which will allow to assess and mitigate potential risks.</td>
<td>Low</td>
</tr>
<tr>
<td>Legal risks</td>
<td>Risks resulting from inappropriate interpretation and, as a consequence, non-performance (delayed performance) under the Investment Loan Agreement and related documents, other than legal provisions of the Kyrgyz Republic.</td>
<td>High</td>
<td>High</td>
<td>Signing by the Manager of the Investment Loan Agreement directly with the Kyrgyz Republic and its ratification in due process, which will upgrade its status as an international agreement and will thus ensure its precedence over national legislation of the Kyrgyz Republic; Introduction into the Agreement of penalties, which may be applied in case of breach by the Beneficiary of any provision thereof.</td>
<td>Medium</td>
</tr>
<tr>
<td>Regulatory risks</td>
<td>Risks of potential collision between various regulatory authorities; risks of changes in regulatory environment; risks of changes in the economic and political situation in Kyrgyzstan; risks of unbalanced policies in</td>
<td>Medium</td>
<td>Medium</td>
<td>Monitoring of the current condition of the Project Company, the political situation, meetings and negotiations with the Borrower in the course of Project implementation.</td>
<td>Low</td>
</tr>
<tr>
<td>Environmental risks</td>
<td>Overall, the Toktogul HPP does have an impact on the environment of the Kyrgyz Republic, but the extent of the Project's impact will be described in more detail in the Project feasibility study.</td>
<td>Medium</td>
<td>Low</td>
<td>The level of the impact on the environment of the Kyrgyz Republic will be described in the Project feasibility study. The ADB has tentatively classified this project as &quot;low-risk&quot;.</td>
<td>Low</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td>-----</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Corruption and fiduciary risks</td>
<td>In accordance with the Corruption Perception Index ratings, provided by Transparency International(^{22}), Kyrgyzstan in 2013 ranked 150th out of 177 countries. In the process of funding the Project, corruption and fiduciary risks may arise in connection with alleged misuse of the funds.</td>
<td>High</td>
<td>High</td>
<td>Application of IBRD procurement and disbursement guidelines, which require enforcement of financial penalties for non-compliance therewith. For purposes of the Project performance monitoring, recruitment of experts should be envisaged. In addition, if necessary, special compliance review procedures of the Manager will be applied.</td>
<td>Medium</td>
</tr>
</tbody>
</table>

\(^{22}\) [http://www.transparency.org/](http://www.transparency.org/)
Appendix 1. Matrix of Project compliance with ACF mission objectives

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Anti-Crisis</th>
<th>Integration</th>
<th>Objectives</th>
<th>Sustainable development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Project implementation in depression-stricken sector</td>
<td>• Growth of mutual investments in EurAsEC countries</td>
<td>• Social sustainability:</td>
<td>• Economic sustainability:</td>
<td>• Environmental sustainability:</td>
</tr>
<tr>
<td>• Project implementation in sector exposed to crises</td>
<td>• Growth of trade between EurAsEC countries</td>
<td>• Creation of new jobs</td>
<td>• Growth of tax revenue (both directly from project implementation, and indirectly - from enabling development of other sectors and businesses)</td>
<td>• Project implementation is carried out under stringent environmental policies (IFI safeguards)</td>
</tr>
<tr>
<td>• Funding of project, whose implementation failure may provoke adverse social and economic impacts (threats to energy security)</td>
<td>• Quantitative growth of product items for trade between EurAsEC countries</td>
<td>• Creation of new jobs for disadvantaged groups of population</td>
<td>• Development of export-driven sectors</td>
<td></td>
</tr>
<tr>
<td>• Implementation of project of strategic importance in the context of increasing budget constraints</td>
<td>• Growth of passenger and freight traffic flows in EurAsEC countries</td>
<td>• Improvement of food security</td>
<td>• Growth of share of domestic value-added products.</td>
<td></td>
</tr>
<tr>
<td>• Recovery of sector in the aftermath of armed conflicts, mass riots, etc.</td>
<td>• Reduced overheads on traffic of passengers and goods between EurAsEC countries</td>
<td>• Reduction of volatility of prices for food and basic services</td>
<td>• Support of sustainable operation of national power supply systems</td>
<td></td>
</tr>
<tr>
<td>• Creation of new jobs in the context of growing unemployment</td>
<td>• Reduced transit time for passengers and goods between EurAsEC countries</td>
<td>• Increased access to basic services (education, healthcare, etc.)</td>
<td>• Reduction of logistics overheads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Improved access (reduced costs and time) to key transport hubs (not necessarily located in EurAsEC) linking EurAsEC countries</td>
<td>• Improved access to higher quality water resources</td>
<td>• Diversification of economy and/or exports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Project implementation with a view to preparation of the host country to joining Customs Union</td>
<td>• Increased access to electric power supply for communities in inaccessible and sparsely populated areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Broader service coverage of inaccessible and sparsely populated areas with communications networks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Provision of access to housing utility services (sewerage, gas supply, district heating) for communities in inaccessible and sparsely populated areas</td>
<td></td>
</tr>
</tbody>
</table>

23 The investment project under review must comply with one or more criteria in each column of the Matrix.
Appendix 2. Cascade of Toktogul HPPs on Naryn River, Kyrgyz Republic
Appendix 3. Estimates for Project grant-element based on IMF Guidelines

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency</td>
<td>US dollars</td>
</tr>
<tr>
<td>Principal repayment</td>
<td>Equal semi-annual installments</td>
</tr>
<tr>
<td>Loan amount</td>
<td>US$ 75 million</td>
</tr>
<tr>
<td>Front-end fee</td>
<td>0.5 %</td>
</tr>
<tr>
<td>Interest rate</td>
<td>1 %</td>
</tr>
<tr>
<td>Term of loan (years)</td>
<td>20</td>
</tr>
<tr>
<td>Grace period (years)</td>
<td>8</td>
</tr>
<tr>
<td>Grant-element</td>
<td>36.49 %</td>
</tr>
</tbody>
</table>
Appendix 4 – Key economic performance indicators of Kyrgyz Republic\(^{24}\)

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (growth to previous year, %)</td>
<td>102.9</td>
<td>99.5</td>
<td>106.0</td>
<td>99.9</td>
<td>110.5</td>
</tr>
<tr>
<td>including net of Kumtor</td>
<td>103.4</td>
<td>97.9</td>
<td>106.3</td>
<td>106.3</td>
<td>105.8</td>
</tr>
<tr>
<td>GDP per capita, US$</td>
<td>880.0</td>
<td>875.0</td>
<td>1,120.5</td>
<td>1,181.8</td>
<td>1,280.0</td>
</tr>
<tr>
<td>Inflation (average annual, %)</td>
<td>6.8</td>
<td>7.8</td>
<td>16.6</td>
<td>2.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Investments (% of GDP)</td>
<td>22.9</td>
<td>23.9</td>
<td>24.3</td>
<td>26.2</td>
<td>26.5</td>
</tr>
<tr>
<td>Consolidated budget revenues (% of GDP)(^{25})</td>
<td>32.3</td>
<td>30.5</td>
<td>33.3</td>
<td>28.6</td>
<td>20.8</td>
</tr>
<tr>
<td>including taxes</td>
<td>22.2</td>
<td>22.3</td>
<td>24.2</td>
<td>21.0</td>
<td>20.8</td>
</tr>
<tr>
<td>Consolidated budget expenditures (% of GDP)</td>
<td>35.9</td>
<td>36.8</td>
<td>38.1</td>
<td>34.8</td>
<td>32.8</td>
</tr>
<tr>
<td>Consolidated budget deficit (% of GDP)</td>
<td>-3.6</td>
<td>-6.3</td>
<td>-4.8</td>
<td>-6.2</td>
<td>-12.0</td>
</tr>
<tr>
<td>Public debt (% of GDP)</td>
<td>57.9</td>
<td>60.3</td>
<td>52.4</td>
<td>51.9</td>
<td>47.8</td>
</tr>
<tr>
<td>Exports of goods and services (increase to previous year,%)(^{26})</td>
<td>1.0</td>
<td>-16.7</td>
<td>17.4</td>
<td>5.2</td>
<td>8.1</td>
</tr>
<tr>
<td>Imports of goods and services (increase to previous year,%</td>
<td>-13.1</td>
<td>-15.8</td>
<td>12.0</td>
<td>30.5</td>
<td>8.9</td>
</tr>
<tr>
<td>Current account transactions (% of GDP)</td>
<td>-4.0</td>
<td>-6.6</td>
<td>-10.8</td>
<td>-25.9</td>
<td>-23.1</td>
</tr>
<tr>
<td>External debt (% of GDP)</td>
<td>84.6</td>
<td>88.7</td>
<td>80.0</td>
<td>82.0</td>
<td>83.3</td>
</tr>
<tr>
<td>including public debt (% of GDP)</td>
<td>53.7</td>
<td>55.4</td>
<td>47.5</td>
<td>47.9</td>
<td>43.8</td>
</tr>
<tr>
<td>External debt service ratio ( % of exports of goods and services)</td>
<td>3.6</td>
<td>3.9</td>
<td>3.1</td>
<td>3.4</td>
<td>3.0</td>
</tr>
</tbody>
</table>

\(^{24}\) According to ACF  
\(^{25}\) 2012-2013 national budget  
\(^{26}\) 2013 - exports and imports, net of services
Appendix 5 - Preliminary application of the Ministry of Finance of Kyrgyz Republic with project concept note