

**PROJECT INFORMATION DOCUMENT (PID)  
APPRAISAL STAGE**

Report No.: AB7212

<b>Project Name</b>	Additional Financing for Belarus Energy Efficiency Project
<b>Region</b>	EUROPE AND CENTRAL ASIA
<b>Country</b>	Belarus
<b>Sector</b>	Energy efficiency in Heat and Power (98%); Public administration- Energy and mining (2%)
<b>Project ID</b>	P133442
<b>Parent Project ID</b>	
<b>Borrower(s)</b>	THE REPUBLIC OF BELARUS
	Government of the Republic of Belarus
<b>Implementing Agency</b>	Belinvestenergoberezhenie Revoliutsionnaya str. 13A Belarus Tel: 375-17- 227 20 78      Fax: 375-17-206 46 83 <a href="mailto:bies@niks.by">bies@niks.by</a>
<b>Environment Category</b>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
<b>Date PID Prepared</b>	February 5, 2013
<b>Date of Appraisal Authorization</b>	n/a
<b>Date of Board Approval</b>	April 25, 2013

### 1. Country and Sector Background

Belarus does not possess a sufficient energy resource base and relies heavily on imported energy resources, which cover about 80 percent of the domestic energy demand. Annual costs related to energy import account for about 22 percent of GDP. Furthermore, Belarus imports about 10-15 percent of its total electricity consumption. The main source of energy resource imports is Russia.

To improve energy security, the Government has realized the importance of energy efficiency for the country, and has made a commitment to reduce energy intensity. A Committee for Energy Efficiency was established in 1993 (currently, the Energy Efficiency Department (EED) of the Committee for Standardization) to develop and implement a national energy efficiency improvement strategy and to promote country-wide energy efficiency educational campaigns. In addition, large national energy efficiency programs were approved in recent years, such as programs to modernize major energy generating plants and to convert existing heating plants to combined heat and power generation. Additional budget resources were also allocated for implementing energy efficiency measures: energy efficiency financing increased from US\$47.7 million in 1996 to US\$1,388 million in 2011. During 1996-2011, total investments in energy efficiency amounted to about US\$6.8 billion.

The results are encouraging. The energy intensity of the economy decreased by 67 percent from 1990 to 2010, falling from 0.69 tonne of oil equivalent (toe) per thousand dollar of GDP (PPP) in 1990 and to 0.23 in 2010. In spite of such impressive progress, Belarus is still lagging behind

EU-27 countries, for which the average energy intensity is 0.13 toe per thousand dollar of GDP (PPP), indicating that there is potential for further improvements in energy efficiency.

## **2. Objectives**

The Project Development Objective is to improve energy efficiency in heat and power generation in selected towns in Belarus.

## **3. Rationale for Bank Involvement**

Continued Bank support for energy efficiency is aligned with the priorities of the Belarus main national energy programs to increase energy efficiency, improve energy security and reduce dependency on energy imports. The Project is also consistent with the priorities set out in the FY08-FY11 Country Assistance Strategy, namely to assist Belarus to: improve energy efficiency and reduce energy intensity and (ii) address global environment challenges and in enhancing the competitiveness of its economy to assure rising incomes and to protect the welfare of the weakest. Supporting energy efficiency and climate change mitigating measures will likely remain key objectives of the forthcoming Country Partnership Strategy for 2014-2017.

By supporting the Government's efforts to improve energy efficiency, the Additional Financing is expected to further enhance the efficiency and sustainability of the energy sector and generate tangible economic benefits. Specifically, the Project will lead to significantly more efficient production of heat and electricity compared to existing separate generation facilities. The main benefits of the project will be improvement of energy efficiency in heat and power generation, resulting in reduced natural gas usage. Moreover, the increased energy efficiency will help mitigate the impact of increases in residential energy prices in the future. In addition, the focus of the Project on energy saving technologies will result in reduced greenhouse gas emissions, as well as lower local air pollution levels from the heat supply facilities.

The Borrower has indicated strong interest in scaling up the development impact of the ongoing project through the Additional Financing. The Government's continued commitment to energy efficiency, the speedy implementation pace of the on-going project and the concrete sub-projects that they proposed provide strong justification for the proposed amount for Additional Financing.

## **4. Description**

The original loan amount is US\$125 million. The project was approved by the Board on May 28, 2009, became effective on September 30, 2009, and the original loan closing date is December 31, 2014. No changes are envisaged to the original objective, design and implementation arrangements. A Loan of US\$90 million will be provided as additional financing. The Additional Financing includes: (i) two new subprojects; (ii) a change in the disbursement percentage. In particular, the changes imply:

- a) Conversion of an existing steam turbine CHP plant in Mogilev to a combined cycle CHP plant by adding a new 25 MW gas turbine and a waste heat recovery boiler. The

combined cycle heat and power plant will be used to supply heat and power to industrial and residential sectors in the city of Mogilev.

- b) Conversion of an existing steam turbine CHP plant in Gomel to a combined cycle CHP plant by adding a new 25 MW gas turbine, a waste heat recovery boiler, and a new 4 MW steam turbine. The project will optimize heat production and provide district heating to a residential area in the city of Gomel.
- c) Increase the financing percentage from 80 to 100 percent. The main reason is that such an arrangement will ease and expedite project implementation, as there will be no payments to contractors split between the IBRD and the GoB. In case the sub-projects' final contract amounts are higher than the sub-loan amounts, the final beneficiaries, Mogilevenergo and Gomelenergo shall finance the balance.
- d) The closing date of the additional loan will be December 31, 2016.

## 5. Financing

Source:		(\$m.)
Borrower		0
International Bank for Reconstruction and Development		90
	Total	90

## 6. Implementation

The implementation arrangements remain unchanged from the original project. The project will be implemented by the existing Project Management Unit (PMU) that has successfully implemented three Bank financed projects. The PMU has the necessary knowledge and capacity to implement the project.

The Energy Efficiency Department (EED) under the Committee of Standardization is the agency responsible for the National Energy Efficiency Program, which is dedicated to improving energy efficiency in Belarus. It is separate from the Ministry of Energy (MOE). EED has been appointed by the government to coordinate and supervise project implementation.

The Project Management Unit (PMU - Belinvestenergoberezhnie) is subordinate to the EED. It will be responsible for daily project implementation and monitoring and adherence to the World Bank requirements. The PMU has adequate and practical knowledge of Bank procedures. It also has the technical capacities as well as the necessary linkages to the ministries and Oblasts to prepare and implement the proposed project. The PMU has skilled managerial, technical, procurement and financial management staff which will be further trained for the specific needs of the project.

## **7. Sustainability**

Financial sustainability is likely owing to the continued tariff reform. To continue the efforts to improve energy efficiency, the Government has committed to increase the residential heat and electricity tariffs to cost recovery levels. Energy tariffs for residential consumers, although increased twice over the past year, remain below cost recovery level (current heat tariffs cover about 30 percent of actual supply costs). At the same time, tariffs for most non-residential consumers are above cost-recovery levels as there is a complex system of significant cross-subsidies from non-residential users to residential consumers, and also between different service lines of utility companies (electricity and heat). The current (January 2013) electricity tariff for industrial customers is about 0.138 US\$/kWh while the residential customers pay only 0.042 US\$/kWh. Similarly the current heat tariff to industrial consumers is about US\$46/Gcal and the residential heat tariff only US\$7.1/Gcal. The current plan is that by end-2015 cross-subsidies will be eliminated in electricity and gas supply while heat tariffs will be increased as much as realistically possible to cover 60-70 percent of costs.

The project supports the Government's efforts to improve energy efficiency by further enhancing the efficiency and sustainability of the energy sector to generate tangible economic benefits. Specifically, the project will lead to significantly more efficient production of heat and electricity compared to existing separate generation facilities. The main benefits of the project will be the improvement of energy efficiency in heat and power generation, resulting in reduced natural gas usage. Moreover, the increased energy efficiency will help mitigate the impact of increases in residential energy prices in the future. In addition, the focus of the project on energy saving technologies will result in reduced greenhouse gas emissions the heat supply facilities.

During the implementation of the Additional Financing, the Bank will also continue a strong policy dialogue with the Government and plan to prepare the following: (i) a tariff study to assess the current tariff setting mechanisms and the Government on the elimination of the cross-subsidies, and impact on low income households and (ii) Technical Assistance to the Government on the preparation of the new heat supply related legislation and regulatory framework. Currently a new electricity law is under preparation which will define the rules for electricity market opening and operation. The new electricity law and related secondary legislation are expected to be in force in 2014. A further step will be drafting a new heat law. These reforms will improve governance and transparency of the energy sector and will ensure long-term sustainability of energy efficiency projects.

## **8. Lessons Learned from Past Operations in the Country/Sector**

The Bank's involvement in the energy sector in many of the transition countries of the region for over 15 years has provided the WB team with many lessons, a few of which have been highlighted below and reflected in the design of the proposed project.

*Complexity:* Experience has shown that projects in transition countries need to be simple in design as the Government is keen to deliver immediate and visible benefits to the population and less keen on being subjected to heavy reform agendas. This has resulted in project initiatives not materializing. Accordingly, the proposed project is simple in design and is closely aligned to the Government's national energy efficiency program which targets investments in the rehabilitation

and reconstruction of energy infrastructure. The project fits in with the Government's objectives to provide energy efficient power and heat generation.

*Supporting Client Objectives:* Bank experience in Belarus shows that technical capacity is generally high, and that implementation can proceed satisfactorily given a supportive governance environment. Bank projects in Belarus have faced difficulties in achieving their objectives and scored low on sustainability, largely due to the inability and unwillingness to implement difficult reform conditions. As also mentioned above, this project is closely aligned to the Government's national energy efficiency program and is not designed to push for any major reform of the energy sector at this time, but rather to support the government's plan for the development of the energy sector.

## **9. Safeguard Policies (including public consultation)**

The project will not involve changes in energy infrastructure or institutions that will pose any adverse impacts on final consumers, particularly with regard to energy tariffs or ownership of energy generating assets. Moreover, increasing energy efficiency will help mitigate the impact of possible increases in residential energy prices in the future. As part of the environmental assessment, the project components and associated short-term environmental impacts expected to occur during the construction phase have been discussed with key stakeholder groups, including: government officials; local NGOs; and local populations and businesses located in Mogilev and Gomel.

The new sub-projects will have predominantly positive impacts on the environment and human health from: (i) decreased fossil fuels burned at the national level resulting from enhanced energy efficiency of boiler houses, and (ii) reduced air pollution at the national level and improved local environmental situation from reduced amount of fossil fuels burned.

The EMPs include the following: mitigation plan, monitoring plan, institutional strengthening needs, institutional arrangements for environmental management, implementation schedule, and a record of public consultations. During project implementation, EMP provisions will be applied to all activities undertaken under the project. Appropriate mitigation measures specified in the EMP will be incorporated as requirements in the bidding documents and will prevent and/or significantly reduce any adverse impacts. The contracts will include adequate provisions to ensure that contractors undertake EMP-specified measures.

The proposed project is in compliance with the Government of Belarus and World Bank regulations, policies and procedures for environmental assessment. The anticipated adverse environmental impacts will occur mainly during the construction stage and are likely to be site-specific and manageable. The project will not affect human populations or involve conversion or degradation of natural habitats, or have a negative impact on forest ecosystems. The proposed mitigation measures will prevent and/or significantly reduce any adverse impacts. Public consultations were held at each project site.

## **10. List of Factual Technical Documents**

Project Paper:

Additional Financing for Belarus Energy Efficiency Project

Others:

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