



Global Environment Facility

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March 27, 2006

Dear Council Member,


UNDP, as the Implementing Agency for the project, *Belarus: Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus*, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with UNDP procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in November 2005, and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by UNDP satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.theGEF.org. If you do not have access to the Web, you may request the local field office of the World Bank or UNDP to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

A handwritten signature in dark ink, appearing to read "L. Good", written over a light grey rectangular background.

 Leonard Good
Chief Executive Office and Chairman

cc: Alternates, Implementing Agencies, STAP



21 March 2006

Dear Mr. Good,

Subject: **Climate Change/CC-2 Local Financing: "Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus" – PIMS no. 2426**

I am pleased to attach herewith the above-mentioned project document. The brief was approved at the GEF Council Meeting in November 2005. Also attached is UNDP's response to the Council comments, as well as the co-financing letters from the donors listed hereunder:


The separate attachment contains the letters from the following institutions:

- OZERITSKY AGRICULTURAL ENTERPRISE, SMOLEVICHSKY REGION, MINSK AREA
- GRODNO CHIMVOLOKNO, Inc.
- UTILITIES SERVICES ENTERPRISE BOROVLIANY, MINSK DISTRICT
- BELARUSSIAN RAILWAYS, ORSHA DIV

As per paragraph 29 and 30 of the GEF Project Cycle, we are submitting this project document for circulation to the members of the GEF Council and, subsequently, for your final endorsement.

Thank you in advance for expediting the review and endorsement of this project.

Yours sincerely,


Yanrick Glemarec
Deputy Executive Coordinator
and Officer-in-Charge

Mr. Leonard Good
Chief Executive Officer and Chairman
Global Environment Facility
Room G6005
1776 G Street
Washington D.C. 20433

Cc: Mr. Geordie Colville, GEF Regional Technical Advisor

c) Response to comments from GEF Council members

***Belarus: Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus
PIMS 2426***

Response to comments from GEF Council Members:

| ISSUE | RESPONSE | DOCUMENT REFERENCE |
|--|--|---|
| <i>Comments from Switzerland</i> | | |
| <p><i>The government of Belarus already makes significant investments in energy efficiency measures and has introduced incentives and legislation to improve energy efficiency, also in the state sector. From the project document it is not fully obvious that the project will succeed—with comparatively limited additional funding—in removing the stated barriers, given that the Energy Center will have to work within the existing Government set-up. This also has been addressed by the STAP reviewer of the project. At least, the assessment of the risk of inadequate project implementation is seen as a means to address this.</i></p> | <p>Establishment of the Energy Center alone cannot drastically contribute to the removal of the existing barriers in the energy efficiency field in the state sector. Based on that understanding, the project proposed a comprehensive approach that builds on a series of interventions each designed to address a particular barrier.</p> <p>Even though the government has been fairly proactive in promoting energy efficiency through, e.g. introduction of incentives, these have been largely under-implemented because of a lack of specific guidelines on their application, as well as appropriate experience and technical knowledge, which is compounded by poorly motivated budget planning staff. To address these - and other - capacity bottlenecks, the proposed Energy Center will provide advisory assistance to state sector organizations, so that they could better tackle the energy efficiency potential available in their organizations. The barriers and proposed interventions have been significantly revised since the STAP review and are summarized in the relevant section of the UNDP Project Document (ages 9-11).</p> <p>The current Government set-up and priorities are not established permanently; this fact has translated into a draft new National Energy Saving Program 2006-2010 that has specifically identified the following priorities for the next cycle:</p> <ul style="list-style-type: none"> • Development of new market mechanisms of energy saving funding in the state sector; • Increase of loan-based energy efficiency financing from innovation funds; • Establishment of an enabling environment for expanding bank loans for EE projects; • Application of general institutional and personal energy efficiency incentives in budgetary and state self-sustained institutions. <p>Therefore, the Energy Center to be established within the project will serve an effective tool for the Energy Efficiency Committee (supreme government body in EE field in Belarus and simultaneously the project implementing agency) to deliver on the above objectives. The potential risk of the Energy Center failing to change the current system and remove the barriers identified is estimated as medium-to-low, owing to the high commitment from the key stakeholders (Ministry of Economy, Committee on Energy Efficiency) to further promote energy efficiency and improve cost-effectiveness of energy</p> | <p><i>Project Document:</i></p> <ul style="list-style-type: none"> • <i>Section I, Part I: Situation Analysis, Barriers to Energy Efficiency, pages 9-11</i> • <i>Section I, Part I: Situation Analysis, Policy and Regulatory Context, page 6</i> • <i>Section I, Part II: Project Strategy, Project Rationale and Policy Conformity, page 13</i> • <i>Section I, Part II: Project Strategy, Risks and Sustainability, page 19</i> • <i>Section I, Part III: Management Arrangements, page 21</i> |

| ISSUE | RESPONSE | DOCUMENT REFERENCE |
|---|--|---|
| | <p>efficiency investments in the country, as expressed in the respective letters of commitment and reflected in the in the new energy efficiency priorities in the national energy program.</p> <p>The above considerations have been reflected in the relevant sections of the UNDP Project Document.</p> | |
| <p><i>The aspect of long-term self financing of the Energy Center is in our view so far inadequately addressed in the project proposal. While the business plan for the EC expresses the intention to achieve self-financing from 2008 onwards, no specific strategy towards this end is presented. Also it seems unrealistic that EC can generate sufficient revenues for self-financing from 2008 onwards while from 2006 to 2007 services are provided free of cost. The transition towards selffinancing should be a gradual process to minimise project risks.</i></p> | <p>As described in the rationale for selection of structure for the Energy Center (Section IV, Part X of UNDP Project Document), several options have been considered by the project team based on a set of criteria. The resultant model, in which the Energy Center is set up as a subsidiary of the Committee on Energy Efficiency, was concluded to be the best match to the project requirements and the current institutional environment in the energy efficiency sector in Belarus.</p> <p>Based on the estimations done by the project team on the basis of the available information and the current market situation, as presented in the Energy Center business plan, by 2008 the Energy Center will have generated enough business to cover the costs of the technical staff, whereas the core staff would continue to be supported through the project funds. This would ensure a gradual transition toward self-financing by the end of the project, i.e. end of 2009. It is also important to emphasize that the Energy Center will provide free services in 2006-2007 for the project partners <u>only</u>. For the rest of the state institutions and enterprises such services will be on a paid basis. Corresponding clarifications were made to the UNDP Project Document (Section IV, Part IX).</p> <p>Thus, the first two years of its operation the Energy Center will be focusing on further researching the market, expanding its client base and fine-tuning its products and services. Based on the actual data obtained at the inception stage and further market analysis, the Energy Center business plan will be adjusted in the course of the project implementation to secure smooth transition to self-financing. Along with other sources of income, the Energy Center is expected to generate profit from implementation of a new energy efficiency investment program to be developed in the course of the project.</p> <p>Realizing the importance of the proposed initiative and potential risks associated with it, the Committee on Energy Efficiency has reiterated its commitment to “support the Energy Center to give opportunities for its development as a self-sustained institution”. This commitment is fully aligned with the new government priorities set out in the draft National Energy Saving Program 2006-2010.</p> | <p><i>Project Document:</i></p> <ul style="list-style-type: none"> • <i>Section IV, Part X: Rationale for Energy Center Model Selection, pages 98-99</i> • <i>Section IV, Part IX: Energy Center Business Plan, page 89</i> • <i>Section I, Part II: Project Strategy, Risks and Sustainability, page 20</i> |



UNDP Project Document

Government of Belarus

United Nations Development Programme (UNDP)

Global Environment Facility (GEF)

REMOVING BARRIERS TO ENERGY EFFICIENCY IMPROVEMENTS IN THE STATE SECTOR IN BELARUS.

Brief description:

The project's strategy addresses capacity and awareness issues amongst state enterprises and local authorities by building capacity to provide information and consulting services, and training to local authority and state enterprise employees in energy efficiency. The Project will support local authority and state enterprises efforts to identify energy efficiency opportunities and increase internal investments to realize such opportunities in the DH&CHP sector, including the utilization of concessional financing opportunities being offered by central government. The Project team will assess opportunities of local bank loans for energy efficiency investment projects. In addition to building awareness the project plans to create momentum amongst local government for investment in energy efficiency by designing and testing employee bonuses for realizing energy efficiency and institutional incentives by enabling municipalities to retain a part of the savings they make from energy efficiency improvements.

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ACRONYMS

| | |
|--------|---|
| APR | — Annual Project Report |
| AWP | — Annual Work Plan |
| CEE | — Committee on Energy Efficiency |
| CHP | — Combined heat and power |
| CIS | — Commonwealth of Independent States |
| CO | — Country Office |
| DH | — District heating |
| EBR | — European Bank for Reconstruction and Development |
| EC | — Energy Center |
| EE | — Energy Efficiency |
| GDP | — Gross Domestic Product |
| GEF | — Global Environment Facility |
| GHG | — Greenhouse gas |
| M&E | — Monitoring and Evaluation |
| MDG | — Millennium Development Goals |
| MYFF | — Multi-Year Funding Framework |
| NEF | — National Energozberzhenie Fund |
| PIR | — Project Implementation Review |
| PMU | — Project Management Unit |
| PSC | — Protect Steering Committee |
| RCU | — UNDP/GEF Regional Coordination Unit |
| SBAA | — Standard Basic Assistance Agreement |
| SIRP | — World Bank Social Infrastructure Retrofitting Project |
| TFE | — Tons of fuel equivalent |
| TPR | — Tripartite Review |
| TTR | — Terminal Tripartite Review |
| UNDP | — United Nations Development Programme |
| UNECE | — United Nations Economic Commission for Europe |
| UNFCCC | — United Nations Framework Convention on Climate Change |
| USD | — US Dollars |

SECTION I: ELABORATION OF THE NARRATIVE

PART I. SITUATION ANALYSIS

ENERGY SECTOR

Energy Balance: Belarus has a very limited natural resource energy endowment and imports over 90% of the all the coal, oil and gas energy needs. This leaves the country's economy dramatically exposed to shifts in energy prices, and heavily dependent on its relations with its main energy trading partner Russia. While benefiting from Russia's generally favorable energy prices, Belarus' foreign trade deficit with Russia grew to USD 3.8 billion in 2004, in large part because of an increase in energy prices. Belarus faces the choice of importing more energy, putting an emphasis on energy efficiency, and harnessing its renewable energy resources, to improve its energy security position and its balance of trade.

Energy intensity: In 2004, fuel and energy resources consumption in Belarus amounted to 27.4 million tons of fuel equivalent (tfe)¹ and energy inputs increased by 577,000 tons of fuel equivalent compared to the year 2003, an increase of 2.2%. At the same time, however, the energy intensity of GDP decreased by 8.2%, mostly due to the implementation of a purposeful government energy conservation policy.

Heat, hot water and cogeneration: Analysis under the National Energy Saving Program has identified district heating and combined heat and power (DH&CHP) sector as consuming around 70% of the country's fuel needs (equal to consumption of 16 million tfe annually or 90% of CO₂ emissions), while having potential for cost effective savings of 2 million tfe at USD 8-15 per ton of CO₂ avoided.

The heat supply system in Belarus includes 21 combined heat and power plants and 4 mini-CHPs belonging to the Belenergo Energy Concern. These plants have a total capacity of 3,990 MW and heat generation capacity of 21,450 Gcal/h. Other Belenergo generation facilities include 27 boiler plants with a total capacity of 6,200 Gcal/h and 10 isolated generating plants with total capacity of 138.5 MW belonging to other entities. In addition to the boiler-houses owned and operated by Belenergo, there are also about 6,500 departmental boiler plants with the capacity from 0.1 to 10 Gcal/h and 750 boiler plants with the capacity exceeding 10 Gcal/h. District heating systems based on heat power plants with heat load ranging from 100 to 2,050 Gcal/h are used in 14 cities in Belarus. District heating systems based on regional boiler plants with heat load from 10 to 320 Gcal/h are used in 20 cities.

Total extension of main-line heat network of the Belenergo Energy Concern and the Ministry of Housing and Communal Services is more than 4,500 and 5,800 km, respectively. Industrial enterprises own a negligible share of the main-line heat network. In small towns and rural settlements, 75-80% of heat is supplied by decentralized sources and individual heating systems.

Within the heat and hot water sector the National Program of Energy Efficiency has identified the following investments as being the most cost effective: 1) use of biomass for heat production; 2) reconstruction of boiler house to shift to mini-CHP plants; 3) boiler replacement with more efficient models; and 4) optimization of heat distribution networks.

POLICY AND REGULATORY CONTEXT

Energy Efficiency Policy

At mid-point of its implementation, the National Program of Energy Saving and Renewable Energy Use 2001-2005 (hereafter referred to as the National Energy Saving Program) was adjusted by the Council of Ministers of Belarus in December 2002², and a number of additional energy efficiency targets for the state sector were set:

¹ Throughout this document, "tons of fuel equivalent" is used to signify "tons of coal equivalent." This figure for fuel and energy resource consumption does not include energy produced from light oil products or from the combustion of raw materials.

²² Regulation 1820 (December, 27, 2002) on "Additional Measures on the Economical and Effective Utilization of Fuel and Energy Resources".

- 4.5% annual reduction in energy consumption per unit of GDP in the state sector;
- 7% annual reduction in the consumption of fuel and energy resources in state-owned production facilities; and
- replacement of 600,000 tons of imported fuel (tfe) by 2005 with local and alternative energy sources.

Energy Pricing Policy

The Government's policy on energy pricing is as follows:

- adjust fuel, electricity and thermal energy prices to create incentives for energy savings;
- gradually withdraw from state control over energy prices to allow a free market between producers and suppliers to govern prices; however
- continue to support some important social objectives through targeted state subsidies.

The Government's long-term strategy is to align tariffs and subsidies with real energy costs. Cross-subsidies of power, heat, and gas in the residential sector by the industrial sector were almost completely removed in 2003. This reform has helped reduce non-payments for electricity and heat in the industrial sector and is reported to have brought the problem of non-payment under control. External market-forces are also expected to increase energy prices. For example as Russia re-orientes its gas exports to the west, gas prices for Belarus are expected to rise, and domestic tariff adjustments are likely to become necessary. Current energy prices are compared in Tables 1 and 2 below:

Table 1: Energy price comparisons, 2005

| Type of Fuel | Belarus | World |
|---|--------------------|---|
| Natural gas end consumer price (USD/1000 m ³) | 62-70 ³ | 100-180 (electricity generation) 250-350 (household) |
| Oil (USD/ton) | 190-220 | 250-300 |
| Mazut (USD/ton) | 120-140 | n/a |
| Coal (USD/ton) | 46-50 | 40-50 |
| Diesel (USD/ton) | 650 | n/a |

Table 2: Heat price comparisons, 2005

| Type of User | Belenergo | Communal boiler houses | European Union (average) |
|--------------------|----------------|------------------------|--------------------------|
| Households | 12 USD/MWh | 12 USD/MWh | 25 to 80 |
| Business and state | 11-12 USD/1MWh | 12 to 50 USD/ MWh | USD/MWh |

Energy Efficiency Regulations

To help meet policy targets, the government has developed a series of regulatory documents that create a legislative, economic, financial, organizational and technical framework for the effective use of fuel and energy resources. Section IV, Part III provides additional details on these legislative documents. It includes the following laws and regulations:

- Law of the Republic of Belarus "On Energy Saving";
- National Energy Saving Program for the period 2001-2005 (see section below);
- National Policy on the Development of Small and Non-conventional Power Engineering;
- Documents establishing the National Energy Savings Fund, or Energoberezhnie Fund;
- Policies introducing instrumental metering;
- Policies providing preferential credits for energy-saving activities;
- Policies designed to provide incentives for state self-sustained institutions to save energy, through which enterprises can create their own energy savings funds. Savings obtained due to energy efficiency measures are accumulated in this fund and can be used for further activities in savings as well as for bonuses (up to 50% of this fund);

³ Next year (2006) natural gas price is expected at about USD 72-74 per 1000 m³.

- Central and local government regulations related to providing personal and institutional incentives for budget institutions to save energy;
- National Program for the Development of Local Fuels and Renewable Resources until 2012.

National Energy Saving Program in Belarus: Beyond the institutional and policy changes within Belarus, the Government's main drive to foster energy efficiency investment has been through the National Energy Saving Program. The First National Energy Saving Program (1996 – 2000) is reported to have saved 5 million tons of fuel equivalent in energy resources through measures such as design and introduction of new energy saving materials and technologies, boiler rehabilitation, replacement and installation of metering devices. Technical measures in the Second National Energy Saving Program (2001-2005) include metering of water and heat consumption in housing, use of non-traditional local sources (e.g. wood wastes) for energy generation, and increasing energy efficiency of existing energy generating, distributing and consumption. The Government is expected to further stimulate energy efficiency in the country through its next National Energy Saving Program 2006-2010 which has been drafted by the Committee on Energy Efficiency toward the end of 2005.

Investment in Energy Efficiency: The government estimated that between USD 1,175-1,180 million in energy efficiency investment would be required in 2001-2004 to meet the targets of the Second National Energy Saving Program. A number of concessional sources of financing have been established to help catalyze this investment. Section IV, Part IV lists these funds and other sources of financing available in Belarus for energy efficiency. In 2001-2004 just over USD 700 million had been invested in energy efficiency. Analysis of the data shows that 52% of government's concessional loans available were invested, while an average of 73% of all government grants available were allocated. Clearly both grants and loans were heavily under-programmed compared to the expectations of the Second National Program, with loans being even more under-programmed than grants. The above figures go in contrast to the government estimates that there are energy efficiency investments to be made in Belarus with internal rates of return of more than 50% and payback periods of 3-5 years.

Another conclusion emerging from the PDF-B is that budgetary organizations are less inclined, or have greater difficulty in making energy efficiency investments than self-sustained organizations. Statistically this can be seen by comparing the utilization of (grant) budgetary funds available only to budget organizations with (grant) innovation funds available only to self-sustained state organizations in Section IV, Part IV (USD 135 million in undisbursed grants or 38% of budgetary funds available). A core part of this project has been to look at the reasons why budgetary and self-sustained organizations do not apply for more grant and loan financing, when it makes financial sense to do so. Among other things, this under-utilization is caused by the outdated energy resource planning methodologies which don't stimulate energy saving; lack of experience in budgetary organization with financing for energy efficiency; absence of staff incentives for budgetary organization to promote energy efficiency. The barriers removal section below provides more details for these reasons.

Regarding commercial capital, loans are now available at 16% interest rate (as against 6% interest rate charged by the Committee on Energy Efficiency for its concessional funds). Factoring in the cost of capital, this makes interest rates still too high for a return on most energy efficiency investments. Commercial financing will therefore remain an unlikely choice for energy efficiency investment in the near future, especially since concessional resources remain heavily under-programmed.

While all energy efficiency funds are underutilized, the availability of grant funding usually means that loans are a second choice of financing for state organizations. One project measure will be to promote, not only an increase in investment in energy efficiency, but also a greater shift towards loan financing over grant financing. The ready availability of grant money does not provide any incentive for consumers to use credit, nor does it encourage local authorities and the central government to increase funding in their budgets for energy conservation measures in budget organizations. Moreover, personnel in state organizations lack the training necessary to develop the business plans and feasibility studies required by banks to obtain credit. The use of credit funds would also increase accountability on the side of project partners, who must monitor actual savings and maintain energy-efficient equipment in optimal condition to ensure that it will be possible to repay their loans. The interventions proposed by the project to promote loan financing, e.g. energy norms, capacity building for energy staff in budgetary organization, staff incentives, reliable sources of energy efficiency information and streamlining of

national energy audits with international standards will also collaterally help increase the efficiency of use of grant funding. For more details see the Barriers section below.

Energy Conservation Services

The widespread development of energy conservation services began in 1998 when the Law on Energy Saving was adopted. At present, various organizations provide a wide range of services. They include the following:

- training for state enterprise employees and the public in energy-saving measures;
- informational support for energy efficiency, including a monthly magazine, Energy Efficiency;
- energy audits for enterprises, including the calculation of energy balances and recommendations on packages of energy efficiency measures;
- feasibility studies for energy efficiency measures;
- calculation of energy resource consumption rates per unit of output (work, services);
- design work;
- manufacturing and installation of energy efficient equipment.

Admittedly, the quality of the services provided in the field of energy efficiency needs improving, and in particular energy audits. This activity used to be subject to licensing, but licensing was abolished in a series of policy measures designed to foster small business⁴, making it impossible for the Committee on Energy Efficiency to reinstate the licensing process. The lack of licensing has led to a sharp decline in the quality of audits. Organizations conducting energy audits lack qualified staff and do not have access to internationally-recognized methodologies for energy auditing. As a result, low-quality audits lead to poor choices of equipment and technical solutions, limiting the amount of energy saved. Nonetheless, the need for audits remains high: while they are voluntary for small organizations, they are mandatory for large organizations. If a large organization fails to conduct an audit, the Committee on Energy Efficiency can penalize it by reducing the energy norms for its facilities.

While developing the project document, the project team conducted a survey among the state sector organizations serving as project partners assessing their demand for energy conservation services. Ministries, regional and district-level executive committees, and other state organizations took part in the survey. The analysis of the results identified the following needs for energy efficiency services:

- to improve the quality of energy audits and feasibility studies of energy conservation measures with the help of internationally recognized methodologies;
- to obtain expert guidance in business planning to catalyze investments in energy savings;
- to obtain expert guidance in designing energy efficiency measures;
- to raise awareness and provide professional development for personnel in the state sector; and
- to provide consulting services while planning energy resources consumption and expenditures to pay for energy resources;
- to provide training in energy planning, monitoring, identification of new energy efficiency projects, carrying out energy audits, developing feasibility studies.

INSTITUTIONAL CONTEXT

The Committee on Energy Efficiency: The Committee is responsible for drafting new laws and regulations on energy efficiency and implementing energy efficiency policies and energy efficiency targets set by the Government of Belarus. The Committee is responsible for implementing the National Energy Saving Program. To this end, it supervises the work of local governments and state enterprises; manages government funds earmarked for energy efficiency investments; sets and enforces energy consumption targets for different economic sectors and business categories, and has the authority to penalize organizations that fail to meet these targets.

⁴ Presidential Decree № 17, 2003; Government Regulation № 1390 (20.10.2003).

The Ministry of Energy: The Ministry is responsible for energy sector planning and restructuring. It works with the Ministry of Economy to set energy prices for the country. The Ministry established⁵ a Research and Development Center, to coordinate and oversee energy sector restructuring. Since 2002 restructuring has remained at the planning stage. In the meantime, the Ministry retains full control over state energy enterprises, including Belenergo, Beltransgas, and Beltopgas concerns. Belenergo generates, transmits and distributes most of the country's electricity, and supplies around 45% of the country's heating and hot water needs. Together Beltransgas and Beltopgas own and manage the country's gas network.

The State Sector

The state sector of Belarus is the single largest consumer of fuel and energy resources in the country. The state sector accounts for 68% of total fuel and energy resources consumption, as compared to less than 2% by the private sector and approximately 30% by the population.

The state sector can be divided into two types of organizations: 1) **state self-financed organizations**; and 2) **state budgetary organizations**, which include organizations financed from the national and municipal budgets (these are mainly social sphere and government institutions; please refer to Section IV Part VIII for description of the national budgetary system in Belarus).

State self-financed organizations: State self-sustained organizations are akin to state enterprises. The government maintains a majority shareholding, and appoints the organization's management, however the organizations are profit motivated, and are expected to cover their own costs through their business activities. Examples of state self-sustained organizations include industrial enterprises, various Belenergo facilities, and Belarusian Railways. State self-sustained organizations are entitled to access innovation funds offered by their oversight organization for energy efficiency investments.

State budgetary organizations: These are financed from the national or local budgets according to the level of government responsible for their operation. National-level state organizations, such as large hospitals, sanatoriums, and prisons fall under the control of respective ministries. Local budgetary organizations, such as clinics and kindergartens, fall under the authority of regional⁶ executive committees (which include the executive committee of the city of Minsk) according to their location. As a rule, budgetary organizations provide services free of charge. The only source of financing of these organizations is budget funds and grants, which are planned and allocated annually.

State self-sustained organizations are the largest consumer of fuel and energy resources in the state sector (annual fuel and energy resources consumption of this group amounts to 15.2 million tons of fuel equivalent). Annual fuel and energy resources consumption of nationally and locally financed budgetary organizations amounts to 0.6 and 2.8 million tons of fuel equivalent, respectively.

RELEVANT ONGOING AND PLANNED ACTIVITIES

The Second National Energy Saving Program is described above, and the financial sources to fund the program are listed in Section IV Part IV. This program is the government's primary ongoing initiative in energy efficiency. At the end of 2002, this program was amended according to the Regulation of the Government № 1820. In the second half of 2005, the Committee on Energy Efficiency will finalize the Third National Energy Saving Program 2006–2010. At the same time, major ministries, and all regional executive committees (including the executive committee of the city of Minsk) will develop energy savings programs for the same period.

The World Bank Social Infrastructure Retrofitting Project - (BY-7056) (SIRP): This project is investing USD 22.6 million in energy efficiency activities in the social sector such schools hospitals and nurseries. Investments will include (1) automatic control of heat consumption at social facilities, (2) reconstruction of small size boiler houses

⁵ In 2002 under Order № 40, the Ministry of Fuel and Energy established a commission made up of representatives of ministries and other key stakeholders to prepare Belarus for energy sector restructuring.

⁶ The term "region" is used throughout this document to refer to administrative regions in Belarus, which are also referred to as *oblasts*. Belarus is divided administratively into seven regions, one of which encompasses the territory of the capital city of Minsk.

including conversion to wood fuel, (3) reconstruction of lighting, (4) rehabilitation of district heating systems, (5) replacement of windows, (6) thermal insulation of walls and roofs, other EE measures.

A project management unit in the Belinvestenergosberezhenie state enterprise is implementing the World Bank project. This project will be implemented with the assistance of the same Belinvestenergosberezhenie state enterprise to promote coordination. The Energy Center will coordinate activities with the WB Project Management Unit. The Energy Center will conduct financial and technical feasibility of loan proposals, as means to build the capacity and experience of the Energy Center.

UNDP/GEF Biomass Energy for Heating and Hot Water Supply in Belarus: This project began implementation in 2003. The project will build experience in the use of biomass in Belarus by: (1) building capacity of selected national experts in energy and least cost planning, and in identifying and implementing biomass boiler investment projects; (2) developing a pipeline of biomass investment projects and revolving fund to co-finance the investments; (3) and an information campaign on the potential of biomass as a boiler fuel to generate broad interest in biomass. Like the World Bank project the Biomass project is being implemented under the Belinvestenergosberezhenie state enterprise, and future Energy Center will utilize the information and capacity being developed by the biomass proposal.

BARRIERS TO ENERGY EFFICIENCY

While the Government of Belarus has developed a comprehensive national program to promote energy efficiency and has provided consistent financial support for energy-saving initiatives, there are a number of barriers on both the demand side and the supply side that prevent the country from optimizing its investments in the sector to achieve maximum energy savings.

On the demand side, state organizations often lack the capacity to develop business plans for energy efficiency investments. Poor quality audits can reduce the cost-effectiveness of an energy efficiency program and make savings difficult to determine. Funds may be allocated late in the fiscal year with no possibility of carrying them over. And organizations and their employees lack incentives to invest in energy efficiency, as savings do not accrue to the state organization that is investing in energy efficiency and performance incentives are not available for staff promoting energy efficiency in their organizations.

On the supply side, investment funding is dominated by government grants. However, both grant funding and loan facilities have been considerably under-programmed. The heavy reliance on grants (96% of total government funding for energy efficiency in 2001-2004) limits the supply of funding in two ways. First, credit is underutilized, because state organizations have no incentive to apply for a loan if they can obtain a grant. Second, funding under the National Energy Saving Program is not leveraged as effectively as it could be, because one-time grants do not provide any returns to the government. In fact, the problem is self-perpetuating, because state organizations and banks have not acquired the experience needed to apply for and issue credit, respectively. As a result, many state sector organizations have “bankable” energy conservation measures with a comparatively short payback period, but the share of credit in overall investment remains negligible: 4% of all government financing for energy efficiency.

The above barriers to be removed as part of the Full Project, as well as the proposed interventions, are summarized in the table below.

| Barriers (Threats) | Root Cause | Proposed Intervention |
|--|--|--|
| 1. Out-of-date methodologies of planning funds to be allocated for energy resources and accounting used by budget institutions. This method of budgeting makes it extremely complicated using the funds saved through energy efficiency for further investments in energy efficiency or for staff bonuses. | When planning their expenditures, budget organizations use out-of-date methodologies and approaches despite the fact that in 2003 the Government of Belarus and all regional executive committees and the executive committee of the city of Minsk approved new regulations on planning expenditures to pay for energy resources. Under the new methodology, technically based rates (norms) for | Output 1.1. National experts will be trained by international consultants in energy and financial planning and provide assistance to state organizations (project partners) in planning for the payment of energy resources to achieve financial savings when energy efficiency measures have been introduced. In addition national experts will assist state organizations (project partners) in projecting financial savings due to improvements in energy |

| Barriers (Threats) | Root Cause | Proposed Intervention |
|---|--|---|
| | energy resource consumption are supposed to be used as the basis for calculating payments for energy resources. The personnel involved in planning use out-of-date approaches because of a lack of capacity in energy-related planning. | efficiency. |
| 2. Grant funding of energy efficiency measures for state institutions doesn't create incentives to obtain maximum energy savings and provide motivation to save energy. | Belarusian legislation provides for grant funding for energy efficiency projects, to the following types of organizations: budget organizations, organizations in the housing and utility sector, agricultural organizations that receive budget subsidies. In addition, legislation provides grants for high-priority energy measures, such as those that increase the use of renewables and secondary energy resources, and some other energy efficiency measures. | Output 2.2. National experts jointly with the Committee on Energy Efficiency will develop specific proposals and draft regulations for the government to amend existing legislative documents in order to stimulate an increase in loan financing for energy conservation. A specific feasibility study will be undertaken to investigate further shift from grants to loans. The study will serve as a basis for a national strategy on restructuring current government EE financing facilities. |
| 3. There is a lack of skilled personnel and experience (feasibility studies and business plans development) at state institutions in using credit to finance energy efficiency measures. | See item 2. Not every potential borrower among state organizations is capable of meeting the requirements to obtain credit (i.e., completion of a feasibility study and development of a business plan) due to lack of experience and motivation. In addition the lack of personnel results from limited staffing, especially in budget organizations, and a rather low salary level that makes it difficult to attract and maintain skilled specialists. | Outputs 2.3, 3.3. Having received the necessary training from international consultants, national experts will provide necessary services (assistance in feasibility studies and business planning) to the project partners to catalyze investments to increase energy efficiency in the state sector. Ongoing training will be conducted for the project partners management and energy and economic staff. In addition, regular training workshops for state employees will be held with the purpose of extend the number of budget institutions using proper budgeting and energy planning. |
| 4. Lack of staff incentives for state and budget organizations to foster energy efficiency as well as absence of clear guidelines on implementation of mechanisms for having savings from energy conservation so that they may be re-invested in energy conservation. | There are government regulations which generally provide for economic stimulation and staff incentives to foster energy conservation in budget organizations. However, they have not been implemented because of a lack of specific guidelines on their implementation, as well as appropriate experience and technical knowledge, which is compounded by poorly motivated budget planning staff. In addition, financial resources, earmarked for expenditure on fuel and energy, and saved because of an energy conservation investment, must be returned to central government if they are not spent by the end of the fiscal year. See also item 1. | Outputs 1.2, 1.3. National experts will provide necessary ongoing assistance to local authorities (project partners) in planning, opening special payment accounts for savings from energy conservation (to avoid cancellation) and allocating the funds saved to finance institutional and staff incentives to foster energy conservation. |
| 5. State organizations lack a source of reliable, current and complete | The existence and operation of that type of information source would | Output 3.1. National experts will create a database of new energy-efficient |

| Barriers (Threats) | Root Cause | Proposed Intervention |
|---|---|---|
| information on modern energy efficient equipment, methodological (technical) approaches and opportunities to increase energy efficiency. | require concrete, ongoing financial support, which the state budget and state innovation fund have not always been able to afford. The Committee on Energy Efficiency has a significant amount of information, but its collection, analysis and updating is carried out by the committee's personnel, who are not able to spend much time on information work and systematic maintenance because of limited staffing. | technologies and equipment with assistance of international consultants. This database may be used not only by state organizations (project partners) for better decision making, but also by the Committee on Energy Efficiency. |
| 6. The national methodology for energy auditing does not fully correspond to internationally recognized standards. The practice of calculating greenhouse gas emission reductions while planning and implementing energy conservation measures is not widespread. | Quality issues in auditing are connected to a lack of knowledge of international best practice, modern equipment for energy audits, and insufficient contacts with foreign and international organizations regarding new technologies, and their economic benefits. See also item 5. | Outputs 2.1, 2.4, 3.2 National experts will be trained by international consultants to conduct energy audits in correspondence with internationally recognized standards and work with the equipment for energy auditing. National experts will conduct ongoing training with energy staff of the project partners and Belarus energy-auditing firms. The results of the training will be used to implement the project energy efficiency investment program and develop a new energy efficiency investment program. |

STAKEHOLDER PARTICIPATION

All potential project stakeholders have been consulted during PDF B implementation. Agreements on the project implementation between the Committee on Energy Efficiency and project partners have been signed. A template of the agreement is provided in Section IV, Part V. During the course of the PDF B, two seminars were held in which participants were able to provide comments and input into the project design, and numerous other smaller meetings were held with a wide range of stakeholders, including the following organizations:

- Committee on Energy Efficiency and its regional branches;
- Ministry of Natural Resources and Environmental Protection ;
- Ministry of Energy;
- Ministry of Economy;
- Ministry of Housing and Communal Services;
- Ministry of Industry;
- Ministry of Health;
- “Belenergo” Energy concern;
- “Grodnoenergo” National Unitary Enterprise;
- Executive Committee of the City of Minsk;
- Executive Committee of Minsk region;
- Executive Committee of Vitebsk region;
- Executive Committee of Grodno region;
- Executive Committee of Logoisk region;
- Executive Committee of Berezino region;
- Belarusian Railways;
- Department of Corrections, Ministry of Internal Affairs;
- Belmestprom Concern;
- EcoMir Fund (a non-governmental organization);
- Representatives of all potential investment sites;

- Representatives of the mass media (Radio-1, *Energy Efficiency* magazine, *Respublika* newspaper); and
- UNECE, UNDP.

Consultation with, and engagement of, these same stakeholders will be an important part of the proposed full-scale GEF project, particularly participating in awareness rising. Their involvement will be facilitated through training, information dissemination and consultation within each project component.

BASELINE ANALYSIS

The Government of Belarus is strongly committed to increasing energy efficiency. It has developed one of the most thorough legislative and regulatory frameworks for promoting energy efficiency in the NIS region, and it has made several sources of financing available for the implementation of energy savings projects. For the period, 2001-2004, these funds totaled nearly USD 365 million from national and local budgets and extra-budgetary funds. However, the government currently lacks the capacity to capture the large potential market for energy efficiency in the state sector, due to barriers including a lack of awareness among stakeholders about the benefits of energy efficiency investments, a lack of capacity to assist stakeholders in identifying projects and structuring their financing, and a lack of experience in connecting positive results in these projects with benefits to the actual investors and other participants.

It is reasonable to assume that in the absence of support from the GEF, the government will continue to allocate funds for energy efficiency projects. It has already developed a draft National Energy Saving Program 2006-2010 (see Section IV Part IV for financing levels and resources). However, given the current barriers to energy efficiency investments, these funds will be underutilized from the perspective of disbursement rates: grant funding disbursement rate for government programs in energy efficiency averaged 73% in 2001 to 2004, whereas the rate of utilization of government loan financing stood at just 52%. These funds will also be underutilized from the perspective of efficiency (non-grant funding can be leveraged in the future, whereas grants provide no returns even when the rate of return on the investment in question is positive). In summary, the government's commitment to energy efficiency will not translate into the development of a market for energy efficiency investments.

PART II. PROJECT STRATEGY

PROJECT RATIONALE AND POLICY CONFORMITY

While there are compelling economic and environmental advantages for energy saving in the state sector (the largest consumer of fuel and energy resources in Belarus), there is a clear need for assistance in addressing a number of barriers that prevent the country from optimizing its investments in the sector to achieve maximum savings.

On the one hand, the Government of Belarus has demonstrated proven support for energy efficiency and renewable energy that is unusually strong compared with other CIS countries, including strategy documents, government programs on energy savings, fines for inefficient energy use, and direct investments in energy efficiency projects. On the other hand, the Government directly controls approximately 80% of the economy, which limits the market-based approaches that are compatible with current conditions. The mechanisms proposed in the project activities reflect this mixed situation and realistically assess the potential for market growth in difficult conditions. The project will support the Government in the development of a range of mechanisms through which it can increase investments in the state sector. The existing barriers identified will be removed by specific related outputs as described above.

It is also clear that the national and local governments have two compelling reasons to invest to energy efficiency for reasons other than environmental sustainability: economic savings and energy security issues. Increased investment in energy efficiency improvements would allow the government to save when paying for fuel and energy for budgetary organizations, such as hospitals, schools and so on; and when reducing subsidies currently expended in the residential sector.

The present project is envisioned as a market development tool that will serve as a bridge between the current situation of low awareness and lack of capital to an eventual situation where the government and other investors can introduce additional means of developing the market. These measures will complement ongoing government

efforts to address barriers in the overall energy market, such as the planned program of price liberalization to reduce subsidies and cross subsidies in energy.

The interventions proposed under the UNDP/GEF project are designed to increase both the supply of real financing for energy efficiency investments and the demand for these investments with the rationale that more effective investment will increase the reduction of fuel consumption and its attendant greenhouse gases emissions. On the demand side, the project will establish an Energy Center to raise expertise and awareness in energy efficiency in state sector organizations and municipalities. The project team will also work with the Energy Center to test economic incentives to foster energy conservation in state organizations; i.e., employee bonuses for capturing energy efficiency opportunities and institutional incentives that will allow municipalities to retain financial savings from energy efficiency measures for re-investment. The Energy Center is designed to become self-financing by the completion of the project (a preliminary business plan is provided in Section IV, Part IX), and it will be able to provide its services to state sector clients even after the project concludes. On the supply side, the project team and the Energy Center will work with state sector organizations, government agencies, and banks to improve the capacity to use non-grant financing for energy efficiency projects. Project personnel will provide policy guidance to leverage non-grant funding for energy efficiency and training to ensure that there is increased uptake of these funds.

While the government has a proven financial commitment to increasing energy efficiency, GEF support is needed to cover additional expenditures concerned with measures to remove barriers to the development of market mechanisms in increasing energy efficiency in the state sector in Belarus. These measures focus on training the Energy Center personnel, employing skilled and experienced national and international experts on subcontractual basis as needed, conducting an information campaign, developing and testing economic incentives to foster energy conservation, and encouraging market-based approaches to finance energy conservation in the state sector through management training in the use of business planning, credit, and performance contracting.

The project is seen as very opportune in view of the shifting Government's priorities, as expressed in the draft National Energy Saving Program 2006-2010, on the development of new market mechanisms of energy saving funding in the state sector, increase of loan-based energy efficiency financing from innovation funds, application of general institutional and personal energy efficiency incentives in budgetary and state self-sustained institutions. The Energy Center to be set up within the project will, therefore, serve an effective tool for the Committee on Energy Efficiency to deliver on these new objectives.

Lack of GEF support may hinder to a considerable extent the implementation of measures on energy efficiency development in the state sector, specifically economic incentives and market mechanisms of energy conservation funding in this sector.

The proposed project has the potential to make a significant contribution to the reduction of GHG emissions in Belarus, because it will decrease consumption of carbon-intensive fossil fuels. Savings as a result of implementation of the investment program worth USD 8 million, including USD 2.9 million from the Committee on Energy Efficiency (see Section IV, Part VII for a detailed overview of the portfolio), will represent approximately 0.35 million tons of CO₂ reduction over a 15-year period. Note that these estimates refer only to direct reductions and direct post-project reductions; indirect reductions due to the subsequent investment program proposed under the project will be greater.

The project conforms to the objectives of the GEF Operational Program 5 (Removal of Barriers to Energy Efficiency and Energy Conservation) inasmuch as it aims to reduce greenhouse gas emissions by catalyzing current investments in energy efficiency in the state sector of Belarus, thereby promoting "... large-scale application, implementation, and dissemination of least-economic cost energy-efficient technologies ... and more efficient energy use".

PROJECT GOAL, OBJECTIVE, OUTCOMES AND OUTPUTS/ACTIVITIES

The **project goal** is to reduce GHG emissions by removing the major barriers to the development of a market for energy-efficient products and services to reduce and offset fossil fuel use in Belarus. The **project objective** is to increase internal investment in energy efficiency projects in the state sector through targeted assistance in the areas of application of energy norms to energy planning, introduction of staff incentives and settlement account for

accruing of energy savings, improving audit standards, increasing the share of loan funds over grants in energy efficiency financing. The projects will reduce greenhouse gas emissions directly by approximately 0.35 million tons of CO2 equivalent over 15 years by catalyzing investments in energy efficiency in the state sector of Belarus of no less than USD 8 million, including USD 2.9 million from the Committee on Energy Efficiency. This objective will be realized through 3 outcomes described below. Indicators are provided in the logical framework (Section II, Part II).

Outcome 1. Increased incentives for state organizations to invest in energy efficiency

In order to address the barriers related to outdated energy resource planning methodologies, the project will develop new methodology and a manual for application of energy norms in energy planning, and provide training to project partners in the application of energy norms in energy planning. In order to increase incentives for state organizations to invest in energy efficiency the project will assist state organizations in opening and operation of special settlement accounts and budgeting techniques that will allow savings from energy efficiency measures to accrue to the project partners and municipalities. Particular emphasis will be placed on evaluation of different options for and introduction of performance incentives (for example, in the form of bonuses) for individuals involved in energy efficiency projects. In both cases, these measures build upon existing mechanisms that have not been applied specifically to energy efficiency projects.

Output 1.1 Budget organizations use energy norms in estimating their annual budget

The distorted energy resource planning framework in the budgetary sector, whereby state budgetary organizations continue to plan their next-year expenditures on the basis of previous year data practically eliminates all opportunities for energy-related savings to accrue to the organization for future investment. There is a clear lack of capacity within state budgetary organizations in energy-related planning. To address this, project partners will be trained in application of modern energy and financial planning methodology, including energy norms; state budgetary organizations will be provided assistance in planning for the payment of energy resources to achieve financial savings when energy efficiency measures have been introduced. In addition national experts will assist state organizations (project partners) in projecting financial savings due to improvements in energy efficiency.

Output 1.2 Budget organizations deposit their energy savings into settlement accounts

Through theoretically possible, accumulation of savings related to implementation of energy efficiency measures in budgetary organization has not been implemented in practice due to absence of clear and specific guidelines on the application of respective regulations, as well as lack of appropriate experience and technical skills in budget planning staff. Furthermore, financial resources earmarked for expenditure on fuel and energy and saved because of an energy conservation investment, must be returned to central government if they are not spent by the end of the fiscal year. To overcome this barrier, the project will provide assistance and consulting services to project partners in setting-up special settlement accounts. Support will be rendered to target municipalities in measuring energy savings, and financial revenues, as well as on necessary reporting. A guide will be developed for measuring energy and financial saving. Regional energy efficiency departments will be trained in energy budgeting, calculating and reporting to ensure dissemination of best practices.

Output 1.3 Budget organizations issue incentives to staff responsible for increasing their investments in energy efficiency

Left with no way to accumulate savings from implementation of energy efficiency measures, state budgetary organizations have no source of funding to issue incentives to foster energy efficiency. Thus, this barrier comes in loop with the previous one addressed under output 1.2. The project will review different options for staff incentives, to come up with a proposal on introduction of staff incentives which will be discussed with target municipalities. An implementation plan for introduction of staff incentives will be elaborated, including setting aside of budget resources, identification of responsible staff, bonus criteria, etc. Project partners will receive specific training in introduction of staff incentives for improving energy efficiency and optimal distribution of related funds.

Outcome 2. Financial resources made available by the state sector for energy efficiency investment are used more efficiently

In order to improve the efficiency of use of financial resources made available by the state sector for energy efficiency investment, the project will improve the capacity of state organization to audit and identify cost effective energy efficiency investments through identification of audit best-practices, targeted training in international audit standards. Specific emphasis will be placed on assisting the government in further increasing the share of loans over grants in energy efficiency financing, and a respective study will be completed toward this end. The project will also implement an investment program developed in the field of state sector energy efficiency.

Output 2.1 Build the capacity of state organizations to audit and identify cost effective energy efficiency investments

With a view to improving the quality of energy audits, the project will identify audit best-practices and develop a program for audit training in order to improve the capacity for energy auditing, as well as provide training to national experts and local energy auditing firms in auditing and developing feasibility studies. To ensure consistency with international practice, new methodology of energy auditing will be developed on the basis of internationally recognized standards and disseminated nationwide.

Output 2.2 Increase the portion of loans compared to grants, offered by the state for energy efficiency

The use of credit funds for energy efficiency, as opposed to grants, clearly increases accountability on the side of borrowers who must monitor actual savings and maintain energy-efficient equipment in optimal condition to ensure that it will be possible to repay their loans; hence the efficiency of funds utilization is higher. Thus, the project will specifically assist the Committee on Energy Efficiency in promoting further increase in the portion of state funding available as loans for energy efficiency, by assisting in carrying out of a feasibility study and development of respective governmental regulation⁷. Based on the results of the feasibility study, a long-term strategy will be developed for restructuring government EE financing facilities to promote loans over grants. The project will seek approval of the proposed strategy by the government before the end of the project through its incorporation in the National Energy Saving Program.

Output 2.3 Build the capacity of state organization to secure credit (as opposed to grants) for energy efficiency investment

Considering the lack of skilled personnel and experience in budgetary organizations with using credit resources, identified as a particular barrier, the project will provide specific training to project partners in developing business plans, negotiations skills, basics of financial economics, loan applications. The project will also assist its partners in establishing cooperation agreements with local banks and other financing institutions.

Output 2.4 USD 8 million in new cost effective energy efficiency investments secured

To demonstrate the benefits of the proposed interventions, the project will implement an investment program in state energy efficiency sector. The Energy Center, set up by the project, will develop business plans for the 4 investment projects in the initial investment program (see Section IV, Part VII for details). It will provide support to the project partners on structuring financing and on implementation, ranging from consulting on tendering to equipment installation and operations.

Outcome 3. Project successes sustained and replicated throughout Belarus

In order to replicate project successes throughout Belarus and to overcome negative perceptions of incentives for energy saving in the state sector and provide local authorities and state enterprises with much-needed market information and training, the project will work to catalyze investments in potential partners and municipalities not involved in the initial phase of project investments. Awareness-raising activities will tie in closely with the activities related to the creation and operation of the Energy Center and the implementation of the initial investments. National experts will measure the savings and emission reductions resulting from the investments,

⁷ The Government of Belarus is committed to promoting further increase in the share of credit resources invested in the energy efficiency activities, which is reaffirmed by the Ministry of Economy of Belarus. Please see Section IV, Part I.

and it will publicize the progress and results of the projects in an ongoing outreach campaign. The Energy Center will play a policy advisory role and will submit comments and proposals to the Committee on Energy Efficiency based on lessons learned.

Output 3.1 Create an Energy Center to provide on-going support to state organizations for realizing more energy efficiency investments

To ensure replication of project successes and address the lack of a reliable source of EE-related information, an Energy Center will be established to provide ongoing support to state budgetary and self-financed organizations on issues related to implementation of energy efficiency measures. An initial information campaign to introduce the Energy Center will be conducted country-wide. The Energy Center will provide information and consultancy services on modern energy efficient equipment, methodological (technical) approaches and opportunities to increase energy efficiency, auditing, application of energy norms in budget planning, based on the best international and local practices. The Energy Center is expected to generate enough business to ensure its financial self-sufficiency after project closure. In the interim period, and in case business projects fail to meet the expectations, the Committee on Energy Efficiency is willing to provide necessary support to the Energy Center to ensure a smooth transition.

Output 3.2 Create a pipeline of energy efficiency investments for implementation after project closure

The Energy Center will conduct necessary energy audits and feasibility studies in order to develop a new energy efficiency investment program worth at least USD 10 million (including USD 5 million in loan funds and USD 5 million in partners' own resources) by the end of the project. Loan applications for the identified investment projects will be completed and agreements with new program partners signed.

Output 3.3 Expand the number or budget organizations using energy norms for annual budgeting, settlement account for energy savings, and providing incentives to staff for expanding the level of investment in energy efficiency

In order to disseminate best-practices, the project will carry out an ongoing information campaign about the project activities, including through a regularly updated website. Cooperation agreements between the Energy Center and state organizations and municipalities not involved in the UNDP/GEF project will be signed, and training in EE best-practices will be delivered to at least 30 new municipalities. To keep up with the international developments in the EE area, the Energy Center will sign cooperation agreements with energy conservation institutions in Belarus and with similar institutions (energy centers) in Eastern Europe and CIS states.

SHORT DESCRIPTION OF THE ENERGY CENTER

The Energy Center to be established will be founded by the investment consulting enterprise Belinvestenergoberezhnenie as its daughter enterprise (please refer to Section IV, Part X for details on the selection of Energy Center model). This will help to simplify the procedure of Energy Center's registration as a legal entity (according to the Belarusian legislation) on the one hand, and later on to achieve coordination of Energy Center's and Belinvestenergoberezhnenie's activities in their work with the state sector, on the other hand.

The Energy Center will have a separate bank settlement account. It will allow the Project Management Unit to control the financing of the Energy Center and will not let the management of the enterprise Belinvestenergoberezhnenie influence the financial flows of the Energy Center. It is expected that the director of Belinvestenergoberezhnenie will become a member of the Project Steering Committee and will be able to submit his proposals on the work of Energy Center. The director and heads of departments of the Energy Center will also be national experts working under service contracts (for the period of the project implementation). It will let the Project Management Unit control the work of the Energy Center staff monthly. Moreover, the procurement of goods and services with GEF funds for the Energy Center will be carried out according to the UNDP procedures. Simultaneously, the director of the Energy Center will report regularly to the Committee on Energy Efficiency. The project will be subject to annual audit as per UNDP financial rules.

By the beginning of the third year of the project implementation, the Energy Center should have an amount of work sufficient to ensure the salary of the operating personnel to be recruited. A new investment program will be developed during the last year of the project implementation to assist Energy Center's becoming self-financing

after the project completion. This program will be realized by the Energy Center with the assistance of the Committee on Energy Efficiency after the project completion.

Thus, the Energy Center will not be a part of the enterprise Belinvestenergoberezhnie, but will cooperate with it constructively. The activity of the Energy Center will be controlled, and motivated to attract appropriate specialists and make the Energy Center self-financing on a steady basis. Main areas of the Energy Center's activity include:

- energy auditing;
- development of business plans and feasibility studies;
- energy efficiency expertise of designing solutions;
- planning of energy resources consumption and corresponding funds;
- calculation of greenhouse gases emissions reduction;
- advanced training and informing of the state sector management and employees in energy efficiency

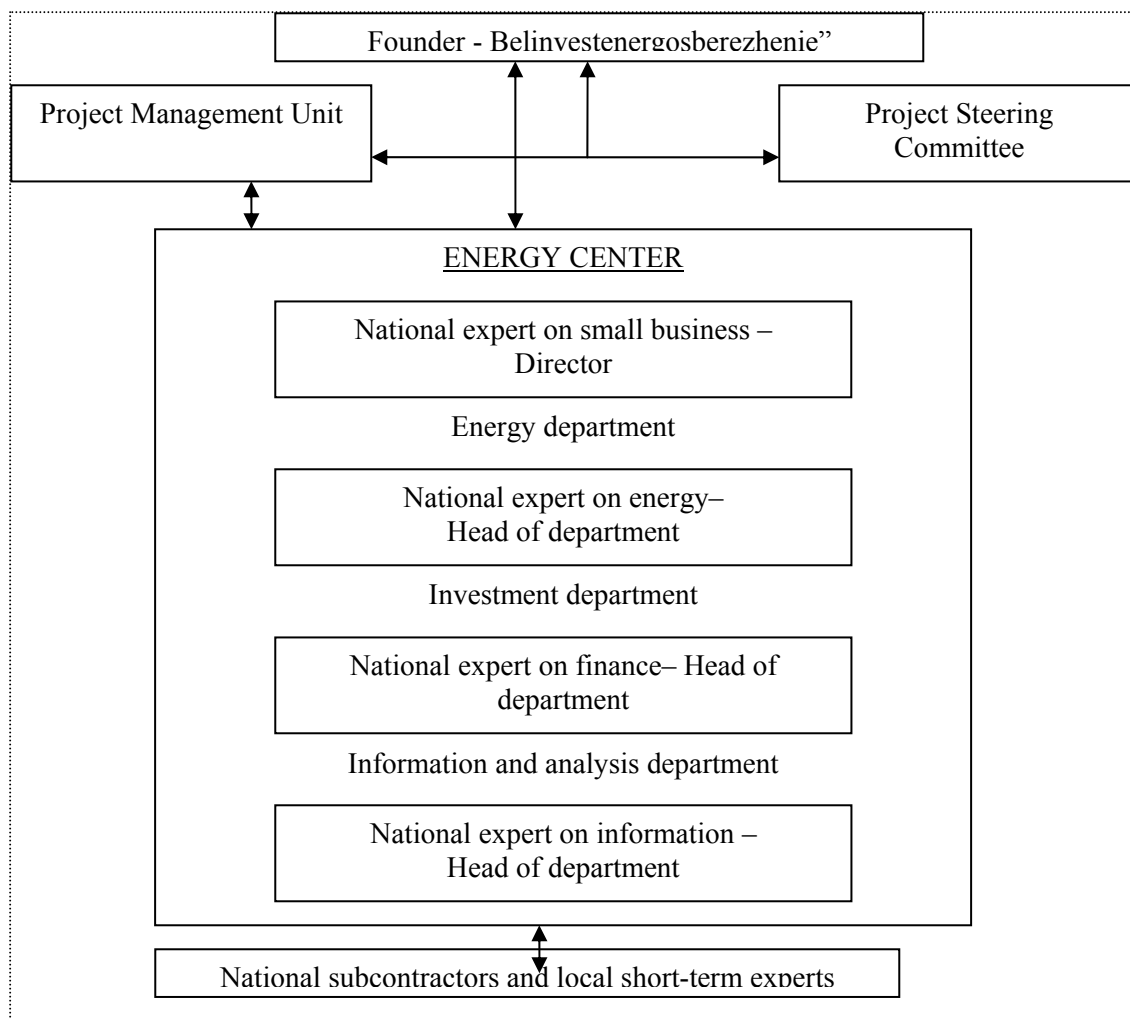
It is planned to hire international consulting company on training to conduct training of the Energy Center staff on energy auditing, especially in heat supply systems, improvement of skills when operating equipment for energy audits, evaluation and calculations of energy savings and GHG emissions reduction, selection of the best energy efficiency technologies and equipment, development of business plans, financial planning, monitoring of energy efficiency projects and evaluation of results, and guidance on working with banks to finance energy efficiency projects in the state sector.

The Energy Center staff will conduct ongoing management training personally and with assistance of national subcontractor and local experts for the project partners' staff (directors, energy managers, economists), including municipalities and regional executive committees, by means of training courses, conferences, free information and set up contacts with energy conservation institutions in regions of Belarus.

For the better development the Energy Center should have contacts with similar foreign institutions. It is planned that the international consultant on Energy Center development will assist the Energy Center management to set up contacts with similar centers and institutions.

Project Management Unit and the Energy Center will carry out ongoing information campaign about the Project and Energy Center activities. As a part of this campaign the information will be provided for the project partners and all interested institutions; a project web site will also be launched.

Proposed structure of the Energy Center is given below.



RISKS AND SUSTAINABILITY

The proposed project involves the participation and coordination of several main ministries (including the Committee on Energy Efficiency, the Ministry of Communal Services, the Ministry of Energy, the Ministry of Natural Resources and Environmental Protection, and the Ministry of Economy), and regional and local authorities. A project of this nature is likely to face risks, ranging from changes in world fuel prices to lack of commitment of various stakeholders, some of which lie outside the control of the project stakeholders (external risks), and some within the control of the project participants (internal risks).

External Risks

External risks by definition lie outside the control of the project and represent the external logic or assumptions in a project. The project has been designed so as to minimize the impact of external risks. During the project, the project team is responsible for monitoring changes in assumptions, and where possible works to influence the probability that the project assumptions hold true. The project's external risks are:

The risk of a lack of ongoing, long-term government support for energy efficiency improvements and incentives in the state sector: The success of the project to meet its objectives depends on the continued strong support from the Committee on Energy Efficiency and other government organizations, ensuring that energy saving activities continue after the end of the project. New Government regulations on the topic and the current level of support from the Committee on Energy Efficiency indicate that this risk is small. The risk is further mitigated by project activities that raise awareness of government organizations and decision-makers, create tools for long-term planning, and assist in the establishment of institutional arrangements that will continue to be effective after the

period of GEF support. The UNECE, UNDP and World Bank are active in the promotion of energy efficiency improvements in the state sector too.

The risk of low fossil fuel prices: The achievement of the immediate and global environmental objectives of the project depend on a gradual increase in the end user prices for fuels, and a reduction in the existing price distortions (at the border – the special tariffs agreed to with Russia – and the cross subsidies for energy end-users). Current trends and future indications are positive, and the assumption that prices will continue to increase appears to be good; as a result, this risk appears to be low. Even with relatively low world fuel prices, Belarus will face strong incentives to use energy saving and domestic fuel, as it will free up hard currency for other projects.

The risk of a poor investment climate: Large-scale investment by government or banks in infrastructure such as the upgrading of district heating networks requires a positive investment climate. This depends in part on political stability with continuity of investment-enabling policies, and continuing economic growth and inflation reduction. The prospects for these conditions to be met are good –there is stable economic growth and reforms, although gradual, are continuing.

Internal risks

The risk of poor co-operation between project stakeholders: To be successful, the project needs input and co-operation from several main ministries and other institutions in Belarus as well as their serious commitment to continue the promotion of the state sector energy efficiency improvements. The project will mitigate this risk by establishing a Project Steering Committee (PSC) as a main body to co-ordinate the project activities with other ongoing activities in Belarus, as well as to discuss and introduce the eventual legal and regulatory changes needed to promote energy efficiency incentives. As well special agreements between the Committee on Energy Efficiency and project partners are signed.

The risk of withdrawal of *baseline funding (sponsor risk)*: Despite the technical and financial support to project recipients there is a risk that the required “baseline” funding for the projects of the investment program is withdrawn. During the preparation of the project, this risk has been minimized by broad consultations with the key stakeholders. The project will minimize the risk of withdrawal by ensuring that participants in the projects continue to be kept fully informed of, involved in, and committed to the project. In addition, local participants will be involved in all phases of project implementation (including planning, implementation and training). The investment program is signed by potential investors.

The risk of *inadequate project implementation*: In a project of this complexity a top quality project management is essential for the success of it. Besides the experience and good knowledge of energy efficiency activities in general, the qualifications of the project management should include a proven track record and experience on promoting and managing projects of a similar size and complexity. These risks will be minimized by taking them into account while defining the Terms of Reference for the project managers and the other project personnel. Inadequate financial and administrative implementation capacities of the Government for the overall program management as well as local institutions and authorities for executing their respective subcontracts could also impede the project implementation and reduce the efficient utilization of project funds. This risk will be minimized by close monitoring of the implementation of project activities by UNDP and UNECE. The UNDP Country Office is also prepared to provide support services to the Government upon their request. The potential risk of the Energy Center failing to change the current system and remove the barriers identified is estimated as medium-to-low, owing to the high commitment from the key stakeholders (Ministry of Economy, Committee on Energy Efficiency) to further promote energy efficiency and improve cost-effectiveness of energy efficiency investments in the country, as expressed in the respective letters of commitment in Section IV, Part I. The Project Steering Committee will serve as the main tool for stakeholder coordination within the project to ensure that the above commitments are followed up on. Furthermore, by providing budgeting and energy norms advice, investment advice, feasibility assessments, elaboration of corresponding implementation guidelines, the would-be Energy Center is expected to contribute significantly to the Energy Efficiency Committee’s delivery on the new priorities of increased loan-based energy efficiency financing, application of institutional and staff incentives, and development of new market-based mechanisms for energy efficiency funding in the state sector, as set out in the draft National Energy Saving Program 2006-2010.

The risk of cost overrun and time delays (completion risk): This risk will be minimized by the negotiation of fixed-price "turnkey" contracts with suppliers and experts and careful selection of contractors.

The risk of use of inappropriate technologies (technology risk): In the project this risk is minimized by only making use of technologies with a satisfactory track record, and ensuring that only experienced contractors are used. The project implementers should be highly experienced and bring together expertise to overcome this risk. In addition hardware will be required to be supplied with favorable guarantees and maintenance contracts with the recipients.

The risk of a lack of local funds for personal and institutional incentives: The availability of these funds depends on proper approaches to planning of the funds to pay for energy resources. The Energy Center will provide appropriate consulting services to project partners to plan the funds properly, determine the saving and distribute the benefit gained. There is a strong support from the Committee on Energy Efficiency, Ministry of Economy and Central Government for introduction of incentives in budgetary institutions.

The risk of failure of Energy Center’s becoming self-financing: a new energy efficiency investment program will be developed before the Project completion to ensure sustainable functioning of the Energy Center. The Committee for energy efficiency will provide constant assistance to the Energy Center in search of customers. Moreover, an ongoing information campaign on the Energy Center’s activities will be conducted.

Sustainability

The issue of sustainability is addressed both directly and indirectly through the thoroughness of the project design. Activities that indirectly support the sustainability of the project include training, information dissemination and legislative support. Financial sustainability is directly addressed through the investment program and the support of the Committee on Energy Efficiency whereas institutional sustainability is supported through training of the Energy Center staff and project partners.

GLOBAL SIGNIFICANCE

Although industrial output has dropped significantly since independence from the USSR in 1991, heavy industry and manufacturing continues to make an important contribution to the economy, and is growing rapidly. As the demand for energy increases (the industrial sector grew 8% in 2000, 5% in 2001 and 4.3% in 2002) Belarus faces the choice of importing more energy, or using carbon intensive domestic fuels. A third option that the Government of Belarus is giving high priority to efficient use of energy as a means to improve its energy security position and its balance of trade. Under their First National Energy Saving Program the government has managed to reduce energy intensity from 1.34 koe/USD in 1990, to 0.93 koe/USD in 1999. Even so the Government estimates there is still potential to reduce energy consumption by 30% (0.5-1 million tfe annually) across the economy through comparatively low cost quick payback energy efficient investments. Analysis under the National Energy Saving Program has identified the district heating and combined heat and power (DH&CHP) sector as consuming around 70% of the country’s fuel needs (equal to consumption of 16 million tfe annually or 90% of CO₂ emissions), while having potential for cost effective savings of 2 million tfe at USD 8-15 per ton of CO₂ avoided. Section IV, Part IV lists the financial features of typical investments in the sector using current energy prices in Belarus, which is comparable with terms and conditions of concessional lending in Belarus. The government’s energy efficiency policies are expected to have the following impacts on CO₂ emissions as shown in the table below. The proposed project would contribute to these objectives.

Table 3: GHG emission intensity

| <i>CO₂ equivalent emissions</i> | <i>1990</i> | <i>2000</i> | <i>2010</i> |
|--|-------------|-------------|-------------|
| per-capita based | 11.8 | 5.0 | 7.1 |
| GDP-based | 1.4 | 0.7 | 0.6 |

This project is expected to leverage more than USD 8 million in internal investment. If the typical cost of reducing the emissions of 1 ton of CO₂ through energy efficiency investment in Belarusian DH&CHP sector is between USD 8 and 15 over an average 15 years equipment lifespan, the expected cumulative CO₂ reductions will be approximately 0.35 million tons of CO₂.

COUNTRY OWNERSHIP: COUNTRY ELIGIBILITY AND COUNTRY DRIVENNESS

The Government of Belarus ratified the United Nations Framework Convention on Climate Change (UNFCCC) on 9 May 2000. The Government of Belarus acceded to the Kyoto Protocol on August 12, 2005.

The project is in conformity of the overall government's strategy aimed at reducing energy costs and energy import dependency. The government's primary ongoing initiative in energy efficiency is the National Energy Saving Program 2001-2005. At the end of 2002, the Program was amended according to the Regulation of the Government № 1820. In the second half of 2005, the Committee on Energy Efficiency will finalize the Third National Energy Saving Program 2006–2010. At the same time, major ministries, and all regional executive committees (including the executive committee of the city of Minsk) will develop energy savings programs for the same period. The project will thus be able to make a valuable contribution to the implementation of the above program through a range of activities described above.

The proposed project is also fully in line with UNDP's priorities in assistance to Belarus. Environmental sustainability has been identified as one of the key areas of support to the Government of Belarus as part of the UNDP Belarus Country Program 2006-2010. The new CP states that specific interventions, among other things, will focus on "promotion of energy efficiency and clean energy technologies". In addition, the framework of assistance of UNDP Belarus closely follows the objectives set by the Millennium Declaration. The project's activities, which are expected to result in the reduction of carbon dioxide emissions and improved utilization of energy resources are in line with UNDP activities in support of the MDGs.

REPLICABILITY

Project replicability will be provided by ongoing training of the project partners' staff by means of training courses, conferences, free information, setting up contacts with energy conservation institutions in Belarus regions and with similar institutions (energy centers) in Eastern Europe and republics of the former USSR. By the end of the project, a new energy efficiency investment plan (program) for the state sector valued at USD 10 million will be developed by the Energy Center and a national sub-contractor.

PART III: MANAGEMENT ARRANGEMENTS

The project will be nationally executed in accordance with standard UNDP national execution guidelines. The Committee on Energy Efficiency will be the Implementing Partner for the project and will appoint a National Project Director. The Committee will be responsible for planning and overall coordination of project activities, reporting. Recruitment, subcontracting and financial operation will be conducted in line with corresponding UNDP procedures. The Committee is responsible for the production of outputs, for the achievement of project objectives and for the use of financial resources.

Project implementation will be overseen by a Project Steering Committee to be established at the project onset. The PSC will be responsible for ensuring that the project is implemented in line with the agreed project design and consistent with national development policies. The PSC will also be responsible for approving the project's annual workplans and reviewing and endorsing the Annual Progress Reports (APR) prior to the annual Tripartite Review Meetings.

Key participants of the Project Steering Committee will be representatives of UNDP, UNECE, Belarusian Ministries and Executive Committees. In order to provide wider exposure to best-practices and experiences in the region, a number of energy efficiency professionals from NIS and Eastern European countries' Energy Centers will be invited to sit on the PSC.

The UNECE secretariat, which worked in support of the PDF A and B phases of this project, will play an important role in the implementation of the full-scale project, providing, where necessary:

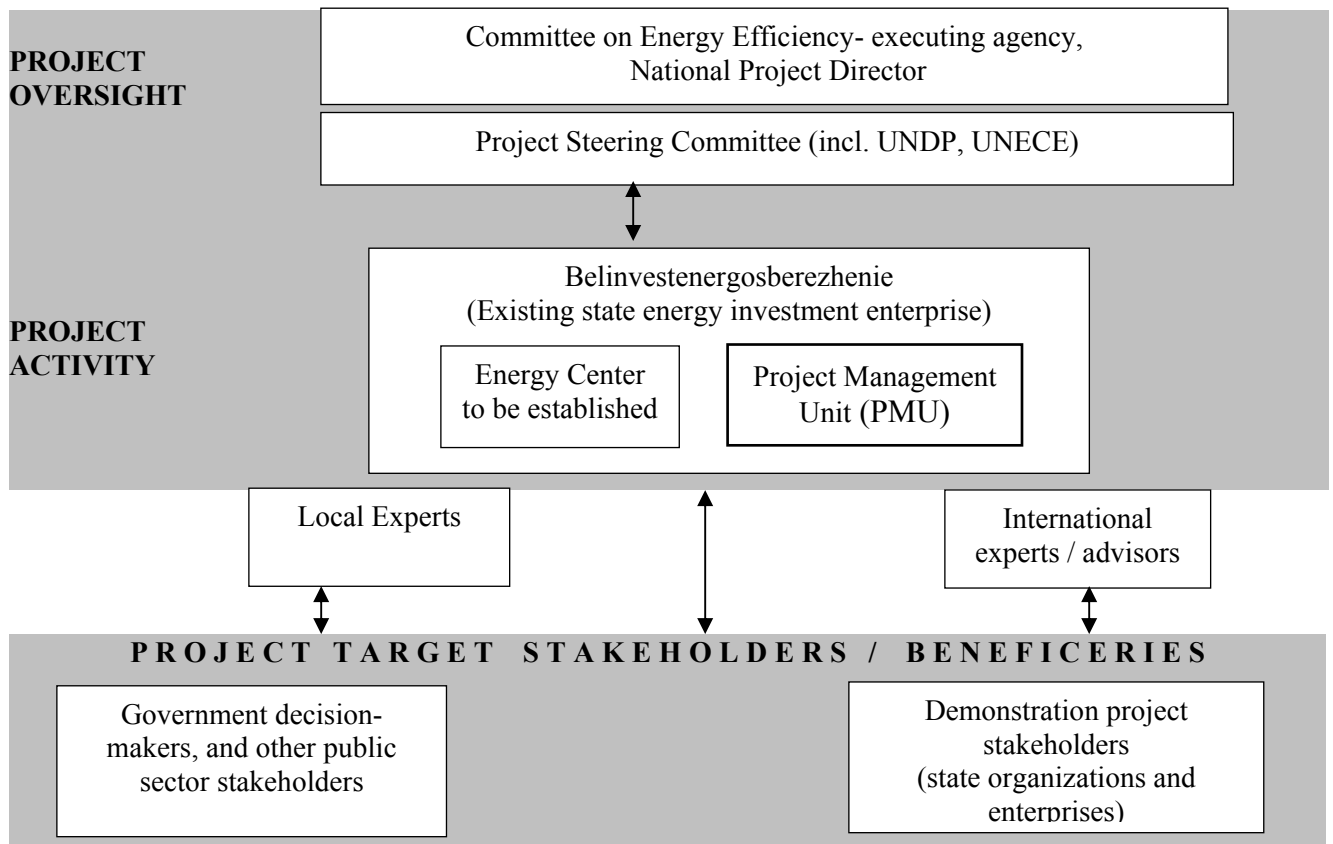
1. *Technical support* for the project execution consisting of assistance to the Implementing Partner in Minsk and local implementation units including development of terms of reference, consultant contract oversight, monitoring and reporting, dissemination of information and experience to energy efficiency demonstration zones in the Russian Federation and abroad, and reporting to UNDP on project implementation.

2. *Additional resources* on an 'in-kind' contribution basis to the project such as assistance in visiting of international forums for the consideration of policy reforms in relation to western and eastern European best practice. Within the same framework, support could include the presentation of project opportunities to foreign business and financial community, provision of training materials for business planning and financial engineering, and the preparation of proposals for leveraging additional support for investments or technical assistance (especially for the national and international dissemination of results as they emerge).

Operational implementation of the project will be led by a full-time Project Manager, under the overall supervision of UNDP and the Committee on Energy Efficiency. The Project Manager will be supported by a competent Administrative and Financial Assistant. The Project Management Unit will be established within the state enterprise Belinvestenergosberezhenie which also serves as the Project Management Unit for the World Bank Social Infrastructure Retrofitting Project. Qualified national and international experts and institutions will be contracted to implement the project activities.

The Implementing Partner will work closely with the Ministry of Natural Resources and Environmental Protection, which is designated as the government-implementing agency under the UNFCCC and is also responsible for monitoring air quality.

The project implementation structure is presented below:



In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF. The [UNDP logo](#) should be more prominent - and separated from the [GEF logo](#) if possible, as UN visibility is important for security purposes.

National Level Support

The Committee on Energy Efficiency under the Council of Ministers of Belarus within tasks and objectives of the Project will provide project staff with timely access to government decision-makers, and free access to all relevant

information necessary for project implementation. The Committee on Energy Efficiency will appoint a National Project Director who will coordinate inputs from the Government, UNECE, UNDP/GEF and other international and local project partners and who will ensure that activities are implemented in a timely manner. The Government will provide the staff time needed for the participation of the members of the Steering Committee in the preparation for and in the actual meetings of the Committee as an in-kind contribution. The Committee on Energy Efficiency as represented by the National Project Director also has a major role in the coordination of the project activities with its own relevant activities as well as the activities of other sponsors active in this sector in order to achieve maximum coordination and realizing committed co-financing for the project and replication of successful project results.

The Committee on Energy Efficiency will provide office, Internet access and telephone lines for the project and the Energy Center staff. GEF and the Committee in 1:1 ratio will pay for EC equipment and furniture. During the project implementation EC office maintenance costs will be covered by the Committee on Energy Efficiency It has also committed no less than USD 2.9 million in co-financing for energy efficiency investment projects as part of Full project.

UNDP Inputs

The UNDP Office in Belarus will provide support services to the National Implementing Partner in the technical and financial implementation of the project upon the corresponding requests. These support services can include support to financial accounting and reporting, direct payments, recruitment and contracting of project personnel as well as procurement of goods and services. UNDP will also coordinate the project activities with its other related projects as well as facilitate the coordination with activities of other donors.

UNDP/GEF will also provide advisory and consulting services through its regional expert on climate change and/or other GEF experts whose services will be covered from the GEF contribution.

UNECE Inputs

UNECE through its regional advisory services program will provide its expert input as an in-kind contribution and will be reimbursed only for the mission costs. The Regional Adviser on Energy will assist local experts to analyze the market, review the existing strategies, master plans and government policies for energy efficiency, as well contributing with international experiences for market transformation activities; an analysis of the different long-term measures and strategies to transform the energy efficiency market in Belarus with respect to their economic implications as well as their impact on greenhouse gas emissions and local pollutants; course of overcoming of barriers and obstacles to the implementation of the different strategies; and presentation and discussion of the results of the analysis (eventually by organizing a workshop), with respect to the overall concept of energy efficiency market transformation.

Total project inputs

The following Table summarizes total project inputs on a per-outcome basis.

| Outcome | Source | | | | Total (USD) |
|--|------------------|------------------|----------------|------------------|------------------|
| | GEF | CEE | UNECE | Partners | |
| 1. Increased incentives for state organizations to invest in energy efficiency | 170,700 | 25,000 | 25,000 | | 220,700 |
| 2. Financial resources made available by the state sector for energy efficiency investment are used more efficiently | 371,700 | 2,975,000 | 25,000 | 5,119,600 | 8,491,300 |
| 3. Project successes sustained and replicated throughout Belarus | 857,600 | 150,000 | 50,000 | | 1,057,600 |
| TOTAL | 1,400,000 | 3,150,000 | 100,000 | 5,119,600 | 9,769,600 |

PART IV. MONITORING AND EVALUATION

Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF. The project indicators, as given in the Project Logical Framework, are the benchmark against which Monitoring and Evaluation will take place and a number of specific Monitoring and Evaluation activities are given below.

Project Manager and key experts will continuously report to UNDP and Project Director on the progress achieved during the meetings of the Project Steering Committee, to be established at the beginning of the project. The Steering Committee will be composed of the representatives of key project partner organizations. Its meetings (at least once every 6 months) will be called on to make recommendations and suggestions on points to be improved and change the directions of the project if necessary in order to ensure better coordination and complementarity of activities with other related initiatives in Belarus. Other major tools for monitoring will include the continuous update of the work plan, field visits, quarterly operational reports to GEF, annual project reports, financial audit and a Tripartite Review Meeting at the end of the project.

The standard Monitoring and Evaluation activities include:

- The *inception report*, which constitutes the finalization of project design and presents the overall workplan as well as the first detailed annual workplan divided in quarterly time frames detailing the activities and progress indicators that will guide implementation during the first year of the project. The inception report is due at the beginning of the project implementation (month 3) and is the responsibility of the Project Manager. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP-CO and the UNDP/GEF regional office by the project team. CO will share the Quarterly Operational Reports (QOR) with GEF Regional Coordination Unit.
- The *Annual Project Workplan* describes in detail the provision of inputs, activities, and expected results for the project in a given year or for the life of the project, indicating schedules and the persons or institutions responsible for providing the inputs and producing results. The workplan will be updated and revised each year by the Project Manager.
- The *Annual Project Report (APR)* aims to obtain the independent views of the main stakeholders of a project on its relevance, performance and the likelihood of its success and will be prepared each year by the Project Manager under the leadership of the UNDP office in Minsk, together with key stakeholders including are the target groups, project management, and the Committee on Energy Efficiency, and submitted to the Annual Tripartite Review (TPR). Additional reports may be requested, if necessary, during the project period. The APR shall be submitted to the UNDP Resident Representative at least four weeks prior to the scheduled date for the TPR.
- To minimize paperwork and processing time, the APR will be held in conjunction with the annual *Project Implementation Review (PIR)*. The annual PIR reviews financial status, procurement data, impact achievement and progress in implementation. A Harmonized APR/PIR report will be prepared each year between June and September under the leadership of the UNDP-CO together with other project stakeholders and with the support of the UNDP/GEF regional co-ordinator and the GEF Monitoring and Evaluation Team. The Annual PIR prepared by the UNDP-CO is intended for submission to the GEF, and is an annual obligation to the GEF Secretariat. Additional progress reports and reviews may be requested, if necessary, during the project's implementation.
- The *Tripartite Project Review (TPR)* is the highest policy-level meeting of the parties directly involved in the implementation of a project and will include the Belarus Committee on Energy Efficiency, the Minsk Office of the UNDP, the project manager, and the direct beneficiaries and other stakeholders. They consider the progress of a project based on the APR. The TPR meetings will be held once a year (the first within 12 months of the start of the project) under the leadership of the UNDP office in Minsk. The Minsk UNDP office will prepare *Tripartite Review Reports* immediately following the TPR meeting.
- Mid-term and final evaluation are independent evaluations organized mid-way through the project implementation (focuses on the effectiveness, efficiency and timeliness of project implementation; highlights issues requiring decisions and actions), and at the end of the project (in addition identifying impacts and sustainability of results). The project team, the UNDP office in Minsk, and the UNDP/GEF

Regional Office in Bratislava are responsible for organizing the evaluations, under the leadership of the Minsk UNDP office.

- The *Terminal Report* is the overall assessment of the project by its stakeholders and additionally aims to serve as a source of lessons and recommendations for follow-up activities. It will be prepared during the final two months of the project.
- The *Terminal Tripartite Review* considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its immediate objectives and contributed to the broader environmental objective, and decides on future actions. This review will be carried out in the final month of the project.
- *Audit* - the Government will provide UNDP with certified annual financial statements relating to the status of UNDP/GEF funds, including an independent annual audit of these financial statements, according to the procedures of the UNDP. The audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government, and at the cost of the executing agency. During the course of the project there are three audits (in the second quarter of years 2, 3, and 4), and a fourth to be conducted after the close of the project.

As part of the assessment of awareness raising activities a survey of attitudes among key decision-makers will be carried out at the end of year 1 and year 3. Throughout the project data will be collected to allow the verification of achievement on the indicators given in the Project Logical Framework. The Project Logical Framework gives details of indicators, verification sources, units, frequency and responsibility.

A tentative plan of monitoring and evaluation is presented below:

| Activity | Year 1 | | | | Year 2 | | | | Year 3 | | | | Year 4 | | | |
|-------------------------------------|---------|---|---|---|--------|---|---|---|--------|----|----|----|--------|----|----|----|
| | Quarter | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Inception report | ■ | | | | | | | | | | | | | | | |
| Workplan | ■ | | | | ■ | | | | ■ | | | | ■ | | | |
| Annual Project Report (APR) | | | | | ■ | | | | ■ | | | | ■ | | | ■ |
| Tripartite review (TPR) | | | | | | ■ | | | | ■ | | | | ■ | | |
| Project Implementation Review (PIR) | | | | | ■ | | | | ■ | | | | ■ | | | ■ |
| Mid-term evaluation | | | | | | | | | ■ | | | | | | | |
| Audit | | | | | | ■ | | | | ■ | | | | | ■ | |
| Final evaluation | | | | | | | | | | | | | | | | ■ |
| Terminal report | | | | | | | | | | | | | | | | ■ |
| Terminal tripartite review | | | | | | | | | | | | | | | | ■ |

Types of M&E activities are presented in the table below.

Besides UNDP reporting to UNDP/GEF, the project will be subject to monitoring and evaluation according to the Regulation on Evaluation of International Technical Assistance Projects approved by the decision of Council of Ministers of Belarus #1513 dated November 26, 2004.

Annual audits of project expenditure will be done in accordance with UNDP and GEF requirements.

| Type of M&E activity | Responsible Parties | Budget US\$ <i>Excluding project team Staff time</i> | Time frame |
|----------------------|--|---|---|
| Inception Workshop | <ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO ▪ UNDP GEF | 5,000 | Within first two months of project start up |
| Inception Report | <ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO | None | Immediately following IW |
| TPR and TPR report | <ul style="list-style-type: none"> ▪ Government Counterparts | None | Every year |

| Type of M&E activity | Responsible Parties | Budget US\$ <i>Excluding project team Staff time</i> | Time frame |
|---|---|--|---|
| | <ul style="list-style-type: none"> ▪ UNDP CO ▪ Project team ▪ UNDP/GEF RCU | | |
| Steering Committee Meetings | <ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO | None | Following Project IW and subsequently at least twice a year |
| Annual Project Report and Project Implementation Review | <ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO | None | Every year |
| Technical reports | <ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed | 8,000 (average 2,000 per year) | As requested by UNDP/GEF RCU |
| Mid-term External Evaluation | <ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP/GEF RCU ▪ External Consultants (i.e. evaluation team) | 40,000 | At the mid-point of project implementation. |
| Final External Evaluation | <ul style="list-style-type: none"> ▪ Project team, ▪ UNDP-CO ▪ UNDP/GEF RCU ▪ External Consultants (i.e. evaluation team) | 50,000 | At the end of project implementation |
| Terminal Tripartite Review and Terminal Report | <ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant | None | At least one month before the end of the project |
| Lessons learned | <ul style="list-style-type: none"> ▪ Project team ▪ UNDP/GEF RCU (suggested formats for documenting best practices, etc) | 16,000 (average 4,000 per year) | Yearly |
| Audit | <ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team | 4,000 (average 1,000 per year) | Yearly |
| Visits to field sites by project team | <ul style="list-style-type: none"> ▪ Project team | 20,000 | As often as required |
| TOTAL INDICATIVE COST | | 143,000 | |

PART V. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the Government of Belarus and the United Nations Development Programme, signed by the parties on 24 September 1992.

Revisions may be made to this project document with the signature of the UNDP Resident Representative, provided that he or she is assumed that the other signatories of the project document have no objections to the proposed changes concerning:

- Changes or additions to any annexes to the project document;

- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of inputs already agreed to or by cost increases due to inflation;
- Mandatory annual revisions, which rephrase the delivery of agreed project inputs or increased expert or other cost due to inflation or take into account expenditure flexibility.

SECTION II: STRATEGIC RESULTS FRAMEWORK AND GEF INCREMENT

PART I: INCREMENTAL COST ANALYSIS

BROAD DEVELOPMENT GOALS

The overall development objective of this project is to provide affordable, reliable, and sustainable sources of energy in Belarus. The project will reduce fuel consumption in the state sector by more than 148,000 tons of fuel equivalent over 15 years and reduce greenhouse gas emissions by around 350,000 tons of CO₂ equivalent over the same period by catalyzing annual investments increasing energy efficiency in the state sector of Belarus. The project will also provide substantial local benefits by reducing energy costs for project stakeholders and by decreasing the dependence of the Government on imported fossil fuel.

BASELINE

The Government of Belarus is strongly committed to increasing energy efficiency. It has developed one of the most thorough legislative and regulatory frameworks for promoting energy efficiency in the NIS region, and it has made several different sources of financing available for the implementation of energy savings projects. For the period, 2001-2004, these funds totaled nearly USD 365 million from national and local budgets and extra-budgetary funds. However, the government currently lacks the capacity to capture the large potential market for energy efficiency in the state sector, due to barriers including a lack of awareness among stakeholders about the benefits of energy efficiency investments, a lack of capacity to assist stakeholders in identifying projects and structuring their financing, and a lack of experience in connecting positive results in these projects with benefits to the actual investors and other participants.

It is reasonable to assume that in the absence of support from the GEF, the government will continue to allocate funds for energy efficiency projects. It has already developed a draft national plan for expenditures on energy efficiency for the period 2006-2010 (see Section IV, Part IV for financing levels and resources). However, given the current barriers to energy efficiency investments, these funds will be underutilized from the perspective of disbursement rates: non-grant funding disbursement rates for government programs in energy efficiency averaged 52% in 2001 to 2004. These funds will also be underutilized from the perspective of efficiency (non-grant funding can be leveraged in the future, whereas grants provide no returns even when the rate of return on the investment in question is positive). In summary, the government's commitment to energy efficiency will not translate into the development of a market for energy efficiency investments.

GLOBAL ENVIRONMENTAL OBJECTIVE

The global environmental objective is the reduction of GHG emissions by removing the major barriers to the development of a market for energy-efficient products and services to reduce and offset fossil fuel use in Belarus. The project has been designed to be consistent with the GEF Operational Program 5: "Removal of Barriers to Energy Efficiency and Energy Conservation" and GEF Strategic Priority 2: "Increasing Access to Local Sources of Financing."

GEF ALTERNATIVE

The proposed activities address the barriers to larger-scale investments in energy efficiency in Belarus. The project activities include both direct investments in state enterprises that will reduce emissions and capacity development to replicate these types of investments. The potential for replication is significant. The state sector accounts for 68% of total fuel and energy resources consumption in Belarus (as opposed to 2% for private commercial organizations). Within this sector, state self-sustained organizations are the largest consumer, using 15.2 million tons of fuel equivalent annually. In the course of project preparation, the project team short-listed 4 projects for consideration from an initial pool of 108). The investments proposed under Output 2.4 are reflective of the type of projects that can be realized, and each project summary lists the potential for replication within the field (see Section IV, Part VII).

INCREMENTAL COST MATRIX

The incremental cost matrix is provided directly below this summary. Under the baseline, investments in energy efficiency will occur, but at a reduced rate. Government legislation will support energy savings, but this support will

not translate into increased investments due to a lack of high-quality, consolidated services in energy efficiency project identification, design, and implementation. Financing support for energy efficiency will be available from some grant sources, but there will not be an effort to prioritize investments, learn from them, and replicate them in similar facilities. Other barriers to energy efficiency investments, such as a lack of awareness of the benefits of energy efficiency investments and a lack of incentives for institutional and individual stakeholders, will remain unaddressed.

Under the GEF alternative, and during the 4-year project, pilot projects 9,880 tons of fuel equivalent annually will be implemented, for a 15-year total fuel savings of 148,200 tons of fuel equivalent. The annual CO₂ emission reduction due to the projects will be more than 23,437 tons annually. Assuming a lifetime of the equipment installed of 15 years, then the life cycle CO₂ emission reduction is estimated at 351,555 tons. This reduction is a direct result of the proposed intervention. For a GEF contribution of USD 1.595 million (including USD 195,000 for the PDF B), the cost of reduced CO₂ is USD 4.5 per ton.

This cost estimate for CO₂ reductions is quite conservative in that it includes only direct project and direct post-project emission reductions. Estimates on indirect reductions are, of course, larger. Based on familiarity with the potential market for investments and in government spending trends, the project team estimates that the replication factor of the project ranges from 4 to 5; i.e., that indirect emissions resulting from additional investments in the sector would result in annual CO₂ reductions ranging from 93,000 to 115,000 tons annually for a life cycle reduction of 1.4 to 1.8 million tons. Even if the project replication consisted only of implementing the investment program developed by the Energy Center under the proposed Output 3.2, annual reductions from that investment program could be expected to generate reductions of approximately 250,000 tons of CO₂ per year, or a life cycle reduction of 3.8 million. This estimate, of course, does not include additional investments that are assumed to take place as the result of awareness-raising activities and training for potential investors conducted by the Energy Center.

ADDITIONAL BENEFITS

This project will bring additional domestic benefits to Belarus. The Government is particularly interested in increasing fuel security, and this is a very strong incentive for reducing the amount of imported energy that is consumed. On a related note, reduced consumption of fuel in state sector enterprises will reduce expenditures for imported oil and gas, which in turn will reduce the foreign debt burden.

In the medium term, this project is also likely to result in local air quality improvements, estimated at a minimum of 113 tons of SO₂ per year (from reductions in mazut consumption), or 1,695 tons over the 15-year project life-cycle. This estimate takes into account only those projects in the initial series of investments, and the total amount of reductions from the expanded investment portfolio and indirect investments fostered by the Energy Center and other project activities will be accordingly higher.

Incremental Cost Matrix

| Component | Baseline | Alternative | Increment |
|---|---|---|--|
| Global Environmental Benefits | In the baseline, investments in energy efficiency will result in limited reductions in fuel consumption in the state sector. Investments in energy efficiency will consist primarily of one-time grants, and potential projects will go unrealized because of a lack of incentives to implement the projects and a lack of capacity among stakeholders to utilize bank credits. There will not be a centralized source of training and expertise for energy efficiency investments with an overview of the various sources of funding available. | <p>In the GEF alternative, 148,245 tons of fuel equivalent is reduced directly through investments in energy-savings projects.</p> <p>GEF alternative CO₂ emissions for the sector are 23,437 tons annually, for an estimated life-cycle reduction of 0.35 million tons.</p> <p>Experts will provide a centralized source of training and expertise for energy efficiency investments with an overview of the various sources of funding available, increasing the demand for both grant and credit resources.</p> | <p>Significant GHG emission reductions are attained.</p> <p>Annual direct CO₂ emission reductions in the final year of the project reach 23,437 tons.</p> <p>The 15-year CO₂ reductions are nearly 0.35 million tons.</p> <p>Indirect life cycle CO₂ emission reductions projected as a result of this project range from 1.4 to 1.8 million tons per year.</p> |
| Domestic Benefits | Under the baseline, domestic benefits would include reductions in local air pollution and reductions in fuel imports. | In addition to increased fuel security, the investments in energy efficiency in the state sector under the proposed project will also increase improvements in local air quality and reduce local spending on fuel. Energy users in the state sector will also improve their capacity to manage energy resources, increasing the quality and reliability of heat and power in state facilities, and improving comfort in communal facilities and competitiveness in state enterprises. | Added fuel security, improved industrial capabilities, better local air quality (including SO ₂ emissions reduced by 113 tons per year, or 1,695 tons total) and improved comfort in communal facilities managed by the state sector. |
| Components: | | | |
| Increased incentives for state organizations to invest in energy efficiency | While the concept of settlement accounts for institutions and performance incentives for workers in the state sector exist, they are not utilized to stimulate investments in energy efficiency. Institutions and individuals have little incentive to develop and implement energy saving projects, as the benefits do not accrue to them even when savings may be substantial. Furthermore, out-of-date methodologies of planning funds to be allocated for energy resources and accounting used by budget institutions overcomplicate utilization of the funds saved through energy efficiency for further investment. | Establishment of special settlement accounts, introduction of institutional and staff incentives to energy efficiency projects, and clear guidelines on application of energy norms in energy planning create motivation to identify and carry out additional projects. | Introduction of settlement account to accrue saving from energy efficiency measures, application of performance incentives to the energy efficiency sector. |
| | Cost: 0 | USD 25,000 (Government) USD 25,000 (UNECE) USD 170,700 (GEF) | USD 25,000 (Government) USD 25,000 (UNECE) USD 170,700 (GEF) |

| | | | |
|---|---|---|---|
| Financial resources made available by the state sector for energy efficiency investment are used more efficiently | Energy efficiency funding remains a priority, but funding is not targeted strategically or coordinated. The effectiveness of the investments which do occur is compromised by the low quality of audits and feasibility studies which are used to identify potential investments. Availability of grant financing from the government creates no incentive for state organizations to maximize energy savings. Funding for energy efficiency continues according to the National Energy Saving Program, but there is no prioritization of project areas. Financing continues to be dominated by government grants, with continued low disbursement rates for available credits, as state organizations lack skilled personnel and experience of using loan resources to finance energy efficiency measures. | Key investments by the Committee on Energy Efficiency and oversight by the Energy Center lead to a portfolio of energy saving projects with a high potential for replication. Projects also provide information on techniques that are particularly successful and cost-effective, and information on the projects can be shared with other potential investors. Particular emphasis is placed on the use of loan resources to stimulate cost-effectiveness of energy efficiency investments. | Improvement of quality of energy audits and feasibility studies. Advancement of state policy on the increase of share of loans in energy efficiency financing. Key barriers to investments in energy efficiency, such as a lack of well-prepared, bankable projects and a lack of awareness of the benefits of investments in energy efficiency, have been permanently reduced. |
| | Cost: USD 5,119,600 (Project Partner contributions) | USD 2,975,000 (Government, Committee on Energy Efficiency) USD 5,119,600 (Project partner contributions) USD 25,000 (UNECE) USD 371,700 (GEF) | USD 2,975,000 (Government) USD 5,119,600 (Project partner contributions) USD 25,000 (UNECE) USD 371,700 (GEF) |
| Project successes throughout Belarus sustained and replicated | A continued lack of awareness among state sector institutions hinders the identification and implementation of projects. Lack of coordination among the government and sites with potential energy efficiency projects leads to little or no prioritization, an inability to share lessons learned in a formal way or scale up successful initiatives. While some investment occurs, a lack of information on concrete results of energy-saving measures in the state sector makes it difficult to use projects to inform policy. | The project provides a source of expertise and information for the state sector. Project team oversees the development of a long-term stream of high-quality energy efficiency projects with diversified financing. Available funding is used more efficiently through project prioritization and leveraging. Increased awareness of energy efficiency issues and energy management in the state sector leads to an increase in demand for energy efficiency services. | Ongoing, high-quality support to the Government and to energy users throughout the state sector in a streamlined manner. Informed guidance and close monitoring provide direct, measurable reductions in fuel consumption and greenhouse gas emissions. Results can be used for replication. |
| | Cost: 0 | USD 150,000 (Government) USD 50,000 (UNECE) USD 857,600 (GEF) | USD 150,000 (Government) USD 50,000 (UNECE) USD 857,600 (GEF) |
| TOTAL Cost | Total baseline costs: USD 5,119,600 from local sources | Total project costs: USD 9,769,600 | Total Incremental costs: USD 1,400,000 requested from GEF USD 100,000 from UNECE USD 3,150,000 from the Government USD 5,119,600 from project partners |

PART II: LOGICAL FRAMEWORK ANALYSIS

Logical framework

| Project strategy | Objectively verifiable indicators | | | | |
|---|--|---|--|--|--|
| Goal: Greenhouse gas emissions are reduced. Fossil fuel consumption is reduced. | Specific results from the successful implementation of the project will be investments by Belarusian investors of no less than USD 8 million, including USD 2.9 million from the Committee on Energy Efficiency during project implementation. The resultant annual energy savings will total approximately 9, 880 tons of fuel equivalent. Annual greenhouse gas emission reductions will equal approximately 23, 437 tons of CO ₂ equivalent. As a result of the implementation of the proposed project, conventional fuel savings will lead to a reduction of approximately 352, 500 tons of CO ₂ equivalent over a 15-year period. | | | | |
| | Indicator (quantified and time-bound) | Baseline | Target | Sources of verification | Risks and Assumptions |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Objective of the project | | | | | |
| Influx of internal investment in energy efficiency projects in the state sector increased as the result of the project implementation | 23, 437 tons of CO ₂ equivalent and 9, 880 tons of fuel equivalent reduced annually by the end of the project due to domestic investments in public sector energy efficiency. | The state sector consumes 68% of total fuel and energy resources. Low interest on the part of investors, low level of motivation and capacities in the state sector. State investment funds for energy efficiency are under subscribed. | Increase in investments in energy efficiency in the state sector by USD 18 million | Reports of the Committee on Energy Efficiency; project reports; independent final evaluation of the project. | The risk of a lack of ongoing, long-term government support for energy efficiency improvements and incentives in the state sector (low). The risk of a poor investment climate (medium). |
| Outcome 1 Increased incentives for state organizations to invest in energy efficiency | Increased levels of investment in energy efficiency by targeted organizations | Targeted organizations invest no funds of their own in energy efficiency (Currently funds for EE are coming from state budget, not from their own resources) | Targeted organizations have increased their investment in energy efficiency by USD 100,000 annually from 3 rd project year. | Final project report; annual reports of the project partners; independent final evaluation. | The risk of inadequate project implementation (low). The risk of time delays (completion risk) (medium). |

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| <p>Output 1.1 Budget organizations use energy norms in estimating their annual budget</p> <p>Activity 1.1.1 Develop new methodology and a manual for application of energy norms in energy planning</p> <p>Activity 1.1.2 Conduct training for national experts (including staff of regional energy efficiency departments) and budget organization staff in the application of energy norms</p> <p>Activity 1.1.3 Provide on-going consulting services to the project partners (local authorities) in budgeting and energy planning</p> | <p>Number of budget organizations using energy norms to estimating their annual budget requirements</p> | <p>No budget organizations use energy norms in estimating their annual budget requirements</p> | <p>30 budget organizations use energy norms in estimating their annual budget requirements by 3rd project year</p> | <p>Project reports provided for in M&E plan. Reports of local authorities.</p> | |
| <p>Output 1.2 Budget organizations deposit their energy savings into settlement accounts</p> <p>Activity 1.2.1 Provide assistance and consulting services to project partners in setting-up special settlement accounts</p> <p>Activity 1.2.2 Support target municipalities to measure energy savings, and financial revenues</p> <p>Activity 1.2.3 Support target municipalities to report on financial savings to ministry of finance</p> | <p>Number of budget organizations depositing their energy savings into a settlement account</p> | <p>No budget organizations deposit their energy savings into a settlement account</p> | <p>30 budget organizations now deposit their energy savings into a settlement account by 3rd project year.</p> | <p>Project reports provided for in M&E plan. Reports of local authorities.</p> | |

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| <p>Activity 1.2.4 Develop a guide for measuring energy and financial saving</p> <p>Activity 1.2.5 Train regional energy efficiency departments to disseminate best practices in calculating and reporting</p> | | | | | |
| <p>Output 1.3 Budget organizations issue incentives to staff responsible for increasing their investments in energy efficiency</p> <p>Activity 1.3.1 Review options for staff incentives</p> <p>Activity 1.3.2 Develop a proposal to introduce staff incentives and discuss this with target municipalities</p> <p>Activity 1.3.3 Develop an implementation plan for introduction of staff incentives, including setting aside of budget resources, identification of responsible staff, bonus criteria</p> <p>Activity 1.3.4 Run an information campaign to inform staff of this opportunity for staff incentives</p> <p>Activity 1.3.5 Training for project partners in introduction of staff incentives for improving energy efficiency and optimal distribution of related funds</p> | <p>Number of budget organizations issuing incentives to staff responsible for increasing their levels of investment in energy efficiency</p> | <p>No budget organizations issue incentives to staff responsible for increasing their levels of investment in energy efficiency</p> | <p>30 budget organizations issue incentives to staff responsible for increasing their levels of investment in energy efficiency by 3rd project year.</p> | <p>Project reports provided for in M&E plan. Reports of local authorities.</p> | |

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| <p>Outcome 2 Financial resources made available by the state sector for energy efficiency investment are used more efficiently</p> | <p>The proportion of loans compared to grants made available by the state for energy efficiency investment</p> | <p>4% of state resources available as loans</p> | <p>10% of state resources available as loans</p> | <p>Final report of the project; annual reports of the project partners; independent final evaluation.</p> | <p>The risk of inadequate project implementation (medium). The risk of time delays (completion risk) (medium). The risk of low fossil fuel prices (low). The risk of poor co-operation between project stakeholders (low). The risk of cost overrun and time delays (completion risk) (medium). The risk of use of inappropriate technologies (low).</p> |
| <p>Output 2.1 Build the capacity of state organizations to audit and identify cost effective energy efficiency investments</p> <p>Activity 2.1.1 Identify audit best-practices</p> <p>Activity 2.1.2 Develop a program for audit training and solicit candidates for training</p> <p>Activity 2.1.3 Improve capacity for energy auditing and provide training for national experts and local energy auditing firms in auditing and developing feasibility studies</p> <p>Activity 2.1.4 Develop and adopt new methodology of energy auditing based on</p> | <p>Share of audits that meet international standards</p> | <p>30% of audits submitted to the CEE meet international standards</p> | <p>60% of audits submitted to the CEE meet international standards</p> | <p>Project reports provided for in M&E plan. Report of the CEE</p> | |

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| internationally recognized standards | | | | | |
| <p>Output 2.2 Increase the portion of loans compared to grants, offered by the state for energy efficiency</p> <p>Activity 2.2.1 Develop new government regulations to increase the portion of loans compared to grants</p> <p>Activity 2.2.2 Provide support through the regulation approval process</p> <p>Activity 2.2.3 Undertake a feasibility study on increasing the share of loans over grants in state EE financing</p> <p>Activity 2.2.4 Based on the results of the feasibility study, develop a long-term strategy for restructuring government EE financing facilities to promote loans over grants</p> <p>Activity 2.2.5 Seek approval of the proposed strategy by the government before the end of the project through its incorporation in the National Energy Saving Program</p> | New government regulations are put in force to increase the portion of loans compared to grants | No regulation on increase of portion of loans available | New government regulations stimulating loans for energy efficiency submitted for approval by the end 1 st project year | Project reports provided for in M&E plan. Report of the CEE | The government continues to promote increase of loan funds over grants for energy efficiency. See the letter provided by the Ministry of Economy in Section IV, Part I |

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| <p>Output 2.3 Build the capacity of state organization to secure credit (as opposed to grants) for energy efficiency investment</p> <p>Activity 2.3.1 Conduct training of national experts and project partners in developing business plans, negotiations skills, basics of financial economics, loan application, as well as in dealing with local banks</p> <p>Activity 2.3.2. Establish cooperation agreements with local banks and other financing institutions</p> | <p>Amount of credit funds from the CEE used by project partners</p> | <p>Project partners use zero credit funds from CEE</p> | <p>Project partners use at least USD 1 million in loan funds from CEE by 3rd project year</p> | <p>Final report of the project Project reports provided for in M&E plan. Agreements.</p> | |
| <p>Output 2.4 USD 8 million in new cost effective energy efficiency investments secured</p> <p>Activity 2.4.1. Develop business plans for the investment projects of the program and conduct final talks with the partners</p> <p>Activity 2.4.2 Provide consulting services to the state organizations (project partners) when implementing the program</p> | <p>Agreements signed between project sites and investors</p> | <p>No agreements signed</p> | <p>At least 4 investment agreements signed by end of 2nd project year</p> | <p>Final report of the project including funds invested, tons of fuel equivalent reduced, and reductions in GHG emissions. Independent final evaluation.</p> | |

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| <p>Outcome 3 Project successes throughout Belarus sustained and replicated</p> | <p>Energy Center is established as a self-supporting consulting institution New energy efficiency investment program. New partners of the Energy Center</p> | <p>No Energy Center, limited investments in loans for energy efficiency</p> | <p>By the project end, the Energy Center achieves self-sustaining level; new energy efficiency program launched</p> | <p>Final report of the project. Final workshop presentation.</p> | <p>The risk of inadequate project implementation (low). The risk of time delays (completion risk) (low).</p> |
| <p>Output 3.1 Create an Energy Center to provide on-going support to state organizations for realizing more energy efficiency investments</p> <p>Activity 3.1.1 Carry out an initial information campaign to introduce the Energy Center</p> <p>Activity 3.1.2 Create a source of reliable, current and complete information on modern energy efficient equipment, methodological (technical) approaches and opportunities to increase energy efficiency</p> <p>Activity 3.1.3 Refine and adjust the Energy Center business plan to ensure a smooth transition to financial self-sufficiency after project closure</p> | <p>Share of costs of the energy center covered by business revenues</p> | <p>No energy center</p> | <p>All costs of the energy center covered by business revenues by the end of the project</p> | <p>Project reports provided for in M&E plan.</p> | |

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| <p>Output 3.2 Create a pipeline of energy efficiency investments for implementation after project closure</p> <p>Activity 3.2.1 Conduct energy audits and feasibility studies to and develop new investment program</p> <p>Activity 3.2.2 Complete loan applications for the identified investment projects</p> <p>Activity 3.2.3 Sign investment agreements with new program partners</p> | <p>Volume of new investment program adopted by the CEE</p> | <p>No investment program</p> | <p>New investment program of at least USD 10 million (including USD 5 million in loan funds, plus USD 5 million in own resources) adopted by the CEE by project completion</p> | <p>Final report of the project. Final workshop presentation.</p> | <p>The program will be implemented with the support of the CEE</p> |
| <p>Output 3.3 Expand the number or budget organizations using energy norms for annual budgeting, settlement account for energy savings, and providing incentives to staff for expanding the level of investment in energy efficiency</p> <p>Activity 3.3.1 Carry out an ongoing information campaign about the project activities, including through a regularly updated website</p> <p>Activity 3.3.2 Sign agreements of cooperation between Energy Center and state organizations and municipalities not involved in the UNDP/GEF project</p> <p>Activity 3.3.3 Agreements with</p> | <p>Number of new partners using energy norms, settlement accounts and staff incentives</p> | <p>No budget organizations use energy norms, settlement account and issue incentives to staff responsible for increasing their levels of investment in energy efficiency</p> | <p>By the end of the project, at least 30 new contracts signed with budget organization using energy norms, settlement account and issue incentives to staff responsible for increasing their levels of investment in energy efficiency no of new contracts for implementation after close of the project</p> | <p>Final report of the project. Independent final evaluation.</p> | |

regional energy efficiency departments to conduct training in 30 municipalities

Activity 3.3.4 Set up contacts between the Energy Center and energy conservation institutions in Belarus and with similar institutions (energy centers) in Eastern Europe and CIS states

SECTION III: TOTAL BUDGET AND WORKPLAN

| Award ID: 00043498 | | | | | | | | | |
|---|---------------------------------------|------------------------|-------------------|---|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|
| Award Title: PIMS 2426 CC FP: Energy efficiency improvements in the state sector in Belarus | | | | | | | | | |
| Project ID: 00050819 | | | | | | | | | |
| Project Title: PIMS 2426 CC FP: Removing barriers to energy efficiency improvements in the state sector in Belarus | | | | | | | | | |
| Executing Agency: NEX execution, CEE | | | | | | | | | |
| GEF Outcome/Atlas Activity | Responsible Party | Source of Funds | Atlas Code | ERP/ATLAS Budget Description/Input | Amount (USD) Year 1 | Amount (USD) Year 2 | Amount (USD) Year 3 | Amount (USD) Year 4 | Total (USD) |
| OUTCOME 1: Increased incentives for state organizations to invest in energy efficiency | Committee on Energy Efficiency | GEF | 71400 | Contractual Services – individuals | 7,800.00 | 7,800.00 | 7,800.00 | 7,800.00 | 31,200.00 |
| | | | 72100 | Contractual Services – companies | 30,000.00 | 30,000.00 | 30,000.00 | 30,000.00 | 120,000.00 |
| | | | 71300 | Local Consultants | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 16,000.00 |
| | | | 71600 | Travel | 1,000.00 | 1,000.00 | 1,000.00 | 500.00 | 3,500.00 |
| | | | | Sub-total | 42,800.00 | 42,800.00 | 42,800.00 | 42,300.00 | 170,700.00 |
| OUTCOME 2: Financial resources made available by the state sector for energy efficiency investment are used more efficiently | Committee on Energy Efficiency | GEF | 72100 | Contractual Services – companies | 100,000.00 | | | | 100,000.00 |
| | | | 71400 | Contractual Services – individuals | 7,800.00 | 7,800.00 | 7,800.00 | 7,800.00 | 31,200.00 |
| | | | 72100 | Contractual Services – companies | 50,000.00 | 50,000.00 | 30,000.00 | 30,000.00 | 160,000.00 |
| | | | 71300 | Local Consultants | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 16,000.00 |
| | | | 72200 | Equipment and Furniture | 51,000.00 | 500.00 | 500.00 | 500.00 | 52,500.00 |
| | | | 71600 | Travel | 2,000.00 | 2,000.00 | 4,000.00 | 4,000.00 | 12,000.00 |
| | | | | Sub-total | 214,800 | 64,300 | 46,300 | 46,300 | 371,700.00 |
| OUTCOME 3: Project successes throughout Belarus sustained and replicated | Committee on Energy Efficiency | GEF | 71200 | International Consultant | 20,000.00 | 35,000 | 20,000 | 35,000 | 110,000.00 |
| | | | 72100 | Contractual Services | 49,600 | 49,600 | 126,600 | 122,600 | 348,400.00 |
| | | | 71300 | Local Consultants | 5,000 | 6,000 | 7,000 | 7,000 | 25,000.00 |
| | | | 71400 | Contractual Services – Individuals | 34,200.00 | 34,200.00 | 34,200.00 | 34,200.00 | 136,800.00 |
| | | | 71600 | Travel (incl M&E) | 42,500.00 | 43,500.00 | 43,500.00 | 43,000.00 | 172,500.00 |
| | | | 72400 | Communications equipment | 1,500.00 | 200.00 | 200.00 | 200.00 | 2,100.00 |
| | | | 72800 | Information Technology Equipment | 18,000.00 | 700.00 | 700.00 | 700.00 | 20,100.00 |
| | | | 72500 | Supplies | 1,700.00 | 1,700.00 | 1,700.00 | 1,700.00 | 6,800.00 |
| | | | 74200 | Audio Visual and Print Prod. Costs | 7,300.00 | 7,600.00 | 6,000.00 | 6,000.00 | 26,900.00 |
| | | | 74100 | Professional services (Audit) | 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 4,000.00 |
| | | | 74500 | Miscellaneous | 2,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 5,000.00 |
| | | | | Sub-total | 182,800.00 | 180,500.00 | 241,900.00 | 252,400.00 | 857,600.00 |
| | TOTAL | 440,400.00 | 287,600.00 | 331,000.00 | 341,000.00 | 1,400,000.00 | | | |

SECTION IV: ADDITIONAL INFORMATION

PART I: OTHER AGREEMENTS

Letter of Endorsement from GEF Operational Focal Point

МІНІСТЭРСТВА
ПРЫРОДНЫХ РЭСУРСАЎ І АХОВЫ
НАВАКОЛЬНАГА АСЯРОДЦЯ
РЭСПУБЛІКІ БЕЛАРУСЬ



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Р/р № 362000000112 ААБ «Беларусбанк»
г. Мінск, код 795, УНН 100519825; АКПА 00012782

МИНИСТЕРСТВО
ПРИРОДНЫХ РЕСУРСОВ И
ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ
РЕСПУБЛИКИ БЕЛАРУСЬ

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г. Минск, код 795, УНН 100519825; ОКПО 00012782

07.06.2009 № 07-9/1164

TO: Ms. Cihan Sultanoglu
UNDP Resident Representative in Belarus

Dear Ms. Sultanoglu,

RE: UNDP/GEF Full-Size Project “Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus”

Committee on Energy Efficiency under the Council of Ministers of Belarus, jointly with UNDP and the UNECE, has completed the preparation of the UNDP/GEF project proposal “Removing Barriers to Energy Efficiency Improvements in the state sector in Belarus”.

The main task of the above full size project is to undertake activities necessary for establishing an energy consulting center, implementation of the energy efficiency investment program, introduction of institutional and staff incentives for energy efficiency improvements in the state sector and implementation of the project replication plan.

The expected additional cumulative GHG reductions over 15 years due to project implementation are estimated at over 1 million tons of CO₂ equivalent. Thus, the proposed project will assist Belarus in fulfilling its international environmental commitments under the UN Framework Convention on Climate Change.

Therefore, on behalf of the Government of Belarus and, in my capacity as GEF Operational Focal Point, I hereby endorse the above mentioned Full Size Project proposal, to be presented through the UNDP to the Global Environment Facility.

We look forward to your kind consideration in this matter.

Sincerely,

Vasily Podolyako
GEF Operational Focal Point
First Deputy Minister of Natural
Resources and Environmental Protection of Belarus

Letter of commitment from the Committee on Energy Efficiency

КАМІТЭТ
ПА ЭНЕРГАЭФЭКТЫЎНАСЦІ
ПРЫ САВЕЦЕ МІНІСТРАЎ
РЭСПУБЛІКІ БЕЛАРУСЬ



КОМИТЕТ
ПО ЭНЕРГОЭФФЕКТИВНОСТИ
ПРИ СОВЕТЕ МИНИСТРОВ
РЕСПУБЛИКИ БЕЛАРУСЬ

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e-mail: energoeffekt@bc.by

09.06.2005, № 08-11/37

На № _____ ад _____

Ms. Cihan Sultanogly
UNDP Resident Representative
In Belarus

Letter of Interest and Commitment

Project: "Removing barriers to energy efficiency improvements in the state sector in Belarus"

Project "Removing barriers to energy efficiency improvements in the state sector in Belarus" is being worked out upon a common initiative by the Committee on Energy Efficiency, UNDP and UNECE. The Committee is co-ordinating implementation of this project and jointly with the sites owners providing financial contribution on behalf of Belarus.

Expression of Interest and Obligations

Committee on Energy Efficiency is permanently conducting state policy on improvement of energy efficiency in all sectors of national economy including state sector. The Committee is especially interested in implementation of practical projects directed to energy efficiency improvement, implementation of new modern technologies, wider use of renewable energy sources and local fuels. In accordance with existing practice the Committee provides a financial support to first of all projects funded by sites owners as well as International Institutions. E.g. at present the Committee takes part in funding of the of the World Bank "social Infrastructure Retrofitting Project" and UNDP/GEF full project "Biomass Energy for Heating and Hot water Supply in Belarus"

Committee confirms its commitment for join funding of UNDP/GEF Project "Removing barriers to energy efficiency improvements in the state sector in Belarus" in case of its practical implementation.

Financial contribution of Committee is defined in accordance with a Project Document elaborated during PDF B implementation. Funding required for implementation of the demonstration part of the project is about USD 13.7 million. Expected annual direct fuel savings will be about 51,000 tons of coal equivalent, money saving – USD 3.0 million, reduction of CO2 emission – about 76,400 tons.

The Committee is ready to provide financial contribution to practical phase of the Project in Belarusian Roubles of 3,000,000 USD equivalent (cash contribution both as concessional financing and grants), and an in-kind contribution of 150,000 USD equivalent. Moreover the Committee will support the Energy Center to be established in the course of the project implementation to give opportunities for its development as self-sustained institution.

First Vice-Chairmen
National Coordinator of the Project

Leonid Shenets

Letter of commitment from UNECE



NATIONS UNIES

ОБЪЕДИНЕННЫЕ НАЦИИ

UNITED NATIONS

COMMISSION ECONOMIQUE
POUR L'EUROPE

ЭКОНОМИЧЕСКАЯ КОМИССИЯ
ДЛЯ ЕВРОПЫ

ECONOMIC COMMISSION
FOR EUROPE

**Industrial Restructuring, Energy
and Enterprise Development Division**
Palais des Nations
CH-1211 GENEVA 10 - Switzerland

Telephone: (41-22) 917-5721, 917-2417 or 917-1234
Telefax: (41-22) 917-0038 or 917-0123
E-mail: george.kowalski@unece.org
Internet: <http://www.unece.org/ie> and www.ee-21.net

Reference No.: IREED/EN/2005/141

Date 8 June 2005

Dear Ms. Sultanolgu

The Industry Restructuring, Energy and Enterprise Development Division of the United Nations Economic Commission for Europe has been involved in implementation of the PDF phases of the joint UNDP/UNECE project "Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus" since 2002. The Division provided support to the local implementation units with regard to development of terms of reference, consultant contract oversight, monitoring and reporting, dissemination of information and experience to energy efficiency demonstration zones in the Russian Federation and abroad, and reporting to UNDP on project implementation. The staff of the division has contributed to the preparation of the project proposal for both PDF phases. The total amount of the UNECE secretariat 'in-kind' contribution to the implementation of two PDF phases of the project is US \$ 75,000.

I would like to inform you that the Industry Restructuring, Energy and Enterprise Development Division plans out to play an important role in the implementation of the full-scale project, providing, all necessary technical backstopping for the project execution consisting of assistance to the State Committee on Energy Efficiency (Executing Agency) in Minsk and local project implementation unit. At the level of activity foreseen for the duration of the project a UNECE Regional Adviser on Energy (L.5) (one fifth of his time) will provide the above-mentioned support.

Additional resources on an 'in-kind' contribution basis to the project by the Energy Efficiency 21 Project such as international fora for the consideration of policy reforms in relation to western and eastern European best practice. Within the same framework, support could include the presentation of project opportunities to foreign business and financial community, provision of training materials for business planning and financial engineering, and the preparation of proposals for leveraging additional support for investments or technical assistance (especially for the national and international dissemination of results as they emerge). The UNECE secretariat will make a total 'in-kind' contribution of US\$ 100,000 of personnel described above, staff travel, communications, conference services, documents reproduction and distribution over the four-year duration of the project.

Ms. Cihan Sultanolgu
Resident Representative
United Nations Development Programme
17 Kirov St., Minsk 220000
Republic of Belarus

I look forward to continuing our fruitful cooperation in the future. With kind regards,
Yours sincerely,

A handwritten signature in blue ink, appearing to read "George Kowalski". The signature is fluid and cursive, with a large initial "G" and "K".

George Kowalski
Director, Industrial Restructuring, Energy
and Enterprise Development Division

Letter from the Ministry of Economy



**МІНІСТЭРСТВА ЭКАНОМІКІ
РЭСПУБЛІКІ БЕЛАРУСЬ**

Мінэканомікі

вул. Берсана, 14, 220050, г. Мінск
тэл. 222-60-48, факс 220-37-77

**МИНИСТЕРСТВО ЭКОНОМИКИ
РЕСПУБЛИКИ БЕЛАРУСЬ**

Минэкономікі

ул. Берсона, 14, 220050, г. Минск
тел. 222-60-48, факс 220-37-77

21 07 2005 № 22-01-03/5941

На № _____ ад _____

Представительство ООН в
Республике Беларусь

О проекте ПРООН/ГЭФ

Министерство экономики Республики Беларусь высоко оценивает важность работы по проекту ПРООН/ГЭФ «Устранение препятствий в повышении энергетической эффективности предприятий государственного сектора Беларуси, стадия Б» (окончание данной стадии проекта - декабрь 2005г.), цели которого отвечают приоритетам национальной энергетической политики.

Целью стадии Б вышеуказанного проекта является разработка полноценной заявки для стадии Полного проекта для Глобального экологического фонда. Первый вариант проектного документа разработан направлен на рассмотрение Секретариатом Глобального экологического фонда.

Одним из ключевых направлений деятельности вышеуказанного проекта является стимулирование увеличения доли возвратных финансовых средств, направляемых на энергосберегающие мероприятия.

Рекомендации экспертов проекта учитывались при разработке проекта «Государственной комплексной программы модернизации основных производственных фондов Белорусской энергосистемы, энергосбережения и увеличения доли использования собственных топливно-энергетических ресурсов в 2006-2010 годах», находящегося на рассмотрении в Правительстве Республики Беларусь. При этом, в данном проекте Программы заложены параметры роста доли возвратных средств,

направляемых на реализацию энергоэффективных проектов при соответствующем сокращении объемов грантов.

Планируется, что данные рекомендации получат дальнейшее практическое воплощение уже в 2006 году. Белорусское Правительство использует положительные результаты и успешный опыт реализации данного проекта для увеличения запланированных в рамках вышеуказанной Государственной программы объемов возвратных средств, при этом будут предприниматься шаги по дальнейшему увеличению доли возвратных средств от общего объема финансирования энергосбережения в Республике Беларусь.

Министр



Н.П. Зайченко

Unofficial translation

Ministry of Economy of the Republic of Belarus

Date: July 21, 2005

To: UN Office in Belarus

"The Ministry of Economy appreciates the importance of the project *"Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus"* stage PDF-B (this stage to be completed in Dec 2005, whose objectives are in line with national energy policy priorities.

The purpose of the PDF B stage is to develop an eligible full-size project proposal to the GEF. The first draft of the proposal has been prepared and submitted to the GEF Secretariat.

The above project focuses, among other things, on stimulating credit financing of energy efficiency.

The recommendations of project experts have already been incorporated in the National Complex Program of Upgrading of Belarusian Energy Sector, Energy Conservation and Increase of Share of Local Fuels for 2006-2010, pending approval by the government. The program calls for gradual increase of the share of credit funds, with the respective decrease in grants.

The above recommendations are planned to be implemented starting in 2006. The government of Belarus is willing to use the positive results and experience of implementation of this project to revise upwards the share of credit resources in the above program; further steps will be undertaken to increase the portion of loan funds in the total resources invested in energy efficiency and conservation in Belarus.

Minister

N.P. Zaichenko

Letters from other project partners confirming their co-financing are attached in separate files

PART II: TERMS OF REFERENCE FOR KEY EXPERTS AND SUBCONTRACTORS

INTERNATIONAL EXPERTS

International consultant on Energy Center development

| | |
|-----------------------|--|
| Position title: | Consultant on Energy Center development |
| Type of contract: | Special Service Agreements International |
| Duration of contract: | 16 man months over the 48 month period |
| Objectives of work: | Ongoing assistance to the Energy Center management in development of the Energy Center to meet project targets |
| Duties: | <ul style="list-style-type: none">• Assist in setting up contacts between the Energy Center and similar institutions (Energy centers) in Eastern Europe and NIS countries;• Advise the Energy Center management on the Energy Center activities within the project;• Conduct ongoing quarterly evaluation of the Energy Center development;• Review and comment on the development of the Energy Center. |
| Expected Results: | By the end of the project the Energy Center is established as a self-supporting consulting center with modern equipment and qualified staff. |
| Schedule of work: | Start of activities: 2006 End of activities: 2009 |
| Qualifications: | <ul style="list-style-type: none">• Extensive practical experience in implementation of UNDP/GEF projects. Good knowledge of rules and conditions for GEF funded projects;• Relevant experiences in Eastern European countries with energy efficiency projects and Energy Center(s) development;• Good interpersonal skills and ability to transfer skills to local experts;• Expertise in comparative energy policies, and their application in CIS countries. |
| Special Terms: | Experience in former Soviet Union Republics |
| Duty Station: | UNDP Minsk |

International consulting company on training

| | |
|-----------------------|---|
| Position title: | Training Consultancy |
| Type of contract: | Standard contract with UNDP |
| Duration of contract: | 3 months |
| Objectives of work: | Training of the Energy Center staff based on internationally recognized methodologies |
| Duties: | <ul style="list-style-type: none">• Conduct training of the Energy Center staff on: Energy Auditing, especially in heat supply systems, Improvement of skills when operating equipment for energy audits, Evaluation and calculations of energy savings and GHG emissions reduction, Selection of the best energy efficiency technologies and equipment, Development of business plans, Monitoring of EE projects implementation and evaluation of results, Methods of interaction with banks for financing of EE projects in the state sector. |

Expected Results: Improved qualification of the Energy Center staff

Schedule of work: Start of activities: 2006
End of activities: 2006

Qualifications:

- Extensive practical experience (a minimum of 5 years) in training of energy institutions staff;
- Relevant experiences in Eastern European countries with energy efficiency projects;
- Good interpersonal skills and ability to transfer skills to local experts
- Good knowledge of rules and conditions for GEF funded projects
- Expertise in comparative energy policies, and their application in NIS countries

Special Terms: Experience in former Soviet Union Republics

Duty Station: UNDP Minsk

International consulting company on development of energy efficiency investment program

Position title: International Consultant on development of energy efficiency investment program

Type of contract: Standard contract with UNDP

Duration of contract: 12 months over the 48 month period

Objectives of work: Investment program of USD 10 million to be implemented by Energy center after completion of the project.

Duties:

- Help to identify and select National subcontractor for audit and feasibility studies, with the necessary skills to identify and document low-cost energy efficient investments to internationally recognized standards, based on best available technologies;
- Agree with subcontractor on internationally recognized protocols, methodologies and document templates for audits and feasibility studies;
- Review and comment on the energy audits and feasibility studies, and agree on a final list of USD 10 million in project investments;
- Confirm conformity of feasibility studies to internationally recognized standards.

Expected Results: Energy efficiency investment program of USD 10 million

Schedule of work: Start of activities: 2009
End of activities: 2009

Qualifications:

- Extensive practical hands-on experience (a minimum of 5 years) in developing of EE projects in Eastern European countries;
- Good interpersonal skills and ability to transfer skills to local experts;
- Good knowledge of rules and conditions for GEF funded projects;
- Will have a demonstrated and successful track record in auditing and convincing investors to finance the recommendations of energy audits
- Expertise in comparative energy policies, and their application in NIS countries.

Special Terms: Experience in former Soviet Union Republics

Duty Station: UNDP Minsk

NATIONAL EXPERTS

National project manager

| | |
|-----------------------|---|
| Position title: | Project manager |
| Type of contract: | Service Contract |
| Duration of contract: | 48 months |
| Objectives of work: | The Project Manager assumes overall responsibility for day-to-day management, coordination and supervision of implementation of project activities and the achievement of planned project outputs. He/she works closely with the National Project Director, assigned by the Committee on Energy Efficiency, and the UNDP Country Office |
| Duties: | <ul style="list-style-type: none">• Supervise and coordinate the project to ensure its results are in accordance with the Project Document and the rules and procedures established in the UNDP Programming Manual;• Assume primary responsibility for the daily project management - both organizational and substantive matters, budgeting, planning and general monitoring of the project;• Prepare detailed work plans for the project, and draft of terms of reference for the experts and subcontractors;• Assume overall responsibility for meeting the financial delivery targets set out in the agreed annual work plans;• Organize and supervise workshops and training needed during the project;• Identify national experts and institutions to work for the project (in close co-operation with the executing agency and the UNDP);• Supervise the work of the national and international experts;• Liaise with relevant ministries, national institutes and other relevant institutions in order to involve their staff in project activities, and to gather and disseminate information relevant to the project;• Prepare GEF quarterly project progress reports, as well as any other reports requested by the Committee on Energy Efficiency and UNDP;• Control expenditures and ensure an adequate management of the resources provided for the project;• Conduct negotiations on co-operation with the Committee, target municipalities and institutions in order to identify and mobilize resources• Assist the Energy Center when developing and implementing project activities. |
| Expected Results: | Successful implementation of the project |
| Schedule of work: | Start of activities: 2006 End of activities: 2009 |
| Qualifications: | <ul style="list-style-type: none">• A master degree in energy engineering.• Academic training in economics or financing would be an asset.• A working knowledge of the energy sector in Belarus, its institutions and key personnel.• A track record at senior management level in public or private administration, and an ability to demonstrate results from management.• Experience in the management of donor funded projects, would be an advantage• Excellent interpersonal and training skills• Good computer skills• Fluency in both Russian and English. |
| Special Terms: | Citizen of Belarus |
| Duty Station: | UNDP, Minsk |

Administrative assistant

| | |
|-----------------------|--|
| Position title: | Administrative and Financial Assistant |
| Type of contract: | Service Contract |
| Duration of contract: | 48 months |
| Objectives of work: | The Administrative and Financial Assistant provides assistance to the Project Manager in the implementation of day-to-day project activities. He/she is responsible for all administrative (contractual, organizational and logistical) and all accounting (disbursements, record-keeping, cash management) matters under the project. |
| Duties: | <ul style="list-style-type: none">• Provide general administrative support to ensure the smooth running of the project management unit;• Assist the Project Manager and local and foreign consultants in conducting different activities within the framework of the project (training, seminars, procurement of tickets, rent of premises, arrangements on study tour, etc.);• During the visits of foreign experts bear responsibility for their visa support, transportation, hotel accommodation etc;• Organize control of budget expenditures by preparing payment documents, and compiling financial reports;• Maintain the project's disbursement ledger and journal;• Organize and coordinate the procurement of services and goods under the project;• Keeping files with project documents, expert reports;• Control the usage non expendable equipment (record keeping, drawing up regular inventories);• Contact local and foreign experts and consultants to inform them about the project details and changes;• Provide English translation as required;• Perform other duties under the instruction of the project manager; |
| Expected Results: | Successful project office operation |
| Schedule of work: | Start of activities: 2006 End of activities: 2009 |
| Qualifications: | <ul style="list-style-type: none">• University degree in economics, management or related;• Not less than 2 years experience in office administration, preferably UN projects;• Fluency in Russian and English;• Excellent computer skills. |
| Special Terms: | Citizen of Belarus |
| Duty Station: | UNDP Minsk |

National Expert on Small Business

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|-------------------|-----------------------------------|
| Position title: | National Expert on Small Business |
| Type of contract: | Service Contract |

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|-----------------------|--|
| Duration of contract: | 48 months |
| Objectives of work: | Establishment of the Energy Center that will provide consulting services in energy efficiency to state organizations. |
| Duties: | <ul style="list-style-type: none"> • Certify legal documents for the Energy Center establishment; • Take part in training of the Energy Center staff and project partners staff; • Control the implementation of the EE investment plan; • Conduct final talks with the partners on financing the investment EE projects; • Draft and sign agreements of cooperation between the Energy Center and state organizations and municipalities not involved in the UNDP/GEF project (about 10 new partners); • Take part in preparation of a new investment program to be implemented by the Energy center after completion of the project; • Draft and sign agreements of cooperation between the Energy Center and local banks and commercial organizations. • Fulfill all necessary duties for successful development of the Energy Center; • Other duties relating project implementation and the project development. |
| Expected Results: | By the end of the project, the Energy Center is established as a self-supporting consulting center with modern equipment and qualified staff. |
| Schedule of work: | Start of activities: 2006 End of activities: 2009 |
| Qualifications: | <ul style="list-style-type: none"> • A masters degree in business administration or energy engineering; • Will have successfully undertaken business start up or fundamentally restructured a unit in the private sector or a for profit state sector enterprise; • A good knowledge of institutional structure of the DH and CHP sector • Good interpersonal and training skills; • Ability to work in both Russian and English |
| Special Terms: | Will be Director of the Energy Center; Citizenship of Belarus |
| Duty Station: | UNDP Minsk |

National Energy Expert

| | |
|-----------------------|---|
| Position title: | National Energy Expert |
| Type of contract: | Service Contract |
| Duration of contract: | 48 months |
| Objectives of work: | Implementation of the investment program developed in the field of state sector energy efficiency. New investment program to be implemented by Energy center after completion of the project. |
| Duties: | <ul style="list-style-type: none"> • Specify basic data and calculation results of the expected energy and financial savings and GHG emissions reduction under the investment energy efficiency projects developed; • Partake in development of the business plans for investment projects; |

- Provide consulting services to the state organizations (project partners) on holding tenders;
- Support the investment projects implementation at the stages of design, equipment purchase, installation, and initial operations;
- Render consulting services to the project partners (local authorities) when evaluating future energy savings;
- Partake in evaluation of real energy savings and GHG emissions reduction as a result of the implemented investment plan;
- Within DH and CHP sector analyse and rank EE investment proposals for workshop presentation, conduct pre-selection of partner municipalities and enterprises in target sector,
- Conduct pre-selection of sites to be audited by National Subcontractor;
- Prepare detailed methodologies and document templates with International Consultant and National Subcontractor for undertaking the energy audits;
- Coordinate audits and rapid FS to be made by National Subcontractor;
- Jointly with National Subcontractor and International Consultant take part in development of EE investment plan;
- Provide assistance to foreign energy audits expert;
- Make an assessment of the costs, savings and GHG emissions reduction can be made through implementation of the EE investment plan;
- Other duties relating project implementation.

Expected Results: By the end of the project, an investment program of no less than USD 7 million in domestic investments is implemented with the participation of the Energy Center. A new investment program of no less than USD 10 million is adopted by the Committee on Energy Efficiency and new project partners.

Schedule of work: Start of activities: 2006

End of activities: 2009

Qualifications:

- A master degree equivalent in energy engineering
- A demonstrated knowledge and experience with identifying best available technologies for energy efficiency;
- Will have a demonstrated and successful track record in energy auditing and convincing investors to finance the recommendations of energy audits;
- Good knowledge of institutional structure of the DH and CHP sector;
- Good interpersonal and training skills;
- Ability to work in English is desired.

Special Terms: Will be Head of energy department of the Energy Center;
Citizenship of Belarus

National Expert on Finances

Position title: National Expert on Finances

Type of contract: Service Contract

Duration of contract: 48 months

Objectives of work: Introduction of institutional and staff incentives to foster a proactive approach to making energy conservation investments at the local level.

Duties:

- Consulting services to the project partners (local authorities) when they undertake budget planning;
- Consulting services to the project partners (local authorities) for opening special settlement accounts as a source of storing funds for subsequent

| | |
|-------------------|---|
| | <ul style="list-style-type: none"> use as incentives; Analyse and document the constraints to energy efficiency investment by the project partners; Prepare proposals to the Committee on Energy Efficiency to correct the regulations currently in force to stimulate repayable financing of energy efficiency; Consulting services to the project partners for optimal distribution of funds for institutional and personal incentives; Partake in business planning and financial evaluation of EE projects; Conduct discussions and consultation with the project partners to fulfill the project tasks; Partake in implementation of the project replication plan to introduce successful staff performance and municipal energy savings retention project schemes nation-wide. |
| Expected Results: | By the end of the project, local authorities (at least 3 regional executive committees) will utilize mechanisms to provide institutional and staff incentives for energy savings to foster proactive approach in EE. |
| Schedule of work: | Start of activities: 2006 End of activities: 2009 |
| Qualifications: | <ul style="list-style-type: none"> Masters in finances or economics Will have been the senior financial manager for a well reputed public office for over 5 years Will be familiar with legal and regulatory provisions governing the management and use of financial resource by the Government of Belarus Will have demonstrated experience in initiating and managing changing financial practices within an office, and will have a demonstrated knowledge of financial management options in public administration Will have a working knowledge of central government and municipal financial practices and sources of financing the budget sphere, A knowledge of DH and CHP sector is considered as advantage; Ability to work in English is desired. |
| Special Terms: | Will be Head of investment department of the Energy Center; Citizenship of Belarus |
| Duty Station: | UNDP Minsk |

National Expert on Information

| | |
|-----------------------|---|
| Position title: | National Expert on Information |
| Type of contract: | Service Contract |
| Duration of contract: | 48 months |
| Objectives of work: | Create a database in the Energy Center of energy efficiency technologies and equipment. Carry out an ongoing information campaign about the project and Energy Center activities. |
| Duties: | <ul style="list-style-type: none"> Prepare information materials for initial information campaign to introduce the Energy Center and take part in this campaign; Finalize the list of hardware and software for a database in the Energy Center of energy efficiency technologies and equipment; Provide ongoing technical support to the database and supplement it by the necessary information; |

- Keep up contacts with the project partners and provide them with information;
- Launch the project Internet site and renew information;
- Support an ongoing information campaign about the project and Energy Center activities;
- Take part in M&E of the project. Assist to International experts when evaluating project results;
- Keep up contacts with similar institutions (Energy Centers) in Eastern Europe and countries of the former USSR;
- Other duties relating project implementation and the project development.

| | |
|-------------------|--|
| Expected Results: | Database in the Energy Center of energy efficiency technologies and equipment. Successful information campaign |
| Schedule of work: | Start of activities: 2006 End of activities: 2009 |
| Qualifications: | <ul style="list-style-type: none"> • Masters in energy engineering; • A knowledge of information technologies; • Will be familiar with legal and regulatory provisions governing the energy conservation in Belarus; • Good interpersonal and computer skills; • A knowledge of DH and CHP sector is considered as advantage; • Ability to work in English |
| Special Terms: | Will be Head of information and analysis department of the Energy Center; Citizenship of Belarus |
| Duty Station: | UNDP Minsk |

NATIONAL SUBCONTRACTOR

EE Investment projects pipeline

| | |
|-----------------------|---|
| Position title: | Consultant services on selection USD 15 million energy efficiency investment proposals |
| Type of contract: | Service Contract |
| Duration of contract: | 10 months period |
| Objectives of work: | Develop a portfolio of Energy Efficient investment proposals |
| Duties: | <p>In consultations with the Committee on Energy Efficiency, the Energy Center, Municipalities, DH&CHP sector owners (project partners) select 20-30 potential sites for further energy audits and feasibility studies to develop energy efficient investment proposals totaling approximately USD 15 million;</p> <p>Conduct energy audits and rapid feasibility studies at selected sites;</p> <p>Estimate the total investment needs to realize the economically feasible energy efficient measures at audited sites;</p> <p>Rank the different sites and EE measures with respect to their technical, economic, financial and environmental feasibility;</p> <p>Within the state sector review, analyze and rank documented energy efficiency investment proposals in this sector for workshop presentation;</p> <p>Make final selection a number of energy efficient investment proposals amounted approximately USD 10 million to be implemented with the support of the Energy Center;</p> <p>Present and discuss the results of the analysis at workshops and meetings organized by the project</p> |

Expected Results: A number of energy efficient investment proposals USD 10 million are identified

Schedule of work: Start of activities: 2009
End of activities: 2009

Qualifications: Consultants with education in engineering, financing, economic and management
Demonstrated knowledge of best available technologies in the sectors
Demonstrated track record in conducting energy efficiency audits, presenting results to investors and having recommends financed
Demonstrated track record in conducting energy efficiency related feasibility studies and having recommends financed

PART III: BELARUSIAN LEGISLATION FOR ENERGY EFFICIENCY

| Regulations | Objectives | Key implementing agents |
|---|---|--|
| 1. Law “On Energy Saving” | The objective of this law is to improve effectiveness of fuel and energy resources use. This law sets energy saving as a priority of state policy | Committee on Energy Efficiency |
| 2. National energy saving program 2001-2005 | Promotion of state policy to save energy aiming for the reduction of energy intensity per unit of GDP by 25% With preferences given to local energy resources. This program builds on the National Energy Saving Program 1996-2000 which aimed for the growth of GDP between 1995-1999 by 28.3% without growth in the use of energy resources. The target was substantially met with a reduction of energy intensity per unit of GDP of 22.4%. | Committee on Energy Efficiency, Ministry of Economy |
| 3. National Fund “Energy Efficiency” | Funding of measures on energy saving. Funds come from fines for irrational (inefficient) use of energy resources. The fund is used in the financing of energy saving measures mostly for budgetary institutions. | Fund is managed by the Committee on Energy Efficiency and Ministry of Finances |
| 4. National policy on the development of small and non-conventional power engineering (defined by Decree № 400 of the Council of Ministers) | To give support to non-conventional power plants. Owners of these plants may sell electricity to the power grid at double the industry tariff (USD 0.07 per kWh). | Committee on Energy Efficiency “Belenergo” concern |
| 5. Policies introducing instrumental metering. | Introduction of obligatory metering of fuel and energy resources. Today about 75% of all consumers have heat and flow meters. | Committee on Energy Efficiency and other Ministries |
| 6. Policies providing preferential credits for energy saving activities | Funding of activities on energy efficiency. Commercial banks’ loans for energy saving measures are provided at 50% of refinancing rate of the National Bank about half of banks’ interest rate through match funding from the Committee on Energy Efficiency | Legal entities, Committee on Energy Efficiency, Commercial banks |
| 7. Funds “For Energy Saving” introduced by the Council of Ministers Decree №504 | Funding of activities on energy efficiency and incentives. Funds are created within organizations to start and continue activities in energy efficiency sphere and provide bonuses for employees saving energy. | Legal entities |
| 8. Council of Ministers Decree №1820, December 27, 2002 | On Additional Measures to Ensure Cost-Effective and Efficient Use of Fuel and Energy (To facilitate implementation of the Republican Energy Saving Program for 2001-2005 and to enhance cost-effective and efficient use of fuel and energy) | Committee on Energy Efficiency |
| 9 Council of Ministers Decree №45, January 17, 2003. | On Measures to Increase Operational Efficiency of the Housing Stock, Utilities and Socio-cultural Facilities and to Protect Rights of Public Services Consumers | Committee on Energy Efficiency, Ministry of Communal Services |
| 10. Council of Ministers Decree №189, February 14, 2003 | Creating incentives to save energy in central budget sphere organizations. | Ministry of Finances, Committee on Energy Efficiency |
| 11. Oblast and Minsk city Executive Committees Regulations (7), 2003 | Creating incentives to save energy in local budget sphere organizations. | Oblast and Minsk city Executive Committees, Committee on Energy Efficiency |

PART IV: FINANCIAL SOURCES FOR ENERGY EFFICIENCY

Table below describes investment sources and forecast for investment 2001-2004, and actual investments to date, under the Second National Energy Savings Program and Council of Ministers' Decree №1820 of December 27, 2002

| Financing source | Planned 2001-2004 | Borrowed 2001 – 2004 | Planned/ available 2006-2010* | Terms and conditions |
|--|----------------------------------|-----------------------|--|---|
| Committee on Energy Efficiency (Ministry of Energy's Innovation Fund) | | | | |
| Grants | USD 88 mln | USD 118.4 mln | USD 279.8 mln | Recipient matching funds: - 0% for budgetary sphere - 50% for self-sustained state enterprises and private sector |
| Concessional financing | USD 20-25 mln | USD 12.9 mln | USD 59.3 mln | 6% interest loan term: 3 years collateral: none eligibility: private and public sector |
| Other Government Funds | | | | |
| Innovation funds of other ministries and institutions | USD 175.2 mln | USD 149.8 mln | USD 399 mln | Funds are used for their own energy efficiency projects as grants |
| Budgetary funds (Central and local budgets) | USD 219 mln | USD 83.3 mln | USD 375.2 mln | Funds are used for energy efficiency projects in budgetary institutions as grants |
| Energoberezeniye fund created from penalties for inefficient use of energy | USD 0.38 mln | USD 0.59 mln | is included in Budgetary funds (see above) | Compensation for the banks making soft loans, grants for energy efficiency projects |
| Non-Government Sources | | | | |
| Bank loans | USD 133.6 mln | USD 26.6 mln | USD 138 mln | Interest: 16% Borrower equity: 100% + interest for the period of borrowing Loan period: up to 6 years |
| Investor equity and matching financing | USD 523.4 mln | USD 305.8 mln | USD 745.9 mln | Co-financing of Committee's grants and 100% funding of their own energy efficiency projects |
| Foreign loans | USD 15.4 mln | USD 3 mln | are included in bank loans (see above) | According to the loan agreement |
| TOTAL | USD 1,174.98-1,179.98 mln | USD 700.39 mln | USD 1,997.2 mln | |

Note: *Targets to be achieved by the end of 2010:

- Energy savings - 4.237 million tons in fuel equivalent (standard coal)
- Increase of renewables - 1.5 million tons in fuel equivalent.
- GHG emissions reduction - 8.093 million tons in CO₂ equivalent

The implementation of energy efficiency programs in Belarus is based largely on the use of the following financial sources:

1. Belenergo Concern Innovation Fund and other Innovation Funds.

Each year when the Government approves the budget, they stipulate the percentage of enterprise funds that should go to extra-budgetary innovation funds. At that time they also stipulate how those resources should be spent. In 2004 the Government ruled that the Committee on Energy Efficiency should manage 40% of the annual finances from the Belenergo Concern Innovation fund and Belenergo should utilize the remainder. Those funds managed by the Committee on Energy Efficiency are exclusively earmarked for energy efficiency investments. In general innovation funds can utilize a mix of grant and concessional financing to achieve energy efficiency goals. In the case of the Belenergo Concern Innovation Fund grants can be allocated to the state sector energy efficiency improvements including renewable fuel projects, while both the public and private sectors can access concessional financing. Loans terms are usually given for maximum 3-5 years, although now that inflation is falling longer periods of lending have become possible. Neither Security or other documents asked by banks are required, although requests should be made a year in advance of the approval of state or regional energy efficiency programs and the proposal should be included in the programs. A business plan and implementation arrangements are also required.

Despite the attractive financial conditions Innovation concessional financing has not been fully utilized. For instance share of innovation fund managed by the Committee and granted as soft loans was as follows:

- year 2001 – USD 1.8 mill. or 8% of available resources
- year 2002 – USD 0.81 mill or 3,6% of available resources
- year 2003 – USD 5,9 million or 16,7% of available resources
- year 2004 – USD 4,4 million or 7,8% of available resources

At least USD 7-12 million can be lent as loans annually.

2. National Energoberezhniye (NEF) Fund.

The income of the NEF comes from fines and penalties of enterprises and end users local government for not meeting non-compliance with energy consumption level agreed with the Committee on Energy Efficiency and other infractions relating to energy efficiency. Fines and penalties include double-rate tariff payments for excessive fuel and power use by end-users, fines for untimely installation of metering devices, violations of energy use regulations, voluntary contributions and a number of other sources. The bulk of NEF's expenditure is targeted at state enterprises mostly budgetary institutions involved in innovative energy efficiency measures, and may take the form of a loan guarantee for commercial banks offering concessional loans for enterprises investing in energy efficiency. The planned allocations are discussed annually with the Ministry of Finance and approved by the Head of the NEF Council.

The Council of Ministers Decree №504 stipulates that enterprises can finance priority energy efficiency improvements using subsidized loans from commercial banks at half the National Bank discount (re-financing) rate. The Government guarantees up to 50% of a concessional commercial loan with resources from the National Energoberezhniye Fund (National Fund for Energy Efficiency). However this source of financing is not widely used. Loan funding for EE projects was as follows:

- year 2001 – USD 0.315 million,
- year 2002 – USD 0.484 million,
- year 2003 – USD 1,1 million,

This level of borrowing means that investments will fall short government financing targets under the 2nd National Energy Savings Plan and Council of Ministers Decree №1820;

3. Energy and resource saving pool funds at state self-sustained enterprises

In 1998 the Government sanctioned the creation of energy and resource saving pool funds by enterprises, which means that enterprises can retain the savings they make from energy efficiency to fund energy efficiency investment projects and research and development in energy efficiency improvements (what is important for replication of EE activities), and for personal incentives to improve energy efficiency, and for repaying bank loans to finance the energy efficiency investment.

PART V: TEMPLATE AGREEMENT BETWEEN COMMITTEE ON ENERGY EFFICIENCY AND PROJECT PARTNERS

AGREEMENT

Minsk

« » _____ 2004

The present agreement is made between the Committee on energy efficiency under the Council of Ministers of the Republic of Belarus (hereinafter referred to as “the Committee”), which is the Executive agency of the UNDP/GEF project “Removing barriers to energy efficiency improvements in the state sector in Belarus, PDF B” (hereinafter referred to as “the Project”), represented by **the first Vice Chairman of the Committee – National Project Coordinator, Mr. Leonid Shenets,** and _____

(name of the state organization)

(hereinafter referred to as “the Organization-Project partner”), represented by _____

(title, name)

BRIEF DESCRIPTION OF THE PROJECT

Main objectives of the Project are as follows:

- 1.1. to analyze the details of establishment of Energy consulting center to provide services to state sector organizations in Belarus in the field of energy conservation;
- 1.2. to develop and agree with investors a plan of investment projects in the field of energy efficiency with total of USD 7-8 million;
- 1.3. to develop and agree institutional and staff incentives to foster energy efficiency improvements in state organizations to catalyze investments in energy conservation at the local level;
- 1.4. to develop a plan of catalyzing investments in energy conservation at the level of state sector organizations and municipalities not involved in the Project;
- 1.5. to develop a GEF Executive summary and UNDP Project document for the full Project.

The Project is registered in the database of programs and projects of international technical assistance (registration number 2/04/000127) in the Ministry of Economy on 17 May 2004.

SUBJECT OF AGREEMENT

According to the present Agreement and valid Project document, the Committee assumes an obligation to assist the Organization-Project partner in determination of the potential saving of fuel and energy resources, development of a plan of energy conservation measures detected in the course of energy audits and implementation of the mentioned plan with the direct participation of the Organization-Project partner. The implementation of the plan of energy conservation measures will be carried out with direct participation of the Energy center to be established within the full Project.

OBLIGATIONS OF THE PARTIES

- 3.1. In accordance with Article II of the present Agreement the Committee shall:
select the objects for energy audits along with the Organization-Project partner;
organize and conduct energy audits of the projects selected;

PART VI: SELECTION OF PROJECT SITES AND EVALUATION CRITERIA

Screening

Selection of the sites was made in two steps. The initial step involved the screening of the project partners and National subcontractor proposals and the second step involved rapid energy audits and feasibility studies as part of the PDF B process. The proposals were screened according to the following criteria:

- A state property
- A stable heat demand
- Necessity of a stable steam load (where combined heat and power production is proposed)
- Existence of social sphere consumers (apartment buildings, hospitals, etc.) connected to a boiler house

Following the screening of sites from the database, approximately 25 sites were visited and additional data collected.

Evaluation Criteria

The investment projects sites visited were **evaluated** according to the following criteria:

- Prospects for long-term viability of the enterprise or entity
- Technical feasibility of proposed project
- Economic feasibility of proposed project
- Willingness to participate as a initial investment project site
- Contribution to addressing analyzed barriers
- Replication potential
- Availability of co-funding

The selected sites scored highly in all the above criteria.

4 investment projects were selected (Section IV, Part VII).

All calculations were made according to the methodology given to National Subcontractor by International Consultant (“Arena-ECO”, Ukraine).

PART VII: INVESTMENT PROJECTS DESCRIPTION

Project 1: Seam turbine installation in the boiler house

Owner: Production communal unitary enterprise “Housing and communal services - Borovliany”

Project sponsor: Committee on Energy Efficiency (Minsk Oblast Department)

Contact:

| | |
|---------|----------------|
| City: | Lesnoe |
| Oblast, | Minsk District |

Existing system:

| | | | |
|-------------------------------|---|-----------------------|--|
| Plant capacity: | 56.5 MW | Distribution net | Heating and hot water supply of settlement and its infrastructure |
| Type of boilers installed: | Mazut-fired boilers NIISTU-5 25 units | Year of construction: | 1963-1975, boilers operation mode was switched to water-heating in 2000. |
| Main end users/customers: | Communal services, apartment buildings | | |
| Legal status of owner/sponsor | State property | | |

Existing energy consumption:

| Fuel | Energy meters installed | Annual consumption | | Energy units | Energy price in USD |
|---------------|-------------------------|--------------------|-------|---------------------|------------------------|
| | Yes/No | | 2004 | | |
| Gas | Yes | | 11000 | 1000 m ³ | 73/1000 m ³ |
| Electricity | Yes | | 2264 | 1000 kWh | 0.080 kWh |
| Thermal power | Yes | | 78568 | Gcal | |

Proposed intervention overview:

| | |
|-----------------------|--|
| Description: | It is suggested to install steam turbine TG-0.5A/0.4-R13/3.7 with electric capacity of 500KW; The boiler house will entirely cover all needs for electric power. Moreover, power supply to the electric networks of Concern “Belenergo” will be 3755 MW/h. |
| Benefits | Savings 510 tfe/yr CO ₂ emission reduction of 817 tonnes/yr |
| Replication potential | About 15 sites in Ministry of Housing and Communal Services |

Proposed measures and financing (including hardware and implementation costs):

| Object | Measure | Estimated investment in USD |
|------------------------------|--------------|-------------------------------------|
| Steam turbine 0.5MW | Installation | 280000 |
| Design | | 28000 |
| Implementation | | 70000 |
| Contingencies | | 28000 |
| Total investment and savings | | 406 000 saving of 144 000 USD/yr |

ECONOMIC INDICATORS

| Indicator | Units | |
|-----------|-------|---------|
| NPV | USD | 1537000 |
| SPBT | Years | 1.9 |
| BPBT | Years | 1.9 |

PRELIMINARY FINANCING PLAN

| | Cost USD | % of Total |
|--------------------------------|----------|------------|
| Owner's resources: | 203000 | 50 |
| Sponsor's resources: | 203000 | 50 |
| Committee on Energy Efficiency | | |
| Total: | 406 000 | 100 |

Basic assumptions

Gas sale price 73 USD/1000 m3
 Electricity sale price 0.08 USD/kWh
 Project lifetime 15 years

Project 2: Heat supply optimization

Owner: PUE “Orshanskaia distantsia grazhdanskikh sooruzhenii”, Belarus Railways

Project sponsor: Committee on Energy Efficiency (Vitebsk Oblast Department)

Contact:

| | |
|---------|-------------------|
| City: | Orsha |
| Oblast, | Vitebskaya Oblast |

Existing system:

| | | | |
|-------------------------------|---|------------------|--|
| Plant capacity: | 44.2 MW | Distribution net | Boiler house in Zaslono str., E-1/9 (2 units) – 1996 yr. CVTS-1 – 1987 yr. Boiler house in Molokovo str. – mazut water boilers CVTS-1 – 1986-1987. |
| Type of boilers installed: | Mazut-fired steam boilers in Zaslono str. E-1/9 (2 units); Mazut-fired water boilers CVTS-1 (8 units); Mazut-fired water boilers TG-3 (7 units); Mazut-fired water boilers in Molokova str. – CVTS-1 (10 units) | | |
| Main end users/customers: | Production area heating, productive consumers. | | |
| Legal status of owner/sponsor | State property | | |

Existing energy consumption:

| Fuel | Energy meters installed | Annual consumption | | Energy units | Energy price in USD |
|-------------|-------------------------|--------------------|------|--------------|---------------------|
| | Yes/No | | 2004 | | |
| Mazut | No | | 6350 | tons | 110.0/ton |
| Electricity | Yes | | 1520 | 1000 kWh | 0,058 kWh |

Proposed intervention overview:

| | |
|-----------------------|---|
| Description: | It is planned to remove boilers in Molokova str. And Zaslono str. and transmit thermal load to the district boiler house “Orsha-Vostochnaya” and CHP “Orshanskaya”. This will allow to increase performance index of conversion and operating costs |
| Benefits | Total savings 1683 tfe/yr CO ₂ emission reduction of 8560 tonnes/yr SO ₂ reduction of 113 tonnes/yr |
| Replication potential | About 10 sites in regions |

Proposed measures and financing (including hardware and implementation costs):

| Object | Measure | Estimated investment in USD |
|------------------------------|----------------------|-------------------------------------|
| Heating pipelining (2.3 km) | PI pipe installation | 2185000 |
| Design | | 109300 |
| Implementation | | 437000 |
| Contingencies | | 27300 |
| Total investment and savings | | 2758600 saving of 856 700 USD/yr |

ECONOMIC INDICATORS

| Indicator | Units | |
|-----------|-------|---------|
| NPV | USD | 5019000 |
| IRR | % | 46 |
| SPBT | Years | 3.5 |
| BPBT | Years | 3.2 |

PRELIMINARY FINANCING PLAN

| | Cost USD | % of Total |
|--|----------|------------|
| Owner's resources: | 2068950 | 75 |
| Sponsor's resources including: Committee for Energy Efficiency: | 689650 | 25 |
| Total: | 2758600 | 100 |

Basic assumptions

| | |
|------------------------|-----------------------------|
| Mazut sale price | 110 USD/1000 m ³ |
| Electricity sale price | 0.058 USD/kWh |
| Project lifetime | 15 years |

Project 3: Installation of gas piston-plant

Owner: Joint Stock Company “Grodnochimvolokno”

Project sponsor: Committee on Energy Efficiency (Grodno Oblast Department)

Contact:

| | |
|----------|--------|
| Address: | Grodno |
| City: | Grodno |

Existing system:

| | | | |
|-------------------------------|---|-----------------------|--|
| Plant capacity: | 222 MW | Distribution net | |
| Type of boilers installed: | Gas-fired boilers CVGM-100 – 2 units, waste heat boilers VAPOR TTT300 – 2 units, gas piston installations JMS – 4 units | Year of construction: | |
| Main end users/customers: | Production facilities, housing sector | | |
| Legal status of owner/sponsor | State property | | |

Existing energy consumption:

| Fuel | Energy meters installed | Annual consumption | Energy units | Energy price in USD |
|-----------------|-------------------------|--------------------|---------------------|------------------------|
| | Yes/No | 2004 | | |
| Gas | Yes | 65 000 | 1000 m ³ | 57/1000 m ³ |
| Electricity | Yes | 145 191 | 1000 kWh | 0.050/kWh |
| Heat production | Yes | 341 463 | Gcal | |

Proposed intervention overview:

| | |
|-----------------------|--|
| Description: | It is planned to install a gas piston unit JMS-620. Under the current heating loads it allows to produce extra 16 mil kWh electricity for internal consumption |
| Benefits | Electricity savings of 16 mil kWh/yr (3,416 tfe/yr) CO2 emission reduction of 7,200 tonnes/yr |
| Replication potential | 2-3 units in concern “Belneftechim” |

Proposed measures and financing (including hardware and implementation costs):

| Object | Measure | Estimated investment in USD |
|------------------------------|---|--|
| Gas piston installation | A gas piston installation JMS-620 will be put into operation (2.73 MW electric power, 3.03 MW heat power) | 1 440 000 |
| Design | | 145 000 |
| Implementation | | 360 000 |
| Contingencies | | 195 000 |
| Total investment and savings | | 2 140 000, saving of 896 400 USD/yr |

ECONOMIC INDICATORS

| Indicator | Units | |
|-----------|-------|-----------|
| NPV | USD | 5 690 000 |
| IRR | % | 63 |
| SPBT | Years | 2,8 |
| BPBT | Years | 2.4 |

PRELIMINARY FINANCING PLAN

| | Cost USD | % of Total |
|---------------------------------|-----------|------------|
| Owner's resources: | 1 240 000 | 58 |
| Sponsor's resources | | |
| Committee on Energy Efficiency: | 900 000 | 42 |
| Total: | 2 140 000 | 100 |

Basic assumptions

| | |
|------------------------|----------------------------|
| Gas sale price | 57 USD/1000 m ³ |
| Electricity sale price | 0.05 USD/kWh |
| Project lifetime | 15 years |

Project 4: Heat supply optimization

Owner: Agricultural co-operative enterprise “Ozeritsky”

Project sponsor: Committee on Energy Efficiency (Minsk Oblast Department)

Contact:

| | |
|----------|--------------|
| Address: | Sloboda |
| City: | Sloboda |
| Oblast,: | Minsk Oblast |

Existing system:

| | | | |
|-------------------------------|--|-----------------------|--|
| Plant capacity: | 69.8 MW | Distribution net | Connected heat load amounts to 4.3 MW for apartment buildings and 28.6 MW for production areas |
| Type of boilers installed: | Gas-fired boilers PTVM 30 - 2 units | Year of construction: | 1984 |
| Main end users/customers: | Production areas, communal services, apartment buildings | | |
| Legal status of owner/sponsor | State property | | |

Existing energy consumption:

| Fuel | Energy meters installed | Annual consumption | | Energy units | Energy price in USD |
|-----------------|-------------------------|--------------------|--------|---------------------|------------------------|
| | Yes/No | 2003 | 2004 | | |
| Mazut | No | | | | |
| Gas | Yes | 9 325 | 8 876 | 1000 m ³ | 73/1000 m ³ |
| Electricity | Yes | 5 938 | 6 000 | 1000 kWh | 0,032 kWh |
| Heat production | Yes | 68 512 | 66 320 | Gcal | 13/Gcal |

Proposed intervention overview:

| | |
|-----------------------|---|
| Description: | It is planned to install steam boilers DE 16/14 and DE 10/13 equipped with 500 kW backpressure steam turbine. Greenhouse walling (single-glazed) is planned to be replaced by double-glazing. |
| Benefits | Natural gas savings of 2.79 mln m ³ /yr (3 200 tce/yr) Electricity savings of 3.835 mln kWh/yr (1 074 tce/yr) CO ₂ emission reduction of 6 860 tonnes/yr |
| Replication potential | Up to 10 similar projects in Belarus |

Proposed measures and financing (including equipment and implementation costs):

| Object | Measure | Estimated investment in USD |
|--|---|-----------------------------|
| 7.5 MW gas-fired boiler and 12 MW gas-fired boiler | A boiler similar to the DE 10/13 (10 tonnes of steam/hour, 13 bar) and a boiler similar to the DE 16/14 (16 tonnes of steam/hour, 14 bar) | 130 000 |
| 0.5 backpressure steam turbine | | 230 000 |
| Replacing of greenhouse walling | | 1 500 000 |

| | | |
|------------------------------|----------------|--|
| (single-glazing) | Double-glazing | |
| Design | | 190 000 |
| Implementation | | 465 000 |
| Contingencies | | 200 000 |
| Total investment and savings | | 2 715 000, saving of 407 200 USD/yr |

ECONOMIC INDICATORS

| Option: Replacement of greenhouse walling (single-glazing) | | | Option: Replacement of boilers and installation of backpressure steam turbine | | |
|--|-------|---------|---|-------|---------|
| Indicator | Units | | Indicator | Units | |
| NPV | USD | 543 000 | NPV | USD | 255 000 |
| IRR | % | 12 | IRR | % | 17 |
| SPBT | Years | 10,6 | SPBT | Years | 8.1 |
| BPBT | Years | 7.3 | BPBT | Years | 6.2 |

PRELIMINARY FINANCING PLAN

| | Cost USD | % of Total |
|--|-----------|------------|
| Owner's resources: | 1 607 650 | 60 |
| Sponsor's resources: Committee on Energy Efficiency | 1 107 350 | 40 |
| Total: | 2 715 000 | 100 |

Basic assumptions

| | |
|------------------------|----------------------------|
| Gas sale price | 73 USD/1000 m ³ |
| Electricity sale price | 0.032 USD/kWh |
| Project lifetime | 15 years |

PART VIII: NATIONAL BUDGETARY SYSTEM IN BELARUS

The Law on the Budgetary System and State Extra-Budgetary Funds of Belarus defines the operational framework of the budgetary system of Belarus and interlinkages between the national and local budgets. In Belarus, the budget structure depends on the administrative-territorial division of the country. The national and local budgets are included in the budgetary system as separate elements.

The above Law also contains the definition of the consolidated budget, i.e. the entirety of budgets of Belarus or its relevant administrative-territorial entity.

Budgets of rural councils, urban villages, district towns located in the territory of a district, and the district budget constitute the consolidated budget of a district (district budget).

Budgets of districts, regional towns located in the territory of a region, and the regional budget constitute the consolidated budget of a region (regional budget).

Budgets of regions, the City of Minsk and the national budget constitute the consolidated budget of the Republic of Belarus (national budget).

The Ministry of Finances of the Republic of Belarus and financial divisions (departments) of local authorities (municipalities) annually make consolidated budgets of the Republic of Belarus and its administrative-territorial entities, respectively.

The fullness of budgets is ensured through the inclusion therein of all taxes stipulated by the national laws, other mandatory payments, as well as by defining spending terms and procedures.

The feasibility of budgets is ensured through the coverage of expenditures as a factor of proceeds actually received and funds used to cover the budget deficit.

The national budget and local budgets of all levels are separate reflecting receipts and expenditures available to relevant government authorities.

The independence of budgets as part of the budgetary system lies in the fact that the national budget is approved by a law of the Republic of Belarus, local budgets – by resolutions of relevant local councils, whereas their implementation is a duty of the government and local executive bodies on the basis of budgetary regulations. The independence of budgets is ensured through the availability of own sources of income, as well as the right of relevant government authorities to make, review, endorse and execute budgets independently.

Budgetary expenditures are contingent upon socio-economic development programs and policies of Belarus and relevant administrative-territorial entities, and are executed annually subject to terms and conditions established by the national legislation and decisions of local councils regarding the budget for the next financial (fiscal) year.

In accordance with commitments assumed earlier, the budget for the next financial (fiscal) year provides full appropriation to pay interest on public debt, repay matured indebtedness on public debt in the national budget for this year from the previous years, as well as allotments to ensure compliance of the Government of Belarus with guarantees it has undertaken.

Within national and local budgets there are reserve and targeted budgetary funds which are utilized according to a specific purpose to support social and other programs, eliminate consequences of natural disasters and carry out other activities which could not have been foreseen at the time the budget was being approved. The size and financing sources of these funds are determined during the approval of the budget for the next financial (fiscal) year.

The budget classification of the Republic of Belarus is a systemized group of revenues, expenditures and sources of covering the deficit of national and local budgets, state extra-budgetary and budgetary targeted funds, extra-budgetary resources of public institutions and organizations, with the assignment of group codes to objects of classification based on their economic performance. This allows in-country and international comparisons of budget indicators so as to be able to analyze the national fiscal policy.

The budget classification is universal and used to make, approve and implement national and local budgets, state extra-budgetary and budgetary targeted funds, extra-budgetary resources of public institutions and organizations.

Balance of budgets of all administrative-territorial entities is a sine qua non of the fiscal policy.

The Government of the Republic of Belarus, local executive bodies shall take steps to ensure that respective budgets are well-balanced and expenditures are affected according to revenues received.

The budget deficit is when expenditures exceed incomes.

Limits of deficit of the national budget, regional budgets and Minsk City budget are set in the Budget Act of the Republic of Belarus for the next financial (fiscal) year.

Limits of budget deficit for districts and towns of regional subordination are set in resolutions of superior Local Councils within the deficit line established for regional budgets and Minsk City budget; for budgets of district towns, urban villages, and rural councils – by superior Local Councils.

The national budget deficit can be covered from sources approved in the Budget Act of the Republic of Belarus for the next financial (fiscal) year; deficit of local budgets – approved by decisions of the appropriate Local Councils.

Subsidies from superior budgets can be allotted to balance local budgets.

In the event of a budget deficit, protected budget items take priority in terms of coverage.

The budget for the next financial (fiscal) year is drawn up in accordance with the national legislation based on budget returns for the previous year and for a certain period of the current year, income targets, forecast parameters of the socio-economic development of Belarus, state and regional programs within the timeframe set by the Government of the Republic of Belarus and local executive bodies.

The national budget is endorsed based on a law of the Republic of Belarus; local budgets – based on resolutions of local councils.

The financial (fiscal) year in the territory of the Republic of Belarus is understood as starting on 1 January and ending on 31 December of the calendar year.

The accounting period comprises the financial (fiscal) year and one-month exemption period following it to finalize transactions undertaken during the execution of the budget for the previous financial (fiscal) year.

Preparing estimates of the national and local budgets is necessary to determine the amount of financial resources required for state bodies and local governments of Belarus to perform their functions, ensure socio-economic development of the Republic of Belarus or respective administrative-territorial entities.

The preparation of budget estimates falls under the exclusive competence of the Government of the Republic of Belarus and respective local executive authorities. Authorities directly involved in the preparation of budget estimates are the Ministry of Finances and local financial bodies (respective executive bodies).

Budget estimates are prepared based on the national socio-economic development forecast and key activities of the fiscal policy.

The Ministry of Economy, Ministry of Finances and National Bank of the Republic of Belarus shall annually develop parameters of the socio-economic development forecast, key activities of the fiscal and monetary policy by 1 August of the year preceding the planned financial (fiscal) year to be laid before the Government of the Republic of Belarus for review, and, once approved by the Government, – before the President of the Republic of Belarus.

The Ministry of Statistics and Analysis of the Republic of Belarus and its bodies shall submit to the Ministry of Finances, local executive bodies statistical data necessary to develop socio-economic development forecasts and prepare budget estimates.

The National Bank of the Republic of Belarus submits to the Ministry of Finances data needed to prepare estimates of the national budget for the next financial (fiscal) year.

The Ministry of Finances and local financial bodies respectively determine income and expenditure targets for national and local budgets. Furthermore, budget expenditures take into account projected receipts.

Based on draft national budget, regional budgets and Minsk City budget, the Ministry of Finances makes a draft consolidated budget of the Republic of Belarus.

Draft national and consolidated budgets of the Republic of Belarus, as well as local budgets for the next financial (fiscal) year and proposals to balance budgets are laid respectively before the Government of the Republic of Belarus and local executive bodies for review.

Draft national and consolidated budgets of the Republic of Belarus for the next financial (fiscal) year, reviewed and approved by the Government, are submitted to the President of Belarus for review.

Normally the President of the Republic of Belarus brings in the Budget Bill of Belarus to the Parliament prior to 1 October of the year preceding the next financial (fiscal) year.

The Budget Act of Belarus for the next financial (fiscal) year establishes and approves the following key parameters:

- budget surplus or budget deficit, budget deficit limits with regard to the national budget, regional budgets and Minsk City budget, internal and external sources of national budget coverage;
- allocation of receipts between national and local budgets, and standard contributions from national taxes and other mandatory payments to regional budgets and Minsk City budget;
- receipts of the national budget as a total and by types of taxes and other mandatory payments in accordance with the budget classification of the Republic of Belarus;
- expenditures of the national budget as a total, by sections and subsections of the functional budgetary classification of the Republic of Belarus, and by the agency budgetary classification;
- a list of national dedicated programs envisaged to be funded through the national budget in the planned financial (fiscal) year;
- the amount of state investment appropriations by sectors which are to be financed through the national budget in the planned financial (fiscal) year;
- a list of protected items.

The Budget Act of the Republic of Belarus for the next financial (fiscal) year and decisions of Local Councils on the approval of the respective budgets are to be adopted in the way that has been established before 1 January of the next financial (fiscal) year. Local budgets are approved following the approval of the respective superior budgets.

It is the responsibility of the Government of the Republic of Belarus, local executive bodies to ensure the implementation of the respective budgets.

The national and local budgets are implemented on the basis of the Budget Act of the Republic of Belarus for the next financial (fiscal) year, other statutory acts of Belarus and decisions of Local Councils in accordance with the budgetary list of the national and local budgets approved in the way that has been established by the national law. Resources of the national and local budgets are accumulated on the respective accounts of the Ministry of Finances and local financial bodies, which keep track of all the transactions related to budget execution.

The corporate right to spend budgetary appropriation earmarked for legal entities in the current financial (fiscal) year ceases upon the completion of the accounting period. The unused account budgetary revenues are transferred by these entities to the respective budget subject to the set procedure.

During the course of executing budgets, the Ministry of Finances and respective local financial bodies have the right to make changes to quarterly allotments and expenditure items of the respective budgets within the approved annual appropriation by sections and subsections of the functional budgetary classification and agency classification of budget expenditures.

Upon request of the Ministry of Finances and local executive bodies, banks shall furnish information about the bank account status of ministries, other central government bodies, other corporate entities using resources of the

budget, state and sectoral extrabudgetary funds, as well as about the cash flow on budgetary accounts; legal entities and individuals are under obligation to provide information about how financial resources received from the budget and state extrabudgetary targeted funds have been used.

Based on a decision of the Ministry of Finances or local financial bodies, budgetary resources, including loans and credits, received without justification or utilized inappropriately or in contravention of the national law are to be returned without recourse to the respective budget with the recovery of an appropriate penalty from legal entities engaged in entrepreneurial activities, institutions conducting profitable activities under their charters as well as individual entrepreneurs.

Content of the National Budget

The national budget finances activities of national importance.

The national budget is used to redistribute some financial resources between regions and the City of Minsk to balance their socio-economic development.

The national budget can be used to release subsidies and subventions to the budgets of regions and the Minsk City if they lack sufficient resources to cover selected expenditures and activities.

The distribution of receipts and expenditures between the national budget and the budgets of regions and the Minsk City is approved by the Budget Act of the Republic of Belarus for the next financial (fiscal) year.

Expenditures of the National Budget

The national budget is used to cover:

- investments in nationally owned facilities;
- conservation activities carried out under state programs;
- activities to mitigate the consequences of the Chernobyl Nuclear Power Plant accident;
- state social support programs;
- other state dedicated programs;
- foreign trade costs;
- national institutions and organizations of education, training, science and research, culture, health, physical education, social support;
- costs related to allocation and replenishment of government reserves;
- government establishment expenditures, including courts, law enforcement and national security agencies;
- national defense, border guards, customs;
- repayment of credits of the National Bank of the Republic of Belarus provided to cover expenditures of the national budget, public debt, their interest, and repayment of other liabilities of the Government;
- repayment of the external debt and interest on credits received from foreign states and banks, international financial organizations;
- establishment of reserve and state targeted budgetary funds;
- loans, credits, subsidies, transfers, subventions to corporate entities and individuals, regional budgets and Minsk City budget;
- Free Economic Zone costs;
- market infrastructure development costs;
- other costs included in the national budget for the respective financial (fiscal) year.

Based on national budget targets approved by a law of Belarus, the Ministry of Finances draws up and approves the budgetary list.

The budgetary list is a key document guiding the implementation of the national budgets in terms of receipts and expenditures.

The President, Government, and State Control Committee of the Republic of Belarus oversee the implementation of the national budget. The Ministry of Finances, Ministry of Taxes and Duties, State Customs Committee of the

Republic of Belarus, local financial, taxing and customs bodies exercise supervisory control over prompt delivery of receipts and appropriate spending of resources.

Content of local budgets

Local budgets include budgets of regions, districts, towns, urban villages and rural councils. Local budgets support financially economic, social, cultural and other events conducted in a specific territory.

Local executive bodies, Local Councils, under their respective authority, independently draw up, consider, approve and execute budgets to satisfy overall national interests and those of the population residing in a specific territory. Other bodies are not allowed to interfere in the process of drawing up, considering, approving and executing local budgets, except when explicitly provided for in national laws.

It is within the discretion of Local Councils to spend local budgets under their respective authority, with the exception of financial resources transferred to them from a superior budget for a specific purpose.

Within local budgets, there can be established reserve and dedicated budgetary funds, whose size is decided by the respective Local Councils.

Every Local Council forms its own budget separately based upon the following:

- assigned funding sources;
- standard contributions from national taxes, other mandatory payments stipulated by the Budget Act of the Republic of Belarus for the next financial (fiscal) year and decisions of Local Councils regarding the respective budgets;
- additional sources set by Local Councils;
- amounts of subsidies, transfers, subventions received from superior budgets;
- spending needs to support socio-economic development intervention.

Local budgets are drawn up subject to the terms and timeframe established by local executive bodies. Local budgets are drawn up by local financial bodies (budgets of district towns, urban villages and rural councils – by executive bodies) based on income-expenditure targets of local budgets and estimated targets received respectively from the Ministry of Finances or superior executive bodies used to determine standard contributions from national taxes and other mandatory payments into these budgets, amounts of subsidies.

Local executive bodies, local financial and tax authorities execute local budgets, ensure the supply of all stipulated receipts and budgetary spending in accordance with their purpose.

Local budgets are implemented in conformity with the budgetary list, which is made by local financial bodies or the respective local executive bodies in accordance with the endorsed budget.

Local governments (municipalities)

According to the Local Government Law of the Republic of Belarus, the single system of local governments in the territory of the Republic of Belarus consists of regional, district, city, community and rural executive committees and local administrations.

The executive committee (with the legal entity status) is an executive authority within a region, district, city, community and rural council.

Executive committees of the primary level (rural, community, town (district towns)), basic level (town (regional towns), district), and regional level are included in the executive establishment and are local governments.

The executive committee comprises the head of the executive committee, his/her deputies (deputy), chief administrator (secretary) and members of the executive committee.

Regional (Minsk City) executive committees are subordinate and accountable to the President of the Republic of Belarus and the Council of Ministers of the Republic of Belarus in matters falling within the purview of the Government; primary and basic executive committees – to the President of the Republic of Belarus and superior

executive bodies. The executive committee is accountable to the respective local Councils (later Councils) in matters falling within the purview of the Council.

The executive committee:

- develops and submits to the Council for approval a local economy and communal property management plan, proposals to protect public security and advocate citizens' rights;
- develops and submits to the Council for approval draft programs of socio-economic development, local budget, takes measures towards the implementation of programs and local budget, submits progress reports to the Council.

In the course of implementing a local budget, executive committees have the right to propose changes to the budget's income and expenditures through the respective Council.

Regional and Minsk City Executive Committees submit to a central government financial body consolidated budgets for the next financial (fiscal) year and budget implementation reports for the previous financial (fiscal) year in accordance with the rules set by that body;

- ensures the supply of local budgetary receipts and sees to it that they are spent appropriately, decides on the issuance of local securities and auctions;
- manages communal property within the administrative-territorial entity in the way that has been established by the Council;
- decides on the establishment, reorganization and liquidation of enterprises, organizations, institutions and associations of communal property; in the way that has been established by the respective Council, approves the schedule of such enterprises, organizations, institutions and associations, and agrees to the schedule of other enterprises, organizations, institutions and associations regardless of their ownership status, located in its jurisdiction except as otherwise provided by the national law; gives consent to the placement of enterprises, organizations, institutions and associations within its jurisdiction not belonging to the communal property of the respective administrative-territorial entity;
- makes contracts with corporate entities and individuals;
- cooperates, by consent of proprietors, resources of enterprises, organizations, institutions and associations, and invests them in a community socio-economic development on a contribution basis;
- supervises the use of the communal property within its jurisdiction in the way that has been established by the national law;
- handles matters related to land planning and use in accordance with the national legislation;
- ensures the designing of urban development projects within its jurisdiction.
- makes decisions intended to protect the rights and legitimate public interests, arranges public hours for executives and department heads of the executive committee, considers letters from people and acts on them;
- in accordance with the national legislation, tackles issues of health, education, social and cultural support, trade, transport, social amenities, etc. within its jurisdiction;
- ensures the rule of law and public security within its jurisdiction;
- exercises other legislative powers.

Heads of executive committees are appointed and dismissed by the President of the Republic of Belarus or in the way established by the President and approved for their posts by the respective Councils.

The term of office of a head of rural, community, town (district town) executive committee is equal to that of the respective Council.

In their activities, heads of regional (Minsk City) executive committees are subordinate and accountable to the President of the Republic of Belarus, Council of Ministers on matters falling within the purview of the Government; head of the primary and basic executive committee is accountable to the President of the Republic of Belarus and superior executive bodies, and on matters reserved for the Council – to the respective Council.

Local administration

The local administration (with a legal entity status) is an executive body within the territory of a town's neighborhood. Local administrations form part of the executive system and are considered to be local governments.

Head of the local administration, his/her deputies and members of the local administration constitute the composition of the local administration.

The head of the local administration is appointed and dismissed by the President of the Republic of Belarus or in the way established by the President. Deputy (deputies) head of the local administration is appointed and dismissed by the chairman of the city executive committee. Other members of the local administration as well as employees of the local administration are appointed and dismissed by the head of the local administration.

The structure and staff of the local administration are approved by the city executive committee.

The local administration:

- manages city communal property within the authority provided by the respective Local Council;
- ensures the supply of budgetary and other receipts and sees to it that they are spent appropriately;
- cooperates, by consent of proprietors, resources of enterprises, organizations, institutions and associations, and invests them in a community socio-economic development on a contribution basis;
- in the way that has been established by the national legislation, supervises the protection of the atmospheric air, water, natural resources, forest, wildlife, as well as the utilization of communal property;
- develops and submits to the city executive committee cost estimates of the local administration, ensures that they are implemented;
- handles issues related to land use pursuant to the land laws of the Republic of Belarus;
- arranges construction and maintenance of houses, roads, upkeep of streets, neighborhoods, areas adjacent to houses;
- ensures the proper maintenance and upkeep of monuments of nature, history and culture, cultural sites;
- exercises other legislative powers provided by the respective executive committee, Council.

The local administration is subordinate and accountable to the city executive committee.

Based on proposals of the respective executive committees, City Councils approve cost estimates of local administrations, and their implementation reports.

The local administration reports to the city executive committee on the performance progress at least once a year, and informs the public about its activities.

Councils

Councils are representative state bodies in the territory of respective administrative-territorial entities of the Republic of Belarus; they are also the main element in the system of local self-governance.

In their territory councils ensure co-ordination among territorial public self-governance bodies.

Rural, village, town, district and regional councils represent a System of Councils in the Republic of Belarus. The system is held together by common legal, educational and operational principles, common tasks that they have to undertake in the interests of population and socio-economic development of their territory.

Officially there are three territorial levels of councils in the Republic of Belarus: primary, basic, and regional.

The primary territorial level includes rural, village, town (i.e. district towns) councils.

- The basic territorial level includes town (i.e. regional towns) and district councils.
- The regional territorial level includes regional councils. The Minsk City Council shares the status of both basic and regional council.
- Councils are legal entities.
- Councils are elected by their respective constituencies, and are consequently accountable to them.
- Councils are funded by local budgets.

Council sessions tackle the following main issues:

- approval of socio-economic development programmes, local budgets and budget implementation reports, and, when needed, reconsideration of budgets;
- imposition of local taxes and levies in accordance with the laws of the Republic of Belarus;
- co-ordination, within the limits established by the laws of the Republic of Belarus, of management and control of public property;
- repeal of resolutions of the Council Chairperson and the Chairperson of the Executive Committee, decisions of the Executive Committee, subordinate council, or acts of territorial public self governance bodies if found incongruous with the laws of the Republic of Belarus;
- management of administrative and territorial arrangement in accordance with the laws of the Republic of Belarus;
- redistribution of responsibilities among councils of different levels, reassigning some tasks to executive committees, local administration, territorial public self-governance bodies;
- other issues which, according to the laws of the Republic of Belarus, are under the jurisdiction of councils.

Jurisdiction of the councils

The councils of primary territorial level tackle the following issues on the territory of their jurisdiction:

- approval of programmes for housing, landscaping, road construction, public utilities, social and cultural development, nature conservation; control of execution of these programmes, and approval of programme implementation reports;
- imposition of local taxes and levies within the limits established by the laws of the Republic of Belarus;
- co-ordination, as established by law, of privatization of public property;
- management and control, in accordance with the laws of the Republic of Belarus, over the use of lands, underground resources, water resources, forests, hunting and fishing estates, and other natural resources under the jurisdiction of the specific administrative unit;
- participation in the development, approval and implementation of zoning and housing projects, their master plans and architectural solutions; enforcement of norms and rules (including local ones) during construction of any facilities on the territory under the jurisdiction of the council;
- other issues within the limits established by the laws of the Republic of Belarus.

The councils of basic territorial level tackle the following issues on the territory of their jurisdiction:

- approval of programmes for housing, landscaping, road construction, public utilities, social and cultural development, privatization, nature conservation; control of execution of these programmes, and approval of programme implementation reports;
- imposition of local taxes and levies within the limits established by the laws of the Republic of Belarus, including tariffs on public utilities, public transport, and other services, if they are not established by superior governmental agencies;
- approval of district development plans, and master plans for district towns and villages;
- approval of schemes for management of local economy and public property;
- introduction of proposals for draft regional programmes of socio-economic development, interterritorial programmes, plans of district enterprises and organizations related to provision of public services and social development of the territory;
- management and control, in accordance with the laws of the Republic of Belarus, over the use of lands, underground resources, water resources, forests, hunting and fishing estates, and other natural resources under the jurisdiction of the specific administrative unit;
- provision of preferences, subsidies, and other benefits within the scope of its jurisdiction, to natural persons and legal entities;
- other issues within the limits established by the laws of the Republic of Belarus.

The councils of regional territorial level tackle the following issues:

- approval of inter-territorial programmes and activities, fulfillment of responsibilities delegated by councils of basic territorial level;

- equalization, when allowed by the laws of the Republic of Belarus, of budgets of administrative units of the region (or the city of Minsk);
- imposition of local taxes and levies in accordance with the laws of the Republic of Belarus;
- provision of organizational and methodological assistance to councils of basic and primary territorial levels in the elaboration of regional development programmes in compliance with the national, cultural and demographic policies of the Republic of Belarus;
- regulation of land ownership within the limits established by the laws of the Republic of Belarus;
- co-ordination of administrative and territorial development in accordance with the laws of the Republic of Belarus;
- other issues of general regional or city level, if they do not encroach upon self-dependence in execution of specific powers by councils of other levels.

The economy of local governance and self-governance is based on natural resources (land, land resources, water resources, forests, plants and wild life), public or other type of property serving as income generation sources for the system of local governance and self-governance, or satisfying social and economic needs of population of the respective territory.

Local economy ensures that the system of local governance and self-governance functions properly, and that the needs of population of the specific administrative unit are duly satisfied.

Local economy consists of enterprises, organizations, agencies and associations, including social and industrial facilities owned by the respective administrative unit.

Public property

Public property consists of the public purse of an administrative unit, and the property owned by public legal entities. The public purse of a specific administrative unit is composed of moneys of the local budget and other public property not owned by public legal entities.

Public property might include the property of governmental bodies of the respective administrative unit, moneys of the local budget, housing facilities and public utilities of the respective territory, industrial, construction, agricultural, shopping, servicing, transport facilities, and other enterprises, agencies and organisations of health, education, culture, physical education and sports, social security, and other property necessary for the proper functioning and development of the territory in question.

Public property also includes the property donated into public ownership by the Republic of Belarus or other owners, and the property created or purchased with own resources by the councils, or other local self-governance bodies, executive committees and local administrations, even if this property is located beyond the borders of the respective administrative unit.

Executive committees and local administrations, in full accordance with the procedural rules established by a specific council, have the right to transfer public facilities into temporary or indefinite tenure, lease them, sell to enterprises, organizations, agencies and associations, individual citizens or groups of people. In protection of the interests of people living on the territory of their jurisdiction, councils determine the mandatory conditions of ownership and use of public facilities alienated in favour of other owners either through competition or by auction.

Financial resources

Financial resources of the bodies of local governance and self-governance are composed of budgetary and extra-budgetary resources of councils and their departments, executive committees and local administrations, and moneys of the bodies of territorial public self-governance. In case of insufficiency of own resources, they can be replenished by grants or subsidies from superior budgets. As established by law, superior budgets can also allocate subventions to local budgets for implementation of target programmes and activities. Local budgets receive funding based on their needs to enhance their economic structure, regional development and regional policy in full accordance with the laws of the Republic of Belarus.

Local budget

Councils approve, while executive committees, within the scope of their jurisdiction, develop and execute local budgets. Local budgets of subordinate administrative units are not included into the budgets of superior administrative units.

Minimum size of a local budget is determined by the national budgetary security average for non-industrial sector per person, taking into account the existing infrastructure of the region.

Local budgets, whose revenues are insufficient to cover all the scheduled costs, receive standardized percentage from national taxes and other mandatory payments contributed by the territory. This standardized percentage is formed by upgrading a local budget to the minimum size which guarantees national budgetary security average per person. This standardized percentage is applied on a long-term basis. In case of increase of local expenditures, the council has to balance its budget independently.

Expenditures of local budgets

Within their jurisdiction, councils can independently:

- determine the use of local budgetary resources, except for the targeted financial resources allocated by superior budgets; spend budgetary resources to finance activities of socio-economic development of their respective territories;
- increase, within the limits of available resources, the expenditures to maintain public utilities, facilities of health care, education, science, culture, physical education and sports, social security, law enforcement, nature conservation, historical and cultural legacy; introduce after-payments and bonuses in addition to the official salaries and wage rates for the workers of the above-mentioned agencies and institutions;
- determine additional preferences and subsidies when rendering assistance to certain categories of population; and identify sizes of allowances for individual citizens.

Councils and executive committees can invest their surplus funds into economic activities, stocks and other securities, extend loans to enterprises and other legal entities.

A local budget has a special amount set aside to pay off loans, debts, and interest rates.

Additional revenues acquired during execution of local budgets, and surplus funds generated either by growing revenues or reduced expenditures, are at full disposal of the council, not subject to withdrawal, and can be used at its discretion. As a rule, any revenue losses or additional expenditures are not compensated by superior budgets. Unused local budgetary surplus is not subject to withdrawal at the end of the year, and can be used at the council's discretion.

Extra-budgetary funds

Councils and executive committees have the right to create extra-budgetary funds which are made of:

- additional revenues and saved financial resources acquired through various socio-economic activities organized by councils or executive committees;
- voluntary contributions and donations of individual citizens, enterprises, organizations, agencies, and associations;
- revenues from issuance of local loans and securities, conduction of auctions, exhibitions, concerts, and other activities;
- fines levied on enterprises, organizations, agencies and associations, for receiving unjustified profits by overpricing their products (work, services);
- fines and compensation payments for environment pollution, unwise management of natural resources, and other violations of the nature conservation legislation of the Republic of Belarus, sanitary norms and rules. The resources generated by these fines and compensation payments are then used to organize nature conservation and rehabilitation activities;
- other extra-budgetary resources.

Extra-budgetary target fund is formed and used in accordance with the status of the fund approved by the council or the executive committee. Moneys of the fund are put on special bank accounts, and cannot be confiscated.

Head administrators of extra-budgetary resources are to submit to authorized financial agencies at a set date their income-expenditure reports.

Councils and executive committees can create extra-budgetary funds jointly with superior or subordinate representative or executive agencies.

The Committee of State Control of the Republic of Belarus, its territorial branches and relevant superior local executive bodies, exercise control over the use of the resources of extra-budgetary funds. Operational control is exerted by local financial and taxation agencies.

Councils and executive committees, with consent of enterprises, organizations, agencies, associations, and individual citizens, can pool their resources, budgetary and extra-budgetary resources, for construction, expansion, repair, shared maintenance of social and industrial facilities, and nature conservation activities.

PART IX: ENERGY CENTER BUSINESS PLAN

1. Description of EC activities

EC will act as an agent between consumers and suppliers on the market of energy efficient services and equipment. In practice it will offer a comprehensive range of services to the target groups:

1.A Services offered to state organizations – project partners as EC clients

1. Current analysis of the energy-consuming equipment.

Most of the state-owned enterprises do not have consistent data on the energy resources consumption and the required maintenance needed for the effective use of the energy-consuming equipment. Technical problems, unsatisfactory functioning of systems and irregular maintenance often lead to prohibitive costs on energy supply and use of equipment. State organizations are aware of the problems they are faced with, however they are not equipped with the respective technological tools, sector analysis data and other information needed to solve them.

During the first stage, EC will benefit project partners. EC specialists will analyze the current state of the energy-consuming equipment, which includes technical and financial overviews, including the analysis indicating increasing cost burden subject to financing from the state budget. A detailed analysis of technologies and methods of using the existing equipment will be undertaken. Also weaknesses and bottlenecks in the systems of the energy-consuming equipment will be identified.

2. Energy audit

The results of the analysis of the current condition of the energy-consuming equipment and its operational modes, and an energy audit will help recommend activities for the inclusion in an investment program. Recommendations will include technologies and intervention to improve the use of heat supply equipment, including calculations of investment/rate of return/efficiency of every investment project. Also calculations of a possible CO₂ emissions reduction will be provided. An energy audit report will include a description of positive financial and environmental impact investments into the improvement of the system of energy-consuming equipment will help achieve. During the execution of an energy audit, there will be developed an energy consumption balance before and after the intervention.

3. Assisting in providing investment funding to modernize energy consumption systems

The primary function of EC will be to assist state-owned organizations in obtaining investment resources. In the delivery of this particular service, EC will enjoy a competitive advantage because currently there is no such service on the market. Proposals regarding the use of potential financial resources to invest in the modernization of energy consumption systems will be submitted once the current system analysis and an energy audit have been completed allowing to identify needs, weaknesses, constraints and potential strengths, as well as co-financing possibilities. It is during this stage that investment needs should be assessed, payback period determined, possibilities for energy saving accurately identified, the most effective technologies selected and CO₂ reduction strategies proposed. Using all of the above data state organizations will be able to make well-grounded decisions when choosing from investment options. It will also help build trust between state organizations and EC thereby generating motivation to continue to work jointly. State organizations will mainly have the following investment options for energy efficiency projects.

3.1. Input of the Committee on Energy Efficiency under the Council of Ministers of the Republic of Belarus

It is envisaged that during the implementation of the project the Committee on Energy Efficiency will provide an input of USD 2.9 million to finance energy efficiency projects, of which 50% on a returnable basis at the annual interest rate of 6%, and USD 0.1 million in-cash, and USD 0.15 million in-kind for EC development and the project implementation. The money returned will be spent on funding further energy efficiency projects.

3.2. Bank commercial loans

During the implementation of the project, a detailed analysis of credit terms offered by commercial banks at the existing interest rates will be undertaken. In the event of a favorable evaluation, loans of commercial banks will be used to implement energy efficiency projects. Additionally, consideration will be given to ESCO funding options.

3.3. Revolving funds

During the implementation of the UNDP/GEF Project “Biomass energy for heating and hot water supply in Belarus”, a Revolving Fund is being established which could be used to finance biomass projects.

4. Preparation of the tendering procedure to purchase technologies

State-owned enterprises are obliged to purchase at public auctions. The majority of state enterprises have neither expertise, nor money to hold a good tender. EC will act as a partner of its clients coaching the entire procurement procedure “from start to finish”, starting with the establishment of initial contact with a state enterprise, drawing up legal and contractual paperwork and implementing the selected technologies. In this field, state enterprises will be offered the following services during the implementation of and beyond the project:

- 4.1. Investment needs assessment to implement projects on the modernization of energy consumption systems.
- 4.2. Preparation of a package to effect purchases at tenders and samples of contracts.
- 4.3. Identification of technology needs.
- 4.4. Backstopping tender purchasing.
- 4.5. Supervising supplier selection.
- 4.6. Assisting in holding a tender.
- 4.7. Supervising the implementation of activities.
- 4.8. Results monitoring and management of site infrastructure (at client’s request).

5. Assisting in Energy Use Contracting (EUC)

In Belarus, energy use contracts are so far not being used in the fund-raising process for the purpose of implementing energy modernization projects. Within the context of lacking financial resources at state enterprises, the EUC model can be instrumental as one of the most effective tools for raising financial resources. EC will offer state-owned enterprises professional EUC management and create the respective EUC base. EC will provide the following services to its clients:

- 5.1 Analysis of the current state of energy consumption systems.
- 5.2 Baseline identification and designing the baseline scenario
- 5.3 Energy audit and recommendations on system efficiency enhancement measures
- 5.4 Assisting in negotiations between parties.
- 5.5 Assisting in finding the most effective technology.
- 5.6 Preparation of a contract package, supervision of contracting and implementation.
- 5.7 Negotiating with financial institutions and assisting in fund-raising.
- 5.8 Results monitoring.

The implementation of these activities will contribute to developing the EUC market and implementing a number of projects. The EC’s key role will be to remove obstacles in this process by building trust of state-owned enterprises towards EUC. During the GEF funding of the program, EC will improve its market position and establish itself as a dependable institution. EC will provide assistance to individual projects ensuring the adoption of the most effective technologies and best practice, project financing and management.

6. Site management

Management of site infrastructure is offered as a service logically derived from all the above activities. Already now many state enterprises show interest in contracts stipulating the project full management process and site management. State enterprise managers of different levels show interest in comprehensive contracts as the most way of cooperating with EC. EC is uniquely capable of meeting the needs of clients who experience lack of time and expertise. Based on practical considerations, state enterprises are interested in entering into full-cycle contracts and are willing to cooperate with institutions capable of delivering such services. Such cooperation will ensure regular payments for the services provided and long-term funding of EC activities based on the in-depth knowledge of certain projects and effective project management. Also EC will strengthen its market position during the GEF funding of the program and will operate beyond the GEF support using access to the available information and “state enterprise decision-makers”. It is envisaged that the financial support provided by the Committee on Energy Efficiency and successful implementation of projects funded through the Committee on

Energy Efficiency will facilitate the follow-up and help bring investments. Also the program experience will make projects more appealing for EC clients from the economic perspective helping them to evaluate their efficacy.

This issue will be thoroughly dealt with as one of the EC enabling activities to reach full self-sufficiency.

7. Continued monitoring and project progress reporting

The progress of implementation of energy efficiency projects will be monitored on a continual basis in order to assess the delivery of interim and final outputs. Clients will be offered recommendations regarding measures intended to ensure and maximize efficacy of project implementation to meet their needs in the best way possible.

1.B Services offered by EC to the Committee on Energy Efficiency

Another EC operational focus will be provide services in searching for investment projects, which could be financed by the Committee on Energy Efficiency on a returnable basis. As indicated in the Project Document, at the moment there is insufficient demand for loan-based funding. The energy efficiency market involving returnable funding is underdeveloped and requires facilitation. EC will work towards stimulating returnable funding of the Committee on Energy Efficiency to implement energy efficiency projects. EC will act as a stepping-stone between the Committee on Energy Efficiency and state enterprises regarding efficiency evaluation of investments into energy efficiency projects at the expense of returnable resources, and ensure that funds are returned promptly and re-invested in further energy efficiency projects.

1. Finding clients for the Committee on Energy Efficiency

EC will be pro-actively involved in looking for clients for the Committee on Energy Efficiency. EC will operate an updatable database about potential energy supply modernization investment projects and will be able to assist effectively in establishing contacts between stakeholders. This service will be provided on an ongoing basis at request of the Committee on Energy Efficiency. EC will bring superior professionalism and expertise into this process, based on practical experience gained during the implementation of pilot projects under the GEF-funded program.

2. Assisting the Committee on Energy Efficiency in building linkages with clients

EC is expected to win trust and high reputation on the energy modernization market, which will contribute to the establishment of effective linkages between state institutions and the Committee on Energy Efficiency. In this field EC will work to build trust and help support linkages between various actors.

3. Data collection, current system analysis, preparations for an energy audit

EC will maintain a large database about potential energy system modernization investment projects established during project implementation. This data will help evaluate effectively the most viable projects. EC will provide comprehensive services on data analysis, including weakness identification and risk assessment during the implementation of individual projects. The results of the Committee-funded projects will help develop capacity needed to ensure financial sustainability and successful implementation of proposed projects.

4. Assisting in external fundraising (commercial loans)

The Committee on Energy Efficiency is not expected to have sufficient resources to invest in large energy system modernization projects. EC will provide assistance to its clients in raising external funds in the form of commercial loans. Thus, as it was mentioned earlier, the issue of commercial loans will be dealt with after much consideration during the project.

5. Contracting assistance

One of the EC primary activities is to provide legal support and assistance during negotiations between state institutions and the Committee on Energy Efficiency. The regulatory framework for EUC implementation in Belarus is still not defined, so EC will build upon the experience of European Energy Centers gained during the implementation of international projects. EC will provide a wide range of contract-related services to its clientele, starting from the preparation of contracts subject to terms and conditions of individual projects and possibilities of parties under the contracts. Also EC will assist in negotiating and ensuring the most conducive conditions possible for the negotiating parties. EC involvement in this process reduces the level of risk related to the project implementation by parties under a contract and ensures effective project management. It is envisaged that this service will put EC in the lead in this market segment.

6. Capacity building

EC will take continued measures to develop capacity. These will mainly be implemented during the first several years of EC operation; however EC will continue to accumulate experience and build capacity on the energy market in the years to come after that. Activities which will be employed to this end include practical and theoretical seminars, training, personal consultations. The implementation of pilot projects funded through the Committee on Energy Efficiency will help EC acquire sufficient experience and obtain exclusive expertise, which will be disseminated among market players.

2. Market Analysis

The market potential for the Energy Center seems quite broad. The Energy Center can have the following clients:

- Municipalities
- State self-financed industrial enterprises
- National state-financed organizations.

Municipalities. There are totally approximately 170 municipalities in Belarus. The operational system of local authorities and their main areas of activities are contained in Section IV, Part VIII. The primary energy services provided by municipalities include the supply of heat energy for heat and hot water supply of consumers from own boiler-houses. Municipalities buy some heat energy from the BelEnergо Concern and deliver it to consumers. This is typical of large cities, i.e. Minsk. Municipalities use subordinate self-financed utilities companies to deliver this service. Overall, the housing and public utilities of Belarus operate about 1,700 boiler houses with the average installed capacity of 5MW. About 60% of boiler-houses are fired by natural gas, 30% by oil, 5% by coal; the others use peat and wood fuel. Housing and public utilities account for about 55% of the country's needs in heat energy.

Municipalities do not resort to loans from the Committee on Energy Efficiency to implement energy efficiency projects opting for grants instead. Besides, the staff of municipalities and subordinate public utilities companies do not have sufficient expertise to conduct good energy surveys and financial planning to fulfill the energy saving potential.

National state-financed institutions. Such institutions include the ministries of health, education, labor and social protection, interior, defense which have their own boiler and heating systems. There are totally about 200 boiler-houses of such institutions with the average installed capacity of 0.3 MW. About 50% are fired by gas, 20% by oil, 15% by coal, the rest by peat and wood fuel. The financial support for energy saving in national state-financed institutions is even worse than in municipalities. Of the total amount of budgeting allocated for energy efficiency projects in 2001-2004 (Section IV, Part IV), the national budget is responsible for a mere share of around 7%. In many cases, the energy staff in such organizations is simply non-existent, because it is not envisaged by the budget. When dealing with state-financed institutions, EC will perform the same functions as in the case of municipalities.

State self-financed industrial enterprises. The general evaluation of these institutions is given in the "state sector" subsection of Section I, Part I. Situation Analysis of the Project Document. Let it be additionally mentioned that such institutions generate heat energy mainly for internal consumption, however energy can be also supplied to the population, as well as housing and utilities networks. All in all, these institutions have about 700 large boiler-houses with the average installed capacity of 4 MW and several thousand small and average boiler-houses with the capacity of 3 MW.

These institutions are highly motivated to improve energy efficiency. Besides, large boiler-houses of these institutions can use gas-piston or turbine installations for combined generation of heat and power. This activity results in the reduction of power coming from the BelEnergо, which reduces specific costs to produce power at power stations.

With regard to such institutions, EC will pursue a policy of consultancy to obtain loans from the Committee on Energy Efficiency, found and manage "Energy and Resource Saving" funds and other areas. The collaboration of EC with such institutions is of special interest if it aims to ensure sustainability.

During the PDF B, 15 sites were selected and energy audits carried out, 4 of which were incorporated into the Project Document (see Section IV, Part VII). The projected estimated savings are 9.88 thousand tons in fuel equivalent, the total investment volume - USD 8 million, average payback time – 4.3 years.

Competitive analysis

At the moment there are no companies on the market pursuing activities similar to EC's. The available information about the energy market and sector tendencies prompts an assumption that similar companies or a real competitor will soon emerge on the market. This assumption is based on the current market analysis indicating lack of the required capacity, technologies and know-how. Taking into consideration a scope of services and comprehensiveness offered by EC, which was described in the previous section, one might assume that EC-proffered services will enjoy the demand on the current market.

3. Marketing strategy

3.1 EC transition from GEF-funding to self-financing

During the first two years of work, EC will be co-funded through GEF and Committee on Energy Efficiency. GEF and the Committee in 1:1 ratio will pay for EC equipment and furniture. During the project implementation EC office maintenance costs will be covered by the Committee on Energy Efficiency, GEF will pay salaries of main national experts. EC will build capacity and enhance efficiency of the services offered with a view to gradual switching to **partial self-financing status** by 2008. Starting from 2008, EC technical staff will be paid from funds earned through own business. It is envisaged that the EC financial situation within three years will become strong enough to allow EC operate as a separate entity and make profits. Staff will be trained and capacity developed by that time. By 2008, EC will have developed a database about potential energy modernization investment projects, market players on both sides, and EC will be sufficiently prepared to be engaged in business.

Between 2006 and 2008, there will be continued monitoring of investments into energy system modernization, EC customer needs assessment and improvement of services offered. Within 2006 and 2008, EC will be operating as an independent entity in accordance with the national legislation.

In 2006 – 2007, EC will provide free services to project partners; **for the rest of the state enterprises these services will be provided on a paid basis.** Starting from 2008, EC will partly sell expertise and services on the market.

3.2 Marketing strategy and awareness raising

During the first two years of work, all the market players will learn about EC activities. As mentioned in the Project Document, the information about EC and the services it offers will be disseminated among market actors by virtue of capacity-building activities, distribution of informational material and promotional campaigns. EC is also expected to establish itself as a trustworthy institution owing to its expertise and professionalism. After the implementation of investment projects listed in the Project Document, the Belarusian state sector will know about project outputs and successes, which could then be employed to advertise the company.

From the very outset, EC will keep the stakeholders informed about its goals, objectives and strategy aiming to switch to partial self-financing in 2008 in order to ensure transparency and continuity of long-term data flow.

Starting from 2008, EC will continue project advocacy through information channels developed between 2006 and 2008. It will organize press conferences to inform the public about a change in the legal status of the company and present its business strategy.

EC will build a team of partners to disseminate information through. This team will include representatives of major print media, television, radio, Internet portals. EC will take advantage of the best practice of Europe's advanced energy centers.

In the field of capacity building, EC will hold regular theoretical and practical seminars, round-table discussions and training for those involved in the modernization of energy-consuming systems to increase their awareness and build expertise.

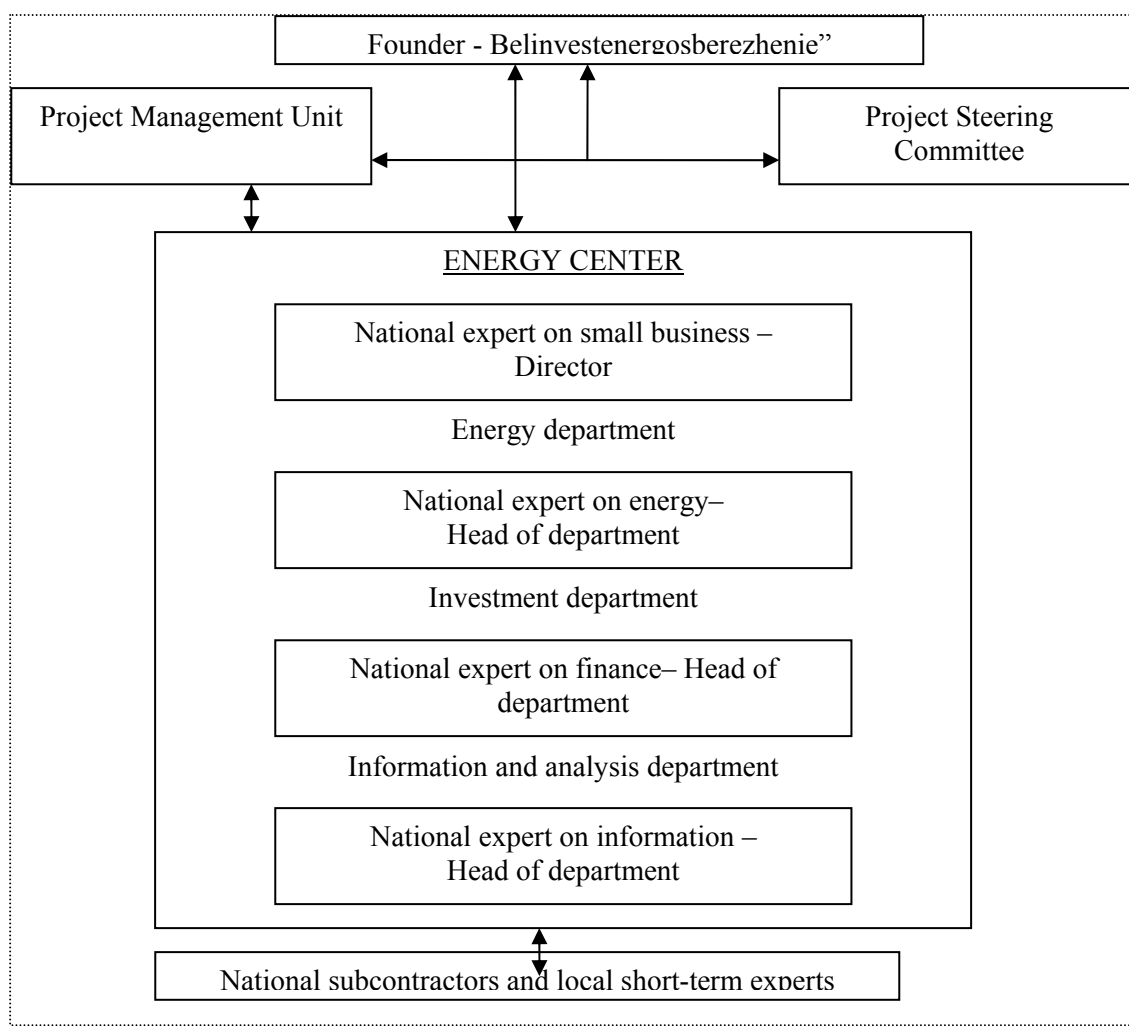
EC will also participate in major national and international conferences and seminars to present information about its ongoing activities and achievements. Interaction with state enterprises and institutions will be based on direct contacts as the most effective strategy of involving them in the project implementation.

Promotional flyers and a reference book of projects targeting energy system modernization will be produced and distributed among market players. A regularly updatable Internet-site will be set in place.

All of the above marketing tools will contribute to increased efficiency of energy system modernization projects and expand linkages between market players.

3.3 EC Management Structure

EC will operate as a subsidiary of Belinvestenergoberezhnie in Minsk. A more detailed description is given in Section I, Part II of the Project Document. After the transition to self-financing, the EC management structure will remain unchanged.



4. Financial data – costs, earnings, break-even point (notes)

During the project brief stage, EC business plan will be of an informative nature. All calculations are made based on the current market situation reflecting the available financial possibilities and overall national economy, in particular, regional financial possibilities. In general, EC activities will be partially funded through a GEF grant during four years. As stated earlier, after the completion of the project, EC will operate on a commercial basis. In order to ensure financial sustainability to support its activities, EC will employ two major financial schemes to generate profits linked to services offered to market players:

- Earnings from consultancies on business and financial planning and information support.
- Earnings from non-consultancy services provided at fixed rates (energy audits, tender preparations, including ToRs for suppliers, contract samples, assistance in the conduct of tenders, contracting individual suppliers, etc.).

4.1 Cost analysis

The table below contains projected costs related to the EC operation for the period covering 2006, 2007, 2008 and 2009. Calculations are made in USD.

The tables below provide costs relating directly to EC activities, while the full project budget is given in Section 3. Notes to the table describe all types of costs for EC.

| Activity – cost | GEF funding | | | | Self-financing | |
|--|-------------|--------|--------|--------|----------------|---------|
| | Year | | | | 2010 | 2011 |
| | 2006 | 2007 | 2008 | 2009 | | |
| A. EC office setup | | | | | | |
| A.1 Operational costs | | | | | | |
| 4 PC, printer/copier | 8,000 | 0 | 0 | 0 | 0 | 0 |
| Software | 2,000 | 0 | 0 | 0 | 200 | 200 |
| Server, network (information database) | 4,000 | 500 | 500 | 500 | 500 | 500 |
| Communications equipment (stationary telephone sets – 4, fax telephone sets– 4) | 1,000 | 0 | 0 | 0 | 80 | 80 |
| Equipment (office furniture, equipment for energy auditing) | 47,000 | 0 | 0 | 0 | 500 | 500 |
| Office supplies (paper, folders etc.) | 700 | 700 | 700 | 700 | 700 | 700 |
| Publications, brochures (technical, financial) | 800 | 800 | 800 | 800 | 800 | 800 |
| Transportation services | 2,000 | 2,000 | 2,000 | 2,000 | 1,000 | 1,000 |
| Sub-total | 65,500 | 4,000 | 4,000 | 4,000 | 3,780 | 3,780 |
| A.2 Salaries – EC staff | | | | | | |
| National expert on small business | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| National energy expert (Head of Energy Department) | 7,800 | 7,800 | 7,800 | 7,800 | 7,800 | 7,800 |
| Technical staff of Energy Department: | | | | | | |
| Electrical engineer | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Electrical engineer | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Heating engineer | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Heating engineer | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| National expert on finance (Head of Investment Department) | 7,800 | 7,800 | 7,800 | 7,800 | 7,800 | 7,800 |
| Technical Staff of Investment Department: | | | | | | |
| Economist | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Economist | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Financial specialist | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Financial specialist | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| National expert on Information (Head of Information and Analysis Department) | 7,800 | 7,800 | 7,800 | 7,800 | 7,800 | 7,800 |
| Technical Staff of Information and Analysis Department: | | | | | | |
| Ecological specialist | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Staff training specialist | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Information manager | 0 | 0 | 0 | 0 | 5,400 | 5,400 |
| Sub-total | 32,400 | 32,400 | 32,400 | 32,400 | 91,800 | 91,800 |
| B. Technical, financial services and consulting provided by EC office experts | | | | | | |
| Consulting services and energy audits * | 0 | 0 | 0 | 0 | 360,000 | 360,000 |
| Traveling expenses | 2,000 | 2,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| Sub-total | 2,000 | 2,000 | 4,000 | 4,000 | 124,000 | 124,000 |
| Investment plan trips | | | | | | |
| Traveling expenses | 2,000 | 2,000 | 1,000 | 500 | 500 | |

| Activity – cost | GEF funding | | | | Self-financing | |
|---|-------------|-------|-------|-------|----------------|-------|
| | Year | | | | 2010 | 2011 |
| | 2006 | 2007 | 2008 | 2009 | | |
| Sub-total | 2,000 | 2,000 | 1,000 | 500 | 500 | |
| <i>Incentive mechanism trips</i> | | | | | | |
| Traveling expenses | 1,000 | 1,000 | 1,000 | 500 | 500 | 500 |
| Sub-total | 1,000 | 1,000 | 1,000 | 500 | 500 | 500 |
| <i>New initiative trips</i> | | | | | | |
| Traveling expenses | 0 | 1,000 | 1,000 | 500 | 500 | 500 |
| Sub-total | 0 | 1,000 | 1,000 | 500 | 500 | 500 |
| C. Awareness raising, media campaigns, capacity building of state enterprises and institutions | | | | | | |
| C.1 Capacity development | | | | | | |
| <i>EC presentation and contact-making seminar involving state enterprises)</i> | | | | | | |
| Arrangements (room, equipment, food) | 3,000 | | | | | |
| Sub-total | 3,000 | | | | | |
| C.2 Regional capacity development | | | | | | |
| <i>Seminar on energy efficiency in the state enterprise sector</i> | | | | | | |
| Arrangements (room, equipment, food) | 3,000 | 6,000 | 6,000 | 6,000 | 3,000 | 3,000 |
| Invitations (preparation, printing, distribution) | 50 | 50 | 50 | 50 | 50 | 50 |
| Sub-total | 3,050 | 6,050 | 6,050 | 6,050 | 3,050 | 3,050 |
| C.3 Information dissemination | | | | | | |
| <i>Promotional materials and instrumentalities</i> | | | | | | |
| Logotype design | 200 | | | | | |
| Production and printing of informational materials | 500 | | | | | |
| Presentation and other materials on CDs | 400 | | | | | |
| Distribution | 50 | | | | | |
| Sub-total | 1,150 | | | | | |
| <i>Publication, brochures</i> | | | | | | |
| Brochure production | 500 | 500 | 500 | 500 | 500 | 500 |
| Brochure printing and binding (300 a year) | 200 | 200 | 200 | 200 | 200 | 200 |
| Distribution | 50 | 50 | 50 | 50 | 50 | 50 |
| Sub-total | 750 | 750 | 750 | 750 | 750 | 750 |
| <i>Internet portal</i> | | | | | | |
| Creation and launch of a portal of specialized companies | | 2,000 | 500 | 500 | 400 | 400 |
| Sub-total | | 2,000 | 500 | 500 | 400 | 400 |
| <i>Promotional campaigns</i> | | | | | | |
| Articles in state mass media | 1,000 | 500 | 500 | 500 | 500 | 500 |
| Sub-total | 1,000 | 500 | 500 | 500 | 500 | 500 |
| <i>Radio, Television</i> | | | | | | |
| Radio and television placement costs | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| Sub-total | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| <i>Press conferences</i> | | | | | | |

| Activity – cost | GEF funding | | | | Self-financing | |
|---|-----------------|----------------|----------------|----------------|-----------------|-----------------|
| | Year | | | | | |
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Rental premises | 700 | 700 | 700 | 700 | 700 | 700 |
| Distribution of materials | 100 | 100 | 50 | 50 | 50 | 50 |
| Invitations (production, printing) | 50 | 50 | 50 | 50 | 50 | 50 |
| Ad placements on radio and in print media | 250 | 200 | 100 | 100 | 80 | 80 |
| Sub-total | 1, 100 | 1, 050 | 900 | 900 | 900 | 900 |
| Total | 115, 450 | 55, 250 | 54, 600 | 53, 100 | 109, 180 | 108, 680 |
| Grand total | 278, 400 | | | | | |

* - In 2008 – 2009 the amount of EC annual self-financing will be equal to at least USD 120,000 to cover the cost of technical staff salaries.
In 2010 – 2011 the amount of EC annual self-financing will be equal to at least USD 360,000 to cover all costs.

Note: Project cost calculations cover the four-year period (the implementation period of the project) broken down by years (2006, 2007, 2008, and 2009), and the two-year period after EC becomes self-sufficient. The 2006 costs are charged to the project initial stage; costs for the subsequent years are full expenses related to the EC operation.

- Category A – EC office setup: cost calculations cover the project’s initial stage.
- Category A.1 – Operational costs: the 2006 costs cover the purchase of equipment; costs for other years are linked to technical maintenance. These costs are indirect overheads.
- Category A.2 – Salary: direct internal staff expenses;
- Category B – Delivery of technical, financial services and consultancy by EC experts: project activities will take more time during the first two years of the project implementation; labor productivity will increase as capacities develop;
- Category C – Increasing awareness: this heading involves financial costs; similar costs are envisaged for every year of the project.

A conservative approach was used to identify projected costs; the one, which includes the assessment of EC baseline, needs which should be met to ensure security. This baseline needs, provided they are fully met, will lay the foundation for the successful achievement of the project objectives.

EC activities between 2006 and 2009 are envisaged to be funded in part through the GEF, and since 2010, EC will be operating on a commercial basis as an independent company.

4.2 Income forecasting

Income forecasting included calculations for each of the two income-generation options:

| Activity – income | GEF Funding | | | | Self-financing | |
|---|-----------------|----------------|----------------|----------------|----------------|----------------|
| | Year | | | | 2 010 | 2 011 |
| | 2 006 | 2 007 | 2 008 | 2 009 | | |
| 1. Consultation fees – it is expected that 20 percent of EC staff working hours will be covered at the expense of consultancy fees | | | | | | |
| Annual incomes | GEF, n/a | GEF, n/a | GEF, n/a | GEF, n/a | 18,360 | 18,360 |
| 2. Earnings from the sale of standard services at fixed prices; EC staff is expected to use 80 percent of working hours to such services | | | | | | |
| Annual income | GEF, n/a | GEF, n/a | GEF, n/a | GEF, n/a | 91,996 | 91,996 |
| Total | 115, 450 | 55, 250 | 54, 600 | 53, 100 | 110,356 | 110,356 |
| Gross income (conservative approach) | 0 | 0 | 0 | 0 | 1,176 | 1,676 |

Calculations

Option 1 – Exclusive consultancy-driven financing

| If 100 percent of the total funding comes from consultancies | | | |
|--|-------------------|----------------------|---------------------|
| Staff type | Hourly rate (USD) | Monthly income (USD) | Annual income (USD) |
| Director | 4,3 | 750 | 9,000 |
| Head of Energy Department | 3,7 | 650 | 7,800 |
| Electrical engineer | 2,6 | 450 | 5,400 |
| Electrical engineer | 2,6 | 450 | 5,400 |
| Heating engineer | 2,6 | 450 | 5,400 |
| Heating engineer | 2,6 | 450 | 5,400 |
| Head of Investment Department | 3,7 | 650 | 7,800 |
| Economist | 2,6 | 450 | 5,400 |
| Economist | 2,6 | 450 | 5,400 |
| Financial specialist | 2,6 | 450 | 5,400 |
| Financial specialist | 2,6 | 450 | 5,400 |
| Head of Information and Analysis | 3,7 | 650 | 7,800 |
| Ecological engineer | 2,6 | 450 | 5,400 |
| Staff training specialist | 2,6 | 450 | 5,400 |
| Information manager | 2,6 | 450 | 5,400 |
| | | | 91,800 |

To make income forecasting more realistic, the EC staff is expected to use 20% of working hours providing advice and guidance. This parameter was calculated taking into account the staff structure and projected demand for various EC services. Consultancies will be mainly provided by the EC Director, because this fits totally into his scope of responsibilities, which include administration, looking for new clients, providing services on project implementation and consultancy. In practice, it means that if the EC Director sells 1/3 of the average monthly working time (176 hours, 22 days, 8 hours a working day) at the rate of USD 4.3, he will be able to completely cover the cost of his salary.

Advisory services will also be provided by the EC technical staff. They may be of interest to clients who have the necessary resources to implement modernization projects, but who need professional recommendations enabling the project efficiency upscaling. Mainly the state sector is expected to apply for such consultancies.

The following practical consultancies will be offered:

- acquisition of investors for state institutions
- acquisition of state institutions for investors
- technical assistance on the consulting basis
- negotiations assistance on the consulting basis
- acquisition of financial resources
- consulting for project document preparation , technical/financial assistance

These rates are realistic and depict the current market for these services in Belarus.

Option 2 – Exclusive standardized services-driven EC financing

| If 100 percent of the total funding comes from selling standardized services | | |
|---|----------|----------------|
| Standardized services | | USD |
| Current analysis of the energy consuming equipment | | 2,800 |
| Energy audit | | 6,158 |
| Assisting in the provision of investments to modernize energy systems | | 1,000 |
| Preparation of the tendering procedure to purchase technologies | | 515 |
| Assisting in EUC contracting | | 350 |
| Site management | | 2,405 |
| Constant monitoring and reporting on project progress | | |
| These rates are realistic and depict the current market for these services in Belarus | | 3,200 |
| Package cost | | 16,428 |
| Number of projects (packages) allowing to reach the break-even point | 7 | 114,996 |

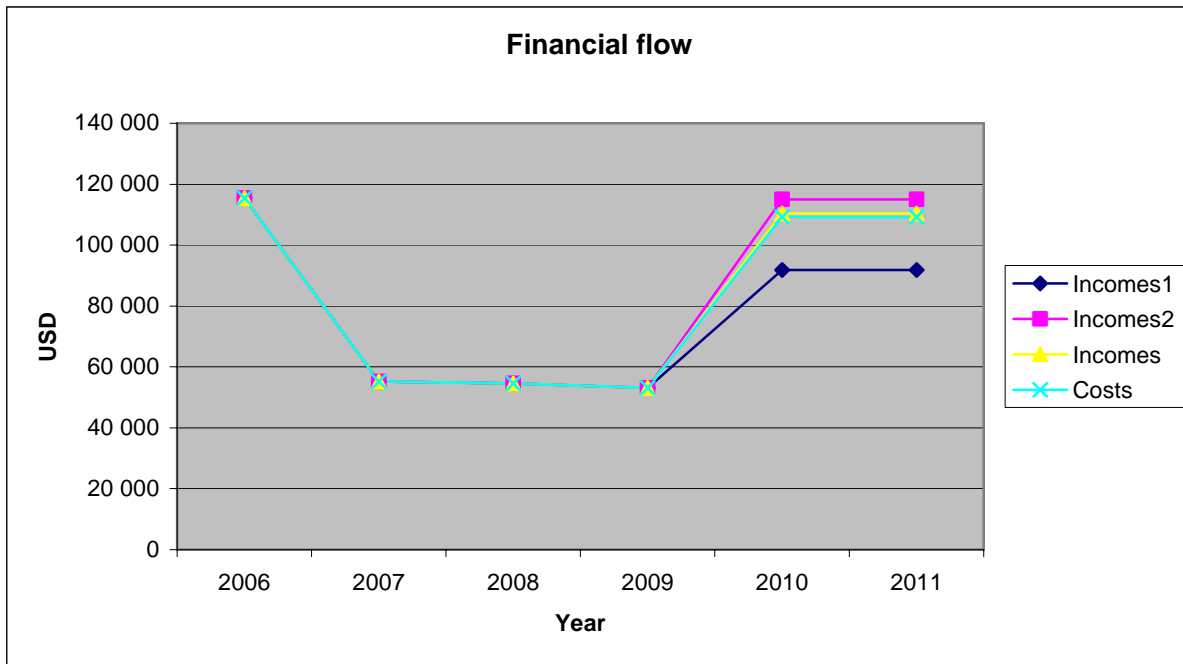
Standardized services are a set of services provided at fixed rates. Calculations used data obtained from the cost analysis of similar services in Belarus, adjusted for possible coverage of production costs in the context of the existing market. Above is the list of EC standardized services and their estimated rates. In the event EC provides only standardized services, the costs will be covered if 7 investment projects with a full set of services are implemented a year. The package cost was used as the baseline to make calculations, because it contains the entire range of services allowing the State Enterprise to contract a party to implement a project ‘from scratch’ before the delivery of planned results. To make financial planning realistic, the EC staff is expected to use 80% of the working hours on these services.

It is envisaged that activities funded in full by GEF during the first two years will help increase labor productivity (staff cost reduction through better efficiency) and adopt the most effective techniques and methodologies. As a result, a steady annual income will help maximize profits through cost reduction.

4.3 Financial flow forecasting and break-even calculations

Since it is impossible to make an accurate financial flow analysis for the time being, the following diagram is used as an example showing two above-described options and the real cost/income scenario (income lines). Since during the first four years the EC will be partially financed with GEF resources, further EC activities (beyond the funding plan) will not require additional investments. Therefore at the moment it is impossible to calculate the

break-even point. Also at this stage of the project, it is possible to forecast EC costs, but not real incomes, because they will depend on the market development and EC achievements during the first two years of work.



The table data indicates that EC will be able to continue to operate even after the funding is terminated. EC is also expected to generate profits. During the first three years, detailed business planning will be undertaken so that future activities are guided by accurate parameters and development trends.

PART X: RATIONALE FOR ENERGY CENTER MODEL SELECTION

Three selection criteria were considered by the project team together with the Committee on Energy Efficiency when deciding on a model for the Energy Center: 1) type of ownership; 2) ability to implement the proposed project activities; and 3) ability to become a financially self-sufficient institution in order to ensure that the capacity created by the project would be sustainable.

Several different models of ownership were discussed. Initially, the model of a privately-owned Energy Center was proposed, but given that state organizations in Belarus are favored when choosing partners for project work in the state sector and that the main purpose of the Energy Center would be to catalyze investments in the state sector, the only possible conclusion was to create a state-owned organization. In addition the project-implementing agency – Committee on Energy Efficiency as the state body would prefer to contribute in the project implementation in particular for the Energy Center development as the state institution but not the private one.

While several UNDP/GEF projects have focused on providing capacity support to a state agency (e.g. the Hungarian Energy Center or the City of Vladimir in Russia), several conditions in Belarus ruled out this approach. First, the EC staff would not be able to conduct work on contract for municipalities and other state organizations, which would rule out financial self-sufficiency for the Energy Center. Second, as part of a budgetary organization, the project's longer-term funding and staffing would ultimately depend on the annual state of the republic budget in Belarus, leaving the Energy Center open to possible staff cuts regardless of the demand for its services and the willingness of state sector clients to pay for them. For this reason, the project team concluded that it would be best to establish a separate organization that could provide sustained capacity support and training to the Committee on Energy Efficiency and other state sector clients. Other UNDP/GEF projects have done this successfully, so a precedent for this approach did exist.⁸ It is important to note that the Committee on Energy Efficiency was involved in the decision making process and has supported this conclusion.

Another issue involved determining the institutional oversight of the Energy Center. Three possible options were considered: 1) the Committee on Energy Efficiency; 2) the Committee on Energy Efficiency and UNDP/GEF; and 3) the state enterprise Belinvestenergosberezhenie.⁹ After considering a variety of factors, the project team proposed the third option; i.e., Belinvestenergosberezhenie.

When considering the first option, the project team considered the experiences of the Committee on Energy Efficiency in establishing organizations. Because the Committee had already established Belinvestenergosberezhenie, it could provide oversight for the work of the Energy Center economic activity fairly easily via Belinvestenergosberezhenie and coordinate mutual activities of these institutions to prevent duplication.

Under the second option, the institutional pattern would follow that of a non-profit organization; i.e., an organization that would not have the authority to conduct commercial activity. Because the project document envisages the transition of the Energy Center to a self-financing agency following project completion, this variant was also ruled out.

The preference was given to the third variant. Firstly, the enterprise Belinvestenergosberezhenie has experience in working with international organizations and may assist to the Energy Center to set up contacts with them. Secondly, it is a state enterprise. Thirdly, it has positive experience in transition to self-financing. Fourthly, as a founder of the Energy Center to be established the enterprise will promote within its powers the work of the Center and take part in joint implementation of energy conservation investment projects.

One had to face a serious problem when determining the structure of the Energy Center, i.e. its staffing table. To make a decision concerning the staffing table, one had to solve a problem of ensuring maximal functionality of the Energy Center with minimal number of human resources. At the initial stage, it was proposed that the specialists of the Center should take part in all energy conservation directions implemented in the country, which in its turn would lead to maintenance of large personnel. After discussions with International Consultant, it was decided to

⁸ Examples include UNDP/GEF projects in low-energy housing (Czech Republic) and municipal energy efficiency (Bulgaria).

⁹ *Belinvestenergosberezhenie* is an abbreviated form of “Belarusian Energy Savings Investment.”

establish basic departments within the Energy Center, which will solve the project tasks, identified in the Total Project Workplan. The Energy Center will take an advantage of services of national subcontractors and local short-term experts for implementing the project activities. As the Energy center becomes self-financed, it is envisaged to employ specialists with necessary qualifications and working experience.

SIGNATURE PAGE

Country: Republic of Belarus

UNDAF Outcome(s)/Indicator(s):
(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s):
(CP outcomes linked t the SRF/MYFF goal and service line)

Clean energy technologies promoted through energy efficiency, renewable energy, and technology demonstration/ leapfrogging, to reduce emissions

Implementing partner:
(designated institution/Executing agency)

Committee on Energy Efficiency

Programme Period: 2006-2010
Programme Component: Access to sustainable energy services
Project Title: Removing Barriers to Energy Efficiency
Improvements in the State Sector in Belarus
Project ID: 2426
Project Duration: 4 years
Management Arrangement: NEX

Total budget: US\$ 9,769,600
Allocated resources:

- GEF US\$ 1,400,000
- EE Committee US\$ 3,000,000
- Project partners US\$ 5,119,600

- In kind contributions
 - EE Committee US\$ 150,000
 - UNECE US\$ 100,000

| Agreed by | Name | Title | Signature | Date |
|-----------|------|-------|-----------|------|
|-----------|------|-------|-----------|------|

Government:

Implementing
Partner:

Mr. Lev Dubovik

Chair of the Energy Efficiency
Committee

UNDP:

Ms. Cihan Sultanoglu

UNDP Resident Representative in
Belarus