**London, 2017**

Independent final evaluation: project on “Developing an Integrated Approach to a Stepped-Up Energy Saving Programme in belarus”

Project financed by European Union and Implemented by UNDP in Belarus and Department of Energy Efficiency under the State Committee for Standardization of the Republic of Belarus

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 Draft final Evaluation REPORT 

Box 1: Key Definitions

**Goal:** The higher-order aim to which a programme is intended to contribute: a statement of longer-term intent.

**Objective:** Description of an overall desired achievement involving a process of change and aimed at meeting certain needs of identified end-users within a given period of time. A good objective meets the criteria of being impact oriented, measurable, time limited, specific and practical. The objective is set at the next higher level than the expected accomplishments.

**Evidence:** The information presented to support a finding or conclusion. Evidence should be sufficient, competent and relevant. There are four types of evidence: observations (obtained through direct observation of people or events); documentary (obtained from written information); analytical (based on computations and comparisons); and self-reported (obtained through, for example, surveys).

**Result:** The measurable accomplishment/outcome (intended or unintended, positive or negative) of a programme or project. In the Secretariat practice, “result” is synonymous with accomplishment and outcome.

**Output** A final product or service delivered by a programme or project to end-users, such as reports, publications, servicing of meetings, training, advisory, editorial, translation or security services, which a programme is expected to produce in order to achieve its expected accomplishments and objectives. Outputs may be grouped into broader categories.

**Outcome** In the United Nations Secretariat, “outcome” is used as a synonym of an accomplishment or a result.

**Relevance**: The extent to which an activity, expected accomplishment or strategy is pertinent or significant for achieving the related objective and the extent to which the objective is significant to the problem addressed.

**Effectiveness** The extent to which a project or programme attains its objectives, expected accomplishments and delivers planned outputs.

**Efficiency** A measure of how well inputs (funds, expertise, time, etc.) are converted into outputs

**Impact** The overall effect of accomplishing specific results. In some situations it comprises changes, whether planned or unplanned, positive or negative, direct or indirect, primary and secondary that a programme or project helped to bring about. In others, it could also connote the maintenance of a current condition, assuming that that condition is favourable. Impact is the longer-term or ultimate effect attributable to a programme or project, in contrast with an expected accomplishment and output, which are geared to the biennial timeframe.

**Sustainability** The extent to which the impact of the programme or project will last after its termination; the probability of continued long-term benefits.

**Lessons Learned** L Generalization derived from evaluation experiences with programmes, projects or policies that is applicable to a generic situation rather than to a specific circumstance and has the potential to improve future actions. A lesson learned summarizes knowledge at a point in time, while learning is an ongoing process.

**Recommendation** Proposal for action to be taken to enhance the design, allocation of resources, effectiveness, quality, or efficiency of a programme or a project. Recommendations should be substantiated by evaluation findings, linked to conclusions and include the parties responsible for implementing the recommended actions.

**Cost Effectiveness** Comparison of the relative costs of achieving a given result or output by different means. It focuses on the relation between the costs (inputs) and results produced by a project or programme. A project/programme is more cost effective when it achieves its results at the lowest possible cost compared with alternative projects with the same intended results.

**Logframe:** Management tool (also known as a logframe) used to identify strategic elements of a programme or project (objective, expected accomplishments, indicators of achievement, outputs and inputs) and their causal relationships, as well as the assumptions and external factors that may influence success and failure. It facilitates planning, implementation, monitoring and evaluation of a programme or project.

**Triangulation** The use of three or more methods to conduct an evaluation or substantiate as assessment. By combining multiple data sources or methods evaluators seek to overcome the bias that comes from single informants and single methods.

**Conclusions** Reasoned judgments based on a synthesis of empirical findings or factual statements corresponding to specific circumstances. Conclusions point out the factors of success and failure of the evaluated projects and programmes, with special attention paid to the intended and unintended results and impacts, and more generally to any other strength or weakness. Conclusions draw on data collection and analyses undertaken, through a transparent chain of arguments.

*Source: UN OIOS MECD Glossary; http://www.un.org/Depts/oios/mecd/mecd\_glossary/index.htm*

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# **ABBREVIATIONS**

|  |  |
| --- | --- |
| AESD | Association for Education in Sustainable Development |
| ABD | Area Based Development |
| DAC | Development Assistance Committee |
| EU | European Union |
| ENPI | European Neighbourhood Policy Instrument |
| EED | Energy Efficiency Department of the of the State Committee for Standardization of the Republic of Belarus |
| EE | Energy Efficiency |
| EEAS | Energy Efficiency Awareness Survey |
| EBRD | European Bank of Reconstruction and Development |
| GoB | Government of Belarus |
| GHG | Greenhouse gas emissions |
| GEF | Global Environment Facility |
| GDP | Gross Domestic Product |
| IMF | International Monetary Fund |
| IFI | International Financial Institution |
| M&E | Monitoring and Evaluation |
| MTE | Midterm Evaluation |
| NSSEDS | National Sustainable Socio-Economic Development Strategy |
| NGO | Non-governmental organization |
| NIM | National Implementation Modality |
| OECD | Organization for Economic Cooperation and Development |
| PM | Project manager |
| PSC | Project Steering Committee |
| P2P | Peer to peer |
| PR | Public relations |
| ProDoc | Project Document |
| PAB | Public Advisory Board |
| PSA | Public Service Announcement |
| PIU | Project Implementation Unit |
| RES | Renewable energy sources |
| RF | Results Framework |
| RBM | Results Based Management |
| SNG | Subnational government |
| TOR | Terms of Reference |
| ToT | Training of Trainers |
| UNDP | United Nations Development Programme |
| USD | United States Dollar |
| VTC | vocational technical colleges |
| WB | World Bank |

# **Executive summary**

Belarus lacks domestic energy resources, and has thereby to import around 87 percent of energy consumed in the country[[1]](#footnote-1). The Government pursues reduction in its dependence on energy imports by reducing its own energy consumption and by increasing its use of renewable energy.

UNDP Belarus supports the Government of the Republic of Belarus (GoB) with achieving the goals of the National Sustainable Socio-Economic Development Strategy till 2020 (NSSEDS, 2004) including, *inter alia,* as a partner in energy efficiency (EE) improvement programs with capacity building and expert advice to achieve its GDP energy intensity reduction target and increasing of renewable energy sources (RES) utilization. The project “*Developing an Integrated Approach to a Stepped-Up Energy Saving Programme*” is one of the projects implemented by UNDP funded by the EU, but there were and are a number of other projects with similar goals. The Energy Efficiency Department (EED hereafter) of the State Committee for Standardization of the Republic of Belarus is the Executing Entity of behalf of the Government of the Republic of Belarus (GoB) for this project (National Implementing Agency). The other project partners include:

* Minsk, Hrodna and Viciebsk Regional Executive Committees and District Executive Committees of pilot project districts (education departments);
* Educational institutions’ authorities in Minsk, Hrodna and Viciebsk regions (schools, kindergartens, boarding schools, vocational technical colleges (VTC)); and
* Local civil society organizations and local population.

The list of the Project beneficiaries includes[[2]](#footnote-2): the EED; Education Departments of the respective Regional Executive Committees; the authorities of the educational institutions; teaching personnel of the schools, kindergartens and colleges; social workers; pupils and their parents, as well as local public at large.

The aim of this three year long – as originally planned- project, was to enhance efficient use of energy resources at the local level in Belarus through the application of energy-saving technologies and measures in educational buildings. In particular, the project was expected to help achieve the following objectives:

* To raise awareness and build capacity within communities to carry out energy saving measures at local level that improve EE and utilize RES;
* To establish pilot sites in local communities demonstrating the application of innovative EE technologies in school buildings; and
* To ensure active participation of local governments, educational institutions and local population in the implementation of energy-saving pilot initiatives, as well as promote the replication of the best practices from the demonstration projects at the local level.

The objective of this Final Evaluation is to assess the performance, i.e. the efficiency, effectiveness, and viability of the project in order to verify that the activities and results of the project are in line with those outlined in the Financing Agreement between the UNDP and the EU and in the Project Document (ProDoc). In particular, the evaluation was called to provide a comprehensive and systematic evaluation of the project performance by assessing project design, the process of implementation and the achievements. In addition, this assignment aims at providing consultation and advice to the Project Implementation Unit (PIU), UNDP Belarus Country Office, EED of the State Standardization Committee, the members of the Project Steering Committee (PSC), project partners, district authorities and other relevant stakeholders by, *inter alia:*

* Synthesizing lessons learned that may help improve the selection, design and implementation of future UNDP energy-efficiency projects;
* Providing feedback on issues that are recurrent and need attention, and on improvements regarding previously identified issues;
* Assessing the role of the Project in building local leadership capacities at the local level;
* Reviewing and assessing the Project’s partnership with the government bodies, civil society and private sector, as well as international organizations in during the implementation of the project; and
* Supporting UNDP in identifying the future interventions of Socio-Economic Development and Community-based Projects, aligning it with the national priorities, UNDP’s mandate and expertise.

The initial duration of the project, i.e. September 2013- September 2016, was extended in July 2016 to the end of April 2017 given that the Project got fully staffed only in August 2014, and to enable the project team to monitor the results of the EE measures (given that the 2016-2017 heating season ends in April 2017). At the time when this evaluation commenced (03/2017) the project was one month before its completion.

The topic of the project was very relevant given that the building sector in Belarus, and especially public buildings built before 1986 is highly energy inefficient and has a significant potential in energy saving provided that the necessary investment is made in rehabilitation The three- pronged approach was overall relevant combining (a) large scale information activities to increase public awareness and to incorporate EE in the teaching process in the education institutions (kindergartens, schools and colleges) given the potential for visibility and schools acting as catalysts of change; (b) innovative elements in the pilots, and, in particular, using solar energy and reverse heat utilization; and (c) desire to demonstrate a model of active participation of the local stakeholders in EE-improvement measures in the public buildings. The design could have been stronger in several respects: by, *inter alia* (a) envisioning a closer cooperation with the Ministry of Education to facilitate the introduction of the EE teaching aids produced with the support of the project in the teaching process more broadly; (b) including a clearer vision of the ways the project could promote increased EE investment in the educational sector, including also by improved investment planning.

The project delivered almost all of its planned deliverables, which is commendable given the limited duration on the backdrop of ambitious tasks. With regards to several components the plans were surpassed: more people were trained and 4 pilots institutions were supported instead of the planned (minimum) 3.

The educational institutions had the chance to develop creative approaches in teaching energy saving especially to the lower and middle grades with creative events and tools. The quality of the information products is highly appreciated by the stakeholders: a number them won prizes and contests in the country. The fact that both the pilot institutions and the project team produced EE information products (including teaching tools) results in a large number of these. While this has advantages, the project could have had a stronger coordinating role and interface with the Ministry of Education. In the similar projects in the future it is important to secure more active participation of the Ministry of Education to ensure that all the teaching tools undergo a review: this is a lesson learnt, as for this project there is no certainty that all the tools did. And finally, in the part concerning the information campaign, there should have been mechanisms in place to capture the feedback of the recipients of the products, to ensure their regular and timely analysis and the reflection of this recurrent learning in the plans in the remaining project periods. The survey among the 23 schools, including schoolchildren, parents and teachers shows that while there is some, not large. increase in the EE/RES awareness in 2016 compared to 2014 (more in the pilot schools), some measures were more effective than the others (and again this is more notable in the pilot schools). Awareness was raised more in relation to the use of solar energy and RES more broadly, compared to the appreciation of the importance of saving energy and hence costs in relation to household expenses on heating and electricity. This shows that awareness raising must be well targeted and timely (e.g. coincide with the reforms) to affect the level of awareness and change behaviour - a lesson that is well known from the experience in other countries. Among other items, the project helped to produce a Manual for teaching EE as part of teaching curricula and trained 27 teachers as trainers: these are supporting arguments to claim that the project will help promote teaching EE as a formalized extracurricular subject in the educational institutions in Belarus. From the four pilot institutions, only the college in Viciebsk is currently doing that, while it is important for the later schooling years and should be promoted in the schools more broadly.

The following 4 institutions were the pilot sites:

* State "Kindergarten № 45 Hrodna" (Hrodna region) with 205 children;
* State "Kindergarten No. 6 in Ashmiany" (Hrodna region) with 150 children;
* State "Secondary school No. 4 in Dziarzhynsk" (Minsk region) with 784 students; and
* "Viciebsk State Vocational and Technical College of Mechanical Engineering after M.F. Shmyreva” (Viciebsk region) with 530 students.

The following energy-efficiency measures were implemented in all pilot educational establishments: installation of solar collectors, new modern windows with triple glazing, ventilation systems with heat recovery, new energy-efficient kitchen equipment and heat reflecting screens; replacing incandescent lamps with energy efficient ones; warming of walls and roofing; and modernization of heat substations (replacement and automation of all heat substation equipment (the latter was not in ProDoc but was implemented as it was considered important).

Based on the monitoring results, savings in heat energy were achieved ranging 39-56 percent and in electricity - ranging between 32- 57 percent.The pilots were also interesting in terms of funding: the local government provided more than 40 percent of the funding (40 percent being the requirement), but there was also monetary contribution from the EED in one of the pilots and there were also co funding from the local stakeholders (e.g. factories) and parents, both in cash and in kind. Given the high level of interest from the local governments in these pilots (demonstrated by the high level of co-financing) it is likely that they will be well cared for in the future. The pilots were meant to serve as demonstration sites for the peer institutions and they do serve that role: there are frequent visits by many educational institutions and not only. They serve as models in a number of respects: the technological novelties, providing a model of integrated investments, as well as being examples of “pooled” funding. The pilots in their technical part were ahead of the peers in the country leading to significant interest from the peers in replication. Whether this replication will be possible and to what extent will depend on the elimination of the institutional, legal and financing barriers on the way of EE investments in the public buildings.

The Public Advisory Boards (PABs), created as 13-15 member platforms at the level of the 4 pilot institutions primarily with the aim to promote participatory monitoring of the project supported pilots, proved to be effective mechanisms for that specific purpose, but it is unlikely that they had affected the EE planning/investment at the local government level, something that was also expected from them according the Description of Action under the EU-UNDP contract. The only activity where the project has hardly succeeded is related to the development of local EE strategies at the pilot locations, whereby, in a nutshell there was no apparent interest on their behalf in having such plans (and there was no sufficient probing into this as part of developing the ProDoc) and, on the top of it, there was no budget allocated for that activity.

Recommendations:

1. Provided that the idea is supported by EED, work on the handover to the Association for the Education for Sustainable Development (AESD) of all the soft copies of information products based on a MoU which will specify that (a) AESD will work with the Ministry of Education to review of all the educational tools are cleared to be used as part of the extracurricular teaching process as well as identify the ones that could be recommended to be used country wide (b) and all those that are cleared will be made available to the public free of charge.
2. Produce a Lessons Learnt report. There could be several booklets, with one of them dedicated to the analysis of economic costs and benefits of the pilots. The other one could feature the learning from the financing side of the pilots with an analysis of the potential for replication. The third one could feature the findings from the survey on awareness levels (but the findings need to be repackaged and presented better). After the booklets are produced, work with the EED to ensure its wide dissemination; and
3. Given that upcoming tariff reform there might be justified need to support the population with further projects targeting public awareness raising as well as support the government with developing a subsidy scheme that will target the poor with their energy costs.

# **Introduction**

## **Project background**

The aim of the European Union (EU)/United Nations Development Programme (UNDP) project on “*Developing an Integrated Approach to a Stepped-Up Energy Saving Programme*” is to enhance the efficient use of energy resources at the local level in Belarus through application of energy-saving technologies and measures in educational buildings. The objective was to be reached through the pursuit of establishing pilot sites demonstrating the application of innovative energy efficient technologies in school buildings, capacity building of local authorities and specialists and raising awareness of the local population to carry out energy saving measures at the local level. The project also aimed at increasing the involvement of local governments and population in the implementation of pilot initiatives related to energy efficiency (EE) and further replication of best practices.

The Project was registered by the Ministry of Economy (the designated Government body to coordinate the projects funded with international development assistance) in September 2013, with the duration of 36 months but in July 2016 it was extended to May 1st, 2017 given that the Project got fully staffed only in August 2014 and also to enable the project team to monitor the results of the EE measures after the 2016-2017 heating season, which ends in April 2017. At the time when this evaluation commenced (03/2017) the project was one month before its completion.

## **Purpose of the evaluation**

In accordance with UNDP Monitoring and Evaluation (M&E) policies and procedures, all projects are strongly encouraged to conduct a mid-term evaluation (MTE) and/or final evaluation. The Final Evaluations are intended to assess the extent of the achievement of objectives, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP projects), and to make recommendations regarding specific actions that might be taken to improve the project. These are also expected to serve as a mean of validating or filling the gaps in the initial assessment of relevance and effectiveness.

According to the Terms of Reference (TOR, see Annex 1) and in line with the UNDP M&E guidelines, this Final Evaluation was initiated by UNDP Country Office in Belarus with:

* *the global objective* - to assess the efficiency, effectiveness, and viability of the project in order to verify that the activities and results of the project are in line with those outlined in the Financing Agreement and in the Project Document (ProDoc); and
* *the specific objective* - to provide a comprehensive and systematic evaluation of project performance, its design, the process of implementation and the achievements.[[3]](#footnote-3)

In particular, this assignment aims at providing consultation and advice to the Project Implementation Unit (PIU), UNDP Belarus Country Office, Energy Efficiency Department (EED) of the State Standardization Committee (National Implementing Agency), members of the Project Steering Committee (PSC), project partners, district authorities and other relevant stakeholders by:

* assessing the overall performance against the project objective and outcomes as set out in the Project Document, project's Logical Framework, and other related documents;
* assessing the effectiveness and efficiency of the project;
* analysing critically the implementation and management arrangements of the project;
* assessing the progress towards achievement of the outcomes;
* reviewing the planned strategies and plans for achieving the overall objective of the project within the timeframe;
* assessing the sustainability potential of the project's interventions;
* documenting the initial lessons concerning project design, implementation and management;
* assessing the relevance of the project with regards to the national priorities;
* providing lessons learned for the future; and
* producing recommendations on any adjustments needed, as well as suggest strategy and policy options for more effective achievement of the project’s expected results within the project timeframe and their further replication

The evaluation has the following complementary purposes:

* To promote accountability and transparency by disclosing the level of project accomplishments and assessed likelihood of sustainability;
* To synthesize lessons learned that may help improve the selection, design and implementation of future UNDP EE-related projects;
* To provide feedback on issues that are recurrent and need attention, and on improvements regarding previously identified issues;
* To provide appraisal on the relevance of the UNDP supported interventions, and the extent to which the set objectives and outcomes have been achieved;
* To identify the gaps/weaknesses in the current Project design and provide recommendations as to their improvements in similar projects;
* To identify lessons learnt from previous and ongoing interventions in this area;
* To assess the role of the Project in building local leadership capacities at the local levels;
* To review and assess the strength and sustainability of the Project’s partnerships with the government bodies, civil society, private sector and international organizations during its implementation;
* To review and assess the efficiency of implementation and management arrangements of the Project; and
* To support UNDP in identifying the future interventions in the area of socio-economic and community development, aligned with the national priorities, UNDP’s mandate and expertise.

The key issues addressed are listed below (see Table 17 in Annex 6 for the mapping of the evaluation criteria and issues):

* ***Project formulation,*** covering: project relevance; implementation approach; country ownership and extent of stakeholder participation during the project formulation; replication approach; cost-effectiveness; design for sustainability; linkages between project and other interventions within the sector; and adequacy of management arrangements
* ***Efficiency,*** covering: assessment of the quality of project implementation and adaptive management; adequacy of planning and financial management; the quality of monitoring and evaluation; the contribution of implementing and executing agencies in ensuring efficient implementation, and an assessment of the extent to which the implementation of the project had been inclusive of relevant stakeholders and to which it had been able to create collaboration between different partners;
* ***Effectiveness,*** covering: assessment of the achievement of the immediate objectives (outputs) and the contribution to attaining the outcomes and the overall objective of the project; and an examination of the any significant unexpected effects of the project (either of beneficial or detrimental); and
* ***Potential for Sustainability,*** covering:assessment of the likelihood of sustainability and risks pertaining to it***.***

The findings of the evaluation are organized along the outline stipulated in the TOR (see **Annex 1**), but ensuring that they cover all the standard Organization of Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) as well as UNDP evaluation criteria and definitions: this is described in Table 1 below.

Table 1: Evaluation criteria and questions

|  |  |  |
| --- | --- | --- |
|  | Evaluation questions and criteria | |
|  | Relevance: Project formulation | |
| 1 | * 1. How relevant is the project for Belarus?   2. How relevant are the outputs, activities and inputs as compared to cost-effective alternatives?   3. Has the project been effectively undertaking adaptive management in order to respond to changing conditions? |
| 2 | 2,1. Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities? |
| 3 | * 1. How adequate are the managerial arrangements of the project?   2. How adequate are the workplan and duration? |
| 4 | * 1. How adequate was the approach related to the participation of the local stakeholders in project management and decision-making as well as engagement more broadly? |
| 5 | * 1. How adequate was the strategy on the dissemination of project information to partners and stakeholders? |
| 6 | * 1. Is the project cost effective? |
|  | Project implementation |
| 7 | * 1. Were there delays in project implementation?   7.1.a. If yes, what were the reasons; and how did they affect the achievement of project’s outcomes and/or sustainability as well as cost effectiveness? |
| 8 | * 1. Are the logframe and the monitoring tools currently being used adequate (providing the necessary information and involving key partners; allowing timely tracking) and sufficient?   2. Is the logical framework being used as a management tool? |
| 9 | * 1. Were the risks identified correctly and were the risk management strategies adequate?   2. In particular, is the UNDP Risk Management System appropriately applied and if not what needs to be done? |
| 10 | * 1. Is there due diligence in the management of funds and financial audits? |
| 11 | * 1. How adequate were the Project Management arrangements as put in place at the start of the project?   2. Did the project display effective adaptive management? |
| 12 | * 1. Did promised co-financing materialize and if not what needs to be done in order to improve the situation? |
| 13 | * 1. Were the lessons derived from the adaptive management process documented, shared with key partners and internalized by partners? |
| 14 | * 1. What roles were played by UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus against the requirements set out in the UNDP Programme and Operations Policies and Procedures?   2. What was their contribution? How effective was the role of UNP in providing quality assurance? |
|  | Results |
|  | Effectiveness |
| 15 | * 1. Were all the planned project outputs and outcomes achieved? If not then why? |
| 16 | * 1. What was the quality of the deliverables, e.g. policy papers, adequacy of the level and proposed modes of enforcement of the regulatory and programmatic documents, etc.? |
| 17 | * 1. How timely were the project deliverables, e.g. the EE oriented curricula for the initial training? |
| 18 | * 1. How effective were the developed project awareness raising products on energy efficiency (project’s web-site; Communication and promotion strategy, etc.)? |
| 19 | * 1. Are project outcomes contributing to national development priorities and plans in accordance with relevant state and local energy conservation programmes and strategies? |
| 20 | * 1. How and why project outcomes and strategies contribute to the achievement of the expected results? |
| 21 | * 1. Is the project on track to meet the global environmental benefits in terms of tones of CO2 reduced by the end of the project as defined in the project document? |
|  | Sustainability |
| 22 | * 1. What is the extent to which the benefits of the project will continue, within or outside the project scope? |
| 23 | * 1. Were the project objectives mainstreamed into the broader development policies and sectoral plans and economies? |
| 24 | * 1. Is there a commitment of the government to support the initiative beyond the project? |
| 25 | * 1. What are the risks that are likely to affect the persistence of project outcomes?   2. In particular, at the Oblast level? Whether or not resources will continue to be available for such investments after the end of the project? |
| 26 | * 1. How will other important contextual factors that are not outcomes of the project affect sustainability? |
| 27 | ***Financial resources:***   * 1. Are there any financial risks that may jeopardize sustenance of project outcomes?   2. What is the likelihood of financial and economic resources not being available for increased investments in energy-efficiency once the EU assistance ends? |
| 28 | ***Socio-political***:   * 1. Are there any social or political risks that may jeopardize the sustenance of the project outcomes?   2. What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?   3. Do the various key stakeholders see that it is in their interest that the project benefits continue to flow?   4. Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project? |
| 29 | ***Institutional framework and governance:***   * 1. Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits?   2. Are the required systems for accountability and transparency, and the required technical know-how in place? |
| 30 | ***Environmental***:  30.1. Are there any environmental risks that may jeopardize sustenance of project outcomes?  30.2 Will any activities pose a threat to the sustainability of the project outcomes? |

## **Methodology of the evaluation**

The evaluation is guided by UNDP Handbook on Monitoring and Evaluation for Results and UNDP Evaluation Policy kit. To ensure that the evaluation provides evidence-based information that is credible and reliable **triangulation** is used as the main evaluation method, to verify the information gathered from the document review, interviews and the site visits (see Annex 2 for the schedule). It involves developing the reliability of the findings through multiple data sources of information (see Figure 1) bringing as much evidence as possible into play from different perspectives in the assessment of hypotheses and assumptions.

In the assessments of the outcomes an attempt is made to attribute the results to the program when feasible: when not feasible, **contribution analysis** will be used, which is presented schematically below (see Figure 2)[[4]](#footnote-4). Table 2 presents a mapping of evaluation tools and the sources of information. The Evaluation matrix is presented in Table 18 and the matrix for interviews is presented in Table 20 in **Annex 6.**

Figure 1: Method of Triangulation

**Site visits**

**Perceptions of different actors**

**Documentation**

**Results**

Figure 2: Steps in Contribution Analysis

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Step 1.** Develop the results chain | **Step 2.** Assess the existing evidence on results | **Step 3.** Assess the alternative explanations | **Step 4.** Assemble the performance story | **Step 5**  Seek out the additional evidence | **Step 6** Revise and strengthen the performance story |

Table 2: Sources of information

| **Evaluation tools** | **Sources of information** | |
| --- | --- | --- |
| Documentation review (desk study) | General documentation | * UNDP Programme and Operations Policies and Procedures * UNDP Handbook for Monitoring and Evaluating for Results * EU Monitoring and Evaluation Policy * EU focal area strategic program objectives * A Practitioner’s Guide to Area-Based Development Programming |
| Project documentation | * EU approved project document and Request for CEO Endorsement * Annual work plans * Donor Reports 1, 2 and Final * CDRs * Financial audit reports * Project Steering Committee minutes * Updated risk log |
| Governments papers | including policies, laws, strategies, etc. |
| Third party reports | including those of the World Bank, EU, EBRD, USAID and others, independent local research centres, etc. |
| Interviews with PIU and key project stakeholders | These will include: UNDP Belarus, Delegation of the EU to Belarus, Energy Efficiency Department of the State Committee on Standardization, relevant administrations of Hrodna, Minsk and Viciebsk Regional Executive Committees, Education Departments of the Hrodna, Minsk and Viciebsk Regional Executive Committees, relevant administrations of Ashmiany and Dziarzhynsk District Executive Committees, administration of the Leninski District of Hrodna city, other beneficiaries and project partners, such as relevant legislative bodies, Hrodna, Minsk and Viciebsk Regional Energy Efficiency Divisions, etc. | |
| In-country visits of project pilot sites | These will include: State Education Establishment “Kindergarten No.45 of Hrodna city”, State Education Establishment “Kindergarten No.6 of Ashmiany town”, State Education Establishment “Secondary School No.4 of Dziarzhynsk city”, Education Establishment “Viciebsk State Vocational Mechanical-Engineering College named after M.F. Shmyrev” | |

#### **Rating**

The range of aspects described earlier is provided with the assessment based on rating of achievements (for more details see Table 19 in **Annex 6).** The applicable rating criteria are presented in Table 3

Table 3: Rating grades

|  |  |
| --- | --- |
| **Rating for the assessment of Relevance, Effectiveness and Efficiency** | |
| HS | Highly Satisfactory: The project has no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency |
| S | Satisfactory: The project has minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency |
| MS | Moderately Satisfactory: The project has significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency |
| MU | Moderately Unsatisfactory: The project has major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency |
| U | Unsatisfactory: major problems |
| HU | Highly Unsatisfactory: The project has severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency |
| **Ratings for sustainability assessment** | |
| LS | Likely sustainable: negligible risks to sustainability |
| MLS | Moderately Likely sustainable: moderate risks |
| MUS | Moderately Unlikely sustainable: significant risks |
| **Additional** | |
| N/A | Not Applicable |
| U/A | Unable to Assess |

#### **Limitations**

The resources of the evaluation did not allow for a representative survey of the project beneficiaries, and more specifically the teachers and students. Only interviews during the visit were possible which of course is less rigorous than one would have wished. As a mitigation strategy, all the efforts were put in place to ensure the largest possible coverage of both project and counterpart-produced reports as well third party reports.

## **Structure of the evaluation report**

The structure of the Evaluation report follows the requirements of the TOR. Chapter 2 describes the project and its development context, Chapter 3 describes the Findings, Chapter 4 presents Conclusions and the main lessons learnt and Chapter 5 concludes with recommendations.

# **The project and its development context**

Belarus lacks domestic energy resources, and has thereby to import around 87 percent of energy consumed in the country.[[5]](#footnote-5) The Government pursues reduction in its dependence on energy imports by reducing its own energy consumption and by increasing its use of local fuels.

UNDP Belarus supports the Government of the Republic of Belarus (GoB) in achieving the goals of the National Sustainable Socio-Economic Development Strategy (NSSEDS, 2004) till 2020 including, *inter alia*, as a partner in EE improvement policy and programs. In particular, UNDP has supported the GoB through capacity building and expert advice to achieve its GDP energy intensity reduction target and increasing of renewable energy sources (RES) utilization through the current project on “*Developing an Integrated Approach to a Stepped-Up Energy Saving Programme”* funded by EU, but also with other projects, e.g. those funded by the Global Environment Facility (GEF) [see Section 3.1.1].

The aim of the 3-year long project, was to enhance efficient use of energy resources at the local level in Belarus through the application of energy-saving technologies and measures in educational buildings. In particular, the project was expected to help achieve the following objectives:

* To raise awareness and build capacity within communities to carry out energy saving measures at local level that improve EE and utilize RES;
* To establish pilot sites in local communities demonstrating the application of innovative EE technologies in school buildings; and
* To ensure active participation of local governments, educational institutions and local population in the implementation of energy-saving pilot initiatives, as well as to promote demonstration of best practices, and their replication at the local level.

The Energy Efficiency Department (EED hereafter) of the State Committee for Standardization of the Republic of Belarus is the Executing Entity on behalf of the Government of the Republic of Belarus for this project. Other project partners include:

* Minsk, Hrodna and Viciebsk Regional Executive Committees and District Executive Committees of pilot project districts (education departments);
* Educational institutions’ authorities in Minsk, Hrodna and Viciebsk regions (schools, kindergartens, boarding schools, vocational technical colleges (VTC)); and
* Local civil society organizations and local population

The list of the Project beneficiaries includes[[6]](#footnote-6): the EED; Education Departments of the respective Regional Executive Committees; the authorities of the educational institutions; teaching personnel of the schools, kindergartens and colleges; social workers; pupils and their parents, as well as local public at large. [[7]](#footnote-7)

# **Findings and Conclusions**

* 1. **Project formulation: relevance**

### **Relevance of the Project focus**

The buildings’ sector has a large potential of energy savings for Belarus: it consumes 40 percent of heat used in the country, and as such represents an important potential source of greenhouse gas (GHG) emission reductions through fuel savings. More than 80 percent of the country’s residential stock, and about 95 percent of the public building stock was built before 1996. Building thermal protection standards were significantly strengthened in 1993 and updated in 2010. Pre-1996 buildings consume, on average, nearly twice as much energy per square meter as buildings constructed in the last four years, and this applies to the educational institutions also (see Figure 3). More than 90 percent of public buildings in Belarus were built before 1996, including 95 percent of kindergartens and secondary schools: 2,479 (about 94 percent) secondary schools and 2,236 kindergartens (about 96 percent) were built before 1996[[8]](#footnote-8),

Figure 3: Annual Heat Consumption in Schools by Period of Construction (kWh/m3)



Note: The small deviation in specific heat consumption in buildings built after 2011 is due to changes in the approach to standardization of rated values. *Source: WB (ESMAP), 2015: “Belarus: Scaling Up Energy Efficiency Retrofit of Residential and Public Buildings Assessment of Investment Needs, Implementation Constraints, Financing Options and Delivery Models”, based on SNB 4.02.01-03 and TCP 45-2.04-196-2010.*

These figures illustrate the potential for energy saving if EE technologies were introduced in all the schools designed pre-2010. Thermal retrofits in these buildings could result in substantial energy savings.[[9]](#footnote-9) Thus a focus of this project on educational institutions was well justified from technical point of view.

Improving EE in all sectors of the economy and reducing GHG emissions have become national priorities, and many efforts have been taken by the GoB to modernize generation facilities, improve EE, and increase the use of local and renewable energy resources. The main legislation and policy papers in effect now include:

* Council of Ministers’ Decree # 1820 ‘On Additional Measures for Efficient Use of Fuel and Energy Resources’ in 2003, to equip all public buildings with heat and water meters and systems of heat energy regulation;
* The Law of the Republic of Belarus "On Energy Saving" of January 8, 2015 No. 239-Z;
* The Law of the Republic of Belarus "On Renewable Energy Sources" of December 27, 2010 No. 204-З;
* The Directive of the President of the Republic of Belarus "Savings and thrift - the main factors of the economic security of the state" of June 14, 2007, No. 3 (as amended by Presidential Decree No. 26 of January 26, 2016);
* The Concept of Energy Security of the Republic of Belarus of December 23, 2015;
* State program "Energy Saving" for 2016-2020; and
* Decree of the President of the Republic of Belarus of May 18, 2015 No. 209 "On the use of renewable energy sources".

The energy intensity of GDP is halved in the last 13 years, standing at 0.19 tonnes of oil equivalent per US$1,000 worth of merchandise (close to that of Finland and Canada, which enjoy similar climatic conditions).[[10]](#footnote-10) The work has included close collaboration with the International Financial Institutions (IFIs). EED has high ambitions for the years to come also, as could be seen from Table 4. In 2016-2020 it is planned to reduce the GDP energy intensity to the world's average — by 2 percent at the end of the five-year term.[[11]](#footnote-11)

Table 4: Plans of the Department of EE of Belarus

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Indicator | **2015 actual** | **2016** | **2020** | **2025** |
| Share of RES, percent | 5,5 | 5,9 | 6 | 7 |
| Energy saving with EE thousand tons of coal equivalent | 7788  (2011-2015) | 1171  (no less than 1000) | 5000  (task for 2016-2020) |  |

*Source: EED. Presentation from 2017*

The energy intensity per unit of GDP is still 1.5 - 2 times higher than in EU member states with similar climate conditions, however. This comparison indicates that Belarus still needs to make substantial efforts to achieve a high level of EE in all sectors, including via: 1) broadening public participation in energy saving programmes; and 2) bringing new energy saving and renewable energy technologies to the Belarusian market. The tasks that the EED and GoB had set look ambitious given that the level of financing on EE measures has declined starting 2013, reflecting the overall budgetary constraints (see Figure 4). Thus, the project is relevant also from the point of view of being one of the few targeting the topic.

Figure 4: Financing of EE measures in 2001-2016 годах (Million US$)

*Source: EED. Presentation from 2017*

The project is also relevant given the ongoing energy tariff reforms aimed at removing of subsidies and hence expected increases of the tariffs in the residential sector[[12]](#footnote-12) and removing cross subsidies in the public and industrial sectors, which requires better awareness of the benefits of higher EE by the population. Linked to this is the relevance of choosing schools as targets, given that they act as agents of change with children often bringing the knowledge they gain to the families, i.e. spreading the knowledge. To sum up (and also according to the previous experience in similar projects), institutional buildings, and in particular schools, kindergartens, boarding schools and vocational-technical schools are natural points of entry for EE activities at a local level for the following reasons:

* high visibility;
* a natural setting for educating students and their families;
* vast geographic coverage;
* significant source of potential energy savings (and associated savings in operational costs);
* the use of design prototypes for institutional buildings with a potential for replication in renovation initiatives; and
* institutional buildings’ retrofits producing important improvements in the learning environment (comfort, visibility) that contributes to enhancing the quality of education

The project was relevant for the main funder, i.e. the EU as well as UNDP, given their portfolios at the time of the conceptualization of this project. In particular:

* **EU:** Energy efficiency in Belarus has been and is being addressed by a number of actions under European Commission technical assistance: (a) on a shared basis by projects under the INOGATE programme for the European Neighbourhood and Partnership Instrument (ENPI) – East region and Central Asia participating countries, e.g. National Allocation Plans (NAP) 2006 “Harmonization of Electricity Standards”; as well as (b) under country specific projects, such as the Annual Action Programme (AAP) 2007 “*Support to the Implementation of a Comprehensive Energy Strategy of the Republic of Belarus*”. The European Commission's *Covenant of Mayors Program*, in which communities pledge to reduce their energy consumption by more than 20 percent by the year 2020 through a variety of actions expanded to all ENPI countries in 2011. Communities in Belarus became eligible to participate in the program, which includes technical support for EE planning at the community level. Already several municipalities have joined.
* **UNDP:** EE has been one of the focus areas for UNDP for many years especially with the adoption of the Millennium Development Goals (MDGs) and then Sustainable Development Goals (SDGs). This is true also for Belarus. Several relevant projects related to EE were implemented in Belarus. This includes two UNDP/GEF projects: (a) "*Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus*," a 5-year project (01/2007 - 12/2011) with a budget of US$1.4 million, designed to improve the efficiency of public sector investments in EE projects, as well as to introduce appropriate supporting initiatives; and (b) the project which was still under implementation at the time of writing this report, namely on “*Improving Energy Efficiency in Residential Buildings in the Republic of Belarus” (2012-2016)***.**

### **Implementation approach**

#### **Barriers to EE in Public Buildings**

Barriers to EE in public buildings in Belarus fall into the following categories: legal, regulatory and institutional, incentive-related, and financing. The barriers are described in more detail below[[13]](#footnote-13).

* Legal Regulatory, and Institutional
  + Inability to reallocate expenditure between line items. This means that the amount set aside in a budgetary organization’s budget to pay energy bills (measured, for example, in cost per litre, cubic meter, ton or kWh of purchased energy) cannot be used for other purposes (for example, a reserve fund to pay for investments in EE).
  + Restrictions on multi-year obligations. Article 138 of the Budget Code prohibits any commitments beyond the approved annual appropriations. The restriction on multiyear obligations stifle the evolution of organizations like ESCOs, which could help public organizations save on energy consumption. To get around this restriction, administrators of budget funds typically try to ensure that their medium- to long-term projects are supported by an act of the Council of Ministers or the Presidential Decree.
  + Highly fragmented responsibilities for certain sectors making coordination of bundled procurement and investment in EE improvements in the public sector more complex. For example, expenditures of post graduate schools are financed by the Republic budget while expenditures for lower level educational institutions such as pre-schools might be financed by oblast and base tier budgets.
* Incentive-related
  + Inability to retain savings on energy. Budgetary organizations in Belarus use incremental, line-item budgeting that tend to limit budgetary organizations’ incentives to save energy (leading it to a “use it or lose it” mentality), so that their budgets are not reduced in the next planning period.
  + “Mutual settlement” and other inter-governmental transfers. The system of transfers between levels of government creates little incentive for subnational governments (SNGs) to reduce operating expenditures and generate permanent fiscal savings. Approximately 35 percent of the budget for SNGs is sourced by transfers from the central government, three-fourths of which being general purpose grants.
* Financing barriers
  + Article 79 of the Budget Code forbids public entities from borrowing in any form. SNGs may issue securities on the domestic market or may take intergovernmental loans to implement investment projects for example. Public enterprises may borrow from commercial banks, using their assets as collateral, but such permissions are granted by the Government (owner of public enterprise) only on a limited basis.

The project pursued the promotion of energy savings in schools in participating communities with three- pronged approach[[14]](#footnote-14), described in Figure 5.

Figure 5: Stylized Results Chain of the Project

|  |  |  |
| --- | --- | --- |
| **Components** | **Objectives by component** | **Goal** |

*Source: author, based on the information from the ProDoc*

#### **Public awareness and training in energy efficiency for local stakeholders in target districts.**

The project has a multifaced information component, including: thematic presentations for local authorities and communities; Quarterly information newsletter, thematic project web-site; Training of trainers (ToT) on EE issues; aim at introducing *Energy Efficiency Extracurricular Subject* in educational institutions; Information stands in pilot buildings; Information campaign, etc. This allowed to cover different segments of the society and tackle the task of increased awareness from various angles and with varying level of complexity.

In 2014 and 2016 the project team conducted an analysis of the results of interviews among students and their parents in 23 educational institutions of Viciebsk, Hrodna and Minsk regions on the use of RES and the introduction of EE activities in everyday life (at school, home, summer house (*dacha*), etc.). The aim of the surveys was to compare the level of awareness of students and their parents before the active phase of the project in 2014 and after the completion of pilot initiatives in three regions in 2016. Both surveys included questions about the level of awareness of the respondents on energy consumption, ways to save electricity and heat, information needs for energy conservation and the sources of information they use; RES and their use by the respondents themselves, as well as the kinds of information they consider necessary for teaching in educational institutions (kindergartens, schools and colleges). It is important to note that the second survey involved the same educational institutions as in the first, but the respondents themselves were not necessarily the same. The extent of the changes in the level of awareness will be analysed in Section 3.2.3 (these surveys will be referred toas ***Energy Efficiency Awareness Survey (EEAS) 2014/2016*** in this report)[[15]](#footnote-15). Several observations, are however more suited in this section. In particular, both surveys revealed that:

* the respondents did not understand well the essence of the issues related to housing and communal services, e.g. related to the share of household budgets spent on heating or electricity. They pointed out that it is important to actively conduct explanatory work on the tariffs and benefits for housing and communal services among the population, that will allow them to plan their expenses and properly manage their finances;
* more than 50 percent of respondents could not say which types of RES they could use at home, at work and at the *dacha* (summer house). They pointed to the need for explanatory work about RES among the population;
* despite the fact that the share of respondents who could not tell the amounts spent on heat, electricity and gas decreased by 3 percent in 2016 compared to 2014, 17 percent of respondents still did not ask themselves this question in 2016; and
* a very small proportion of the correct answers about the use of thermal energy in both surveys - about 20 percent (only those answers that indicate a monthly consumption of 1 to 5 Gcal were taken as reliable) suggests that the respondents practically do not understand what is connected with heat consumption.[[16]](#footnote-16)

These findings indicate that the focus of the 1st component of the project on public awareness was justified.

In addition to its many other programs in EE, the EED is supporting numerous educational measures and measures aimed increased public awareness in matters related to EE: the *EE marathon*, which is a national competition for preschool instructors and primary and secondary school pupils (in which participants develop educational materials and activities poems, plays, and initiatives) is only one of them. Thus, the information campaign was well aligned with the high level of importance that the GoB attaches to it and this is a supporting argument in favour of the relevance of the 1st component of the project.

On the backdrop of a massive GoB focus on EE education WB (2015) comments that; “*There are no regular measurements or evaluation of end-user practical awareness of EE or other types of feedback provision [which] would help to sharpen the focus of the outreach and improve on the materials used*.”. The design of the project could have addressed the same concern better: this is discussed in Section 3.2.3.

#### **Energy efficiency pilot projects implemented via a competitive grants scheme**

The project included:

* ***New approaches to increase the impact of standard retrofit measures.*** Measures, such as the replacement of old windows with new energy-efficient ones, thermal insulation for exterior walls and roofs, automatic controls for heat, and efficient lighting systems with controlled luminance have previously been used in institutional buildings in Belarus. However, this project implements these measures according to the new energy-saving regulations adopted in 2010 in the construction sector, which require much higher thermal resistance in roofs, walls and windows compared to the previous ones;
* ***Introduction of new EE technologies in the pilot buildings, including, in particular, waste heat recovery.*** In institutional buildings, the losses through exhaust ventilation represent around 40 percent of total heat loss. Because of the thermal efficiency of air- to- air heat exchangers installed for the heat recovery of the exhaust air to plenum air is about 70 percent, around 30 percent normally wasted was expected to be returned to the buildings. This was expected to help with constant supply of fresh warm plenum air. In old systems, the plenum and exhaust ventilation systems are frequently switched off in an attempt to conserve heat. This was the first time when such technology was to be used in any institutional building in Belarus;
* ***RES in the pilot buildings.*** Solar thermal collectors to heat up domestic hot water during the hot period of the year were installed. It was estimated that from March to September the solar radiation would allow to preheat and even fully heat hot tap water. Solar collectors were planned to operate in parallel to traditional hot water heat exchangers (using an automatic control system whereby the latter switches on when needed) resulting in an expected 50-100 percent of reduction in heat consumed in traditional hot water heat exchangers. This was also a relative novelty in the educational buildings in Belarus. A forceful push to using a higher share of RES in the energy mix of Belarus is highly relevant for the country given Belarus’s high level of dependence on energy imports (the single largest contributing factor to its current account deficit). Given that Belarus has limited sunny days a year, there is a skepticism about the merits of promoting solar energy among the population and even the energy experts, and from this point also the project was very relevant as one of the steps to overcome those stereotypes.

The pilot buildings were expected to serve as blueprints for other communities and provide visible demonstration of the fuel savings results of the higher standards. As elaborated convincingly in WB (2015): “…*there is a lack of confidence in, and awareness about the effectiveness of EE measures. For example, a thermal retrofit contractor interviewed for this study claimed that low awareness about technological and economic benefits of construction technologies among designers, developers and contractors leads to a lack of trust about the possibility of fully realizing the EE potential of thermal retrofits*”. This highlights well the high relevance of this component, provided that the results are well disseminated (see *Recommendations*)

1. **The use of Area Based Development (ABD) approach within the framework of sustainable energy management at the local level**

According to the Description of Action of the EU-UNDP Financing Agreement “…f*or the purposes of this project ABD is defined as an approach to development, which implies targeting specific geographical areas in a country, characterized a particular complex development problem, through an integrated. inclusive, participatory and flexible approach (UNDP, 2003)”.* Specifically, the project was expected to:

* involve the project beneficiaries in the project monitoring and increasing their knowledge of EE issues through training and increased awareness; and
* work with local governments to improve their capacity to undertake energy saving investments (*NB:* *this point is in the Description of Action from the EU-UNDP Financing Agreement but not in the ProDoc)*

In this evaluation report the cited definition of ABD is accepted as a basis for the analysis, but it should be mentioned that ABD is primarily a tool of *policy formulation*[[17]](#footnote-17)*,* and hence the use of this concept in this context would imply that the focus and objective clearly include targeting *policy* related to EE. And so, the focus on the “*capacity and policy making at the local level to undertake EE investment*” should have had more prominence and clarity.

Under this third component the project pursued mainly 3 types of effort:

* ***Capacity building in ABD for target districts.*** According to the Description of Action from the EU-UNDP Financing Agreement, ABD represents “*a major shift from the traditional emphasis on centralized investments in the infrastructure*”. Referring specifically to the argument about “policy” aspect of ABD approach, this element of Component 3 looks relevant, especially in the light of the description of the barriers on the way of EE investments in the public sector described in the beginning of this Section, and more specifically in the part related to the fragmentation of possible investors. The ProDoc and the Description of Action from the EU-UNPD Financing Agreement do not explicitly specify, however, *the way* in which the pilots were supposed to affect this investment making process and incentives if they were not going to alter any of the fundamental barriers (institutional, legal and financial). In other words, the links between the pilot and the Public Advisory Groups (PAGs) with the envisaged local EE Strategies (see the bullet points below) is not sufficiently spelled out: just being demonstration sites is hardly sufficient to affect policy, given the significant barriers.
* ***Creation and facilitation of PABs operating under local authorities.*** These units were relevant in terms of platforms to energize the participatory monitoring of the pilots. Whether they were relevant in terms of “*facilitating energy saving investments by the local government*” is questionable given that all 4 PABs were created at the level of the pilots and not at the level of the local governments. The latter option was allowed in the ProDoc along with the option of forming the PABs at the level of the pilot educational institutions, but for all the regions the level of the pilots was chosen. It should be noted that the Description of Action of the EU- UNDP Financing Agreement does not specify the level of the PABs; and
* One particular activity stands out as not well backed up with the evidence of need and interest from the bottom up: ***local EE strategies.*** Based on the interviews for this evaluation no sufficient level of consultation seems to have happened before including this in the activities with the regional executive committees or city administrations at the time of the preparation of the ProDoc. As the interviews indicated the level of interest at Regional Executive Committees level was/is low, since they have their 5-year Plans of Socio Economic Development with EE Sections as well as Annual EE plans. There could be more interest at the level of city administrations, as was revealed with the interview in Viciebsk city administration (potentially more now than back in 2014, as a number of them are joining the Covenant of Mayors), but this was not sufficiently investigated and elaborated, including the context, the factors behind the potential interest and the type/level of detail of the strategies that they might be interested in.

The sharp reduction in the EE subsidies which the GoB used to provide - a consequence of economic upheavals in 2011 -- makes it all the more important that private investors, commercial banks and international financial institutions step in to help fill the gap.[[18]](#footnote-18) In this regards the fact that the EU has stepped in and funded this project is very important. The project design could have had more focus on probing into the willingness of the local government bodies, companies and residents themselves (in this case as parents) in investing in EE measures, looking into the barriers and coming up with recommendations.

### **Stakeholder participation/ownership**

The EED was part of the developing the project concept and this can be observed from the well drafted Component 2. However, in some aspects, especially in relation to some of the activities under Component 3 (Local EE strategies, as discussed) the design process required consultations at various level of the local government (region, oblast, city) to assess the level of interest before including this as part of the project proposal. Similarly, in the part of Component 1, a more active role of the Ministry of Education at the stage of the writing the proposal (as well as implementation, as will be discussed in Section 3.2.1) should have been assured to clarify the modes of participation and clarify the role.

### **Cost-effectiveness**

The estimated economic performance, the low level of technological risk of the planned technical rehabilitation of the pilots and the fact that some of the main components were planned to be locally produced imply that cost effectiveness was treated as an important factor in the project design. Ideally concerns about the cost effectiveness of the awareness raising work under Component 1 should have prompted incorporation of measures that would have allowed to assess the effectiveness of various modes of work robustly.

The project implementation Unit (PIU) had only 4 staff members. This has saved on administrative costs but arguably at the expense of efficiency and effectiveness to some – even if not large - extent. This is discussed more in Chapters 3.2 and 3.4). Similarly, the 3 years’ duration was overly optimistic given the ambitious goals of the project.

### **Replication approach and sustainability design**

The choice of the new technologies was informed by the desire to make them more likely to replicate. These were doomed to be easier to replicate given their estimated economic performance and them carrying low level of technological risk (important given the high visibility). In this way, the pilot buildings were meant to serve as important blueprints for other local governments and population, and provide a visible demonstration of the fuel-saving and money-savings results of the new higher standards. Piloting of other forms of EE technologies, e.g. heat recovery (a novelty, in essence), and the use of solar energy (also a relative novelty in Belarus) was supposed to trigger the interest and replication as well. To support the replication of the best practices, a series of in-country study tours and roundtable discussions for the EE pilot communities and potential stakeholders from other oblasts not involved in pilot renovations were planned (see the discussion in Section 3.3.1 and Recommendations). Thus, the design was adequate to trigger interest in replication, but hardly sufficient to bring about changes in the investment making policy in EE by the regional and local governments as was expected – perhaps too ambitiously- according to the Description of Action of the EU-UNDP Financing agreement, as discussed.

The ProDoc has elements supporting the replication of educational activities, in particular through Training of Trainers (TOT), visits of the peers to the pilot educational institutions, Public Service Announcements (PSAs) ran on the main TV channels, etc. However, as mentioned earlier, the closer involvement of the Ministry of Education would have facilitated a more systematic approach in terms of the replication of the use of educational tools as part of the extracurricular EE teaching developed in the framework of the project.

It is conjectured in the ProDoc that “*to secure sustainability, a thematic web-page can be installed on the platform of the acting web sites (for example on the platform of EED’s web site*”. The interview at the EED did not indicate that this is a strong possibility. So, the future of the website and the electronic versions of the educational tools was unsure prior the commencement of this evaluation. There were developments during the evaluation mission which are discussed in Section 3.3, whereby possibilities emerged related to finding a “home” for the products developed.

### **Results framework**

The results framework (RF) of the project could have been better formulated. In particular,

1. there are many targets in the text of the ProDoc but not in the RF, and, moreover, there are concerns related to their formulation. This list is presented below, but also in the text of the report later:
   * “*80 percent of trained educators will report of their willingness and readiness to facilitate inclusion of EE training into schools in the form of extracurricular or elective classes”* for Activity 1.4. It is in the ProDoc page 10 para 1, but not in the RF;
   * *“By the end of the project, 100 percent of target project regions will establish school-based EE elective curriculum”* for the Activity 1.5. It is an unclear what is meant under the word “Region”. It is in the ProDoc, page 10, para 3, but not in the RF;
   * *“100 percent of schools, covered by the elective curriculum, will report that students and their parents demonstrate an increased EE awareness”* for Activity 1.5, It is in the ProDoc, page 10, para 3, but not in the RF; and
   * “*By the end of the project, 80 percent of key stakeholders in target districts are expected to report that they use basic ABD techniques*” for Activity 3.1. It is unclear what is meant under “basic ADB techniques”. It is in the Prodo, page 12, para 6, but not in the RF.
2. Plus, the outcome level results are mentioned as *tasks* in the ProDoc (page 9, para 2) but they are not all featured in the RF. This applies to Outcome 3, whereby the expected outcome level result, i.e. “*Active participation of local governments, educational institutions and local population in energy-saving pilot initiatives at the local level, along with demonstration of best practices and replication ensured*” is hard to capture with quantifiable evidence, and the Indicators from the RF (*No. of representatives of local stakeholders trained in ABD participatory practices; and No. of public hearings conducted in every target region/territory*) do not capture it well. Additionally, these 3 “tasks” represent actually different level of results: while “*To raise awareness and build capacity within communities to carry out energy saving measures at local level that improve energy efficiency and utilize renewable energy sources*” is a good outcome level expected result (for Component 1), the expected result for Component 2, namely, “To establish pilot sites in local communities demonstrating application of innovative energy efficiency technologies in school buildings” is actually an output level result.

### **Linkages between project and other interventions within the sector**

Apart from the related activities of the EU and UNDP discussed earlier, the project was also complementary to activities of some other international organizations and financing institutions which were ongoing or happened before/or approximately at the same time as the current project. In particular:

* **World Bank (WB)**: In 2001 and 2006, the World Bank funded the *Post-Chernobyl Recovery*and *Social Infrastructure Retrofitting demand side EE* projects. These two projects included energy retrofits in social and public buildings, such as schools, hospitals and orphanages. The *Energy Efficiency* project, funded in 2009, aimed at helping to reduce gas consumption and total efficiency in heat and power generation by converting six existing heat only boiler plants to combined heat and power (CHP) plants in different locations across Belarus;
* Launched in 2003, the **Norwegian-funded SPARE project**, which involved a partnership between the Ministry of Education in Belarus, schools, and environmental non-governmental organizations (NGOs), worked with schools to raise awareness of environmental issues, including EE, and has provided relevant materials for use in the classroom; and
* **EBRD**: in 2013 launched a new facility in Belarus to provide local banks with up to US$50 million to finance investments in EE/RES. Five-year funding under this programme was made available to medium-sized industrial firms and small businesses through local banks that meet EBRD lending requirements under the EBRD’s Belarus Sustainable Energy Finance Facility (BelSEFF). Even though the EBRD’s priority in all its countries of operations is always to promote the private sector, part of the funding under this facility was also made available to qualifying state-owned companies. This was a result of acknowledgment that it is precisely in the public sector that the need for EE investments is greatest in Belarus. An additional benefit was seen in that it was expected that this initiative would also help to foster the emergence of a home-grown EE industry in Belarus, whose small business sector is well qualified to produce the tools and machinery needed to implement such projects. At present, most of this equipment has to be imported from abroad. The Czech Republic had provided a non-refundable grant of EUR 1.5 million which was used to raise awareness of EE issues as well as to promote a dialogue with government officials and NGOs in support of developing a legal and institutional framework for such projects. This was the first time that EBRD has offered sustainable energy funding in Belarus.

The current project was complementing and building upon these projects and this is also a supporting argument of its overall relevance. It should be noted that over the last three years, there have been no donor investment grant programs or credit lines in the public, residential or commercial building sectors

### **Management arrangements**

The EED was charged with the responsibility to ensure the successful implementation of the project activities, sustainability of the achieved results, as well as reporting to the Belarusian state authorities. It was expected to closely cooperate with UNDP to ensure that all the project activities are planned and implemented in a manner appropriate to the project’s goals and objectives. The EED was expected to assign a senior official as a National Project Coordinator responsible for project implementation on behalf of the EED. The Project Organization Structure (presented below in Figure 6) includes the Project Steering Committee (PSC), Project Assurance, and the Project Team.

The PSC was established, as planned at the inception phase of the project to monitor the project progress, to guide its implementation and to support the project in achieving its listed outputs and outcomes. The PSC regulations, including the list of members, were developed and approved by UNDP and EED at the inception phase of the project. It was chaired by the National Project Coordinator assigned by the EED. The PSC membership includes representatives of state departments and organizations as well as UNDP and the EU. The PSC regulations stipulate that “*Other members can be invited at the decision of the PSC on an as-needed basis, but taking due regard that the PSC remains sufficiently lean to be operationally effective*”. During the interviews for this evaluation it became clear, however, that it was difficult to invite, for example, someone in charge of the curricula development from the Ministry of Education, as the protocol is quite rigid: participation is requested by letters and it is up to the Ministry of Education to decide who to assign as a member of the PSC (NB: the representative who was assigned was a person in charge of schools’ supply side and, as virtually all the interviewees agreed, the project would have significantly benefitted if there was someone representing the “curricula” side), Requesting the participation of a person with specific profile was not attempted however, and so, it is not possible to claim with certainty what would have happened if this was contemplated. The power of UNDP and EED to approve the list of the PSC members (and those designated by other ministries) could have been utilized better.

Figure 6 Project Organizational Structure

Project team, experts and Specialists

The project manager participated as a non-voting member in the PSC meetings and was also responsible for compiling a summary report of the discussions and conclusions of each meeting.

To ensure UNDP’s ultimate accountability for project results, PSC decisions are to be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity and transparency. The Project Assurance role resting with UNDP Belarus Environment Focal Point supports the PSC by carrying out objective and independent project oversight and monitoring functions. The PSC, to be effective should be a forum for effective discussion, whereby even decisions on radical changes in the project design could be taken, if there is sufficient and convincing evidence supporting such a need. According to the interviews the PSC was a lively platform enough, but in the case of local EE strategies, the approach could have been both more flexible and proactive (discussed in Section 3.2.3)

The day-to-day management of the project was carried out by the Project Team under the overall guidance of the UNDP Resident Representative of Belarus and National Project Coordinator. The Project Team includes: Project Manager (PM), Administrative and Finance Assistant, expert on EE, expert on ABD, PR Manager and the Driver. The PM reports to the UNDP Focal Point on PSC. The PM is responsible for overall project coordination and implementation, consolidation of work plans and project papers, preparation of quarterly progress reports, reporting to the project supervisory bodies, and supervising the work of the project experts and other project staff. The PM is also responsible for building and maintaining contacts with the local authorities, NGOs and local population involved in the project.

The management arrangements were overall satisfactory with the overall comment that the PIU was understaffed (based on the feedback from the interviews as well as the assessment of the effectiveness and efficiency of the project discussed in the respective Chapters, and especially, in the Section 3.4.1 of this report).

Table 5: Rating- Relevance

|  |  |  |
| --- | --- | --- |
| **Project Formulation** | | |
| **Overall Project Formulation (Relevance):** *Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities?* | | |
| Conceptualization/design | **MS** | Not fully developed theory of change in the 3rd component and its interrelation with the other two |
| Stakeholder participation | **S** | Low level participation of the Ministry of Education and regional executive bodies in the development of the proposal |

## **Results: attainment of outputs, outcomes and objectives**

### **Outcome 1: Public awareness and training in energy efficiency in target districts.**

78 participants*[[19]](#footnote-19)* took part in the ***Thematic presentations for local authorities and communities*** in October 2014 covering various aspects related to EE in buildings (including the Belarusian experience in EE, including national policies in this area). Thematic materials were developed, disseminated and placed on the project web-site[[20]](#footnote-20) There is no hard evidence to claim that at least 80 percent of the participants have improved their knowledge of all potential benefits of energy-saving technologies and the use of renewable energy - a target from the text of the ProDoc- as the feedback forms were collected but not systematically analysed. However, the interviews for this evaluation indicated satisfaction with the quality of the presentations, with a reflection that these helped them to increase their awareness related to EE measures in educational institutions.

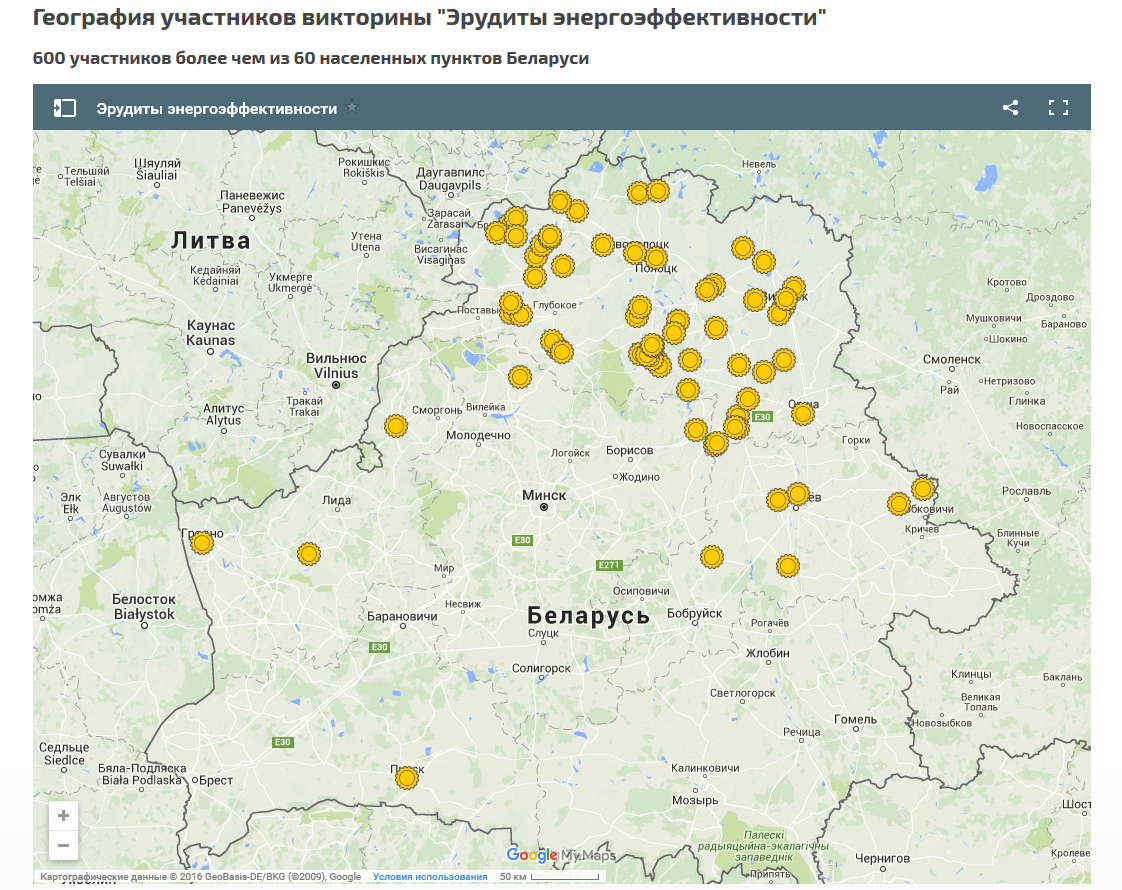
By the end of the project implementation, 10 issues of the ***information newsletter*** were published with 299 copies each and distributed to project stakeholders in target districts. 50 percent of the newsletter’s content presented by local stakeholders (local authorities, enterprises, local mass media, NGO, local population)- a target from the ProDoc - was taken as a guiding principle. No formal feedback mechanism was put in place (e.g. in the form of inserts, feedback box on the website, etc.) but the interviewed stakeholders for this evaluation commented positively on the usefulness of these in their work and, in general, for their awareness of EE.

***Information campaign.*** The information campaign included the following actions:

* ***Information stands*** at the pilot buildings;
* 29 ***interviews in newsletters and local mass media***;
* 100 ***articles in web media and information agencies***;
* 23 ***press releases*** on the results of the implementation of the project activities;
* 5 ***animated videos*** describing the essence of the project activities broadcasted by 15[[21]](#footnote-21) national and local TV channels. Unfortunately, there are no statistics to describe the frequency of the broadcasts as well as viewership[[22]](#footnote-22): according to the project team, the TVs refuse to provide such statistics for PSAs. The airing of PSAs was free of charge, which is a substantial contribution on behalf of the TV stations, since TV airtime is quite expensive and in many countries even for airing PSAs TV channels require payment. The 1st video called “*How School was treated*” took the third prize at “Adnak” National Advertising Festival in the category “Best Social Video”. The same video was promoted widely during the “green week” in Brussels on June 3-5, 2015;
* 4 ***press tours*** to pilot sites for 34 journalists representing national and regional media aiming to showcase energy-saving measures;[[23]](#footnote-23)
* 5 ***Public Relations (PR) events*** - drawing competitions "*Draw a Green School of the Future*" and play "Energopolis" board game at EU eco-fests;
* 2 ***comic strips on EE for school and college students***;
* ***2 colouring books on EE for pre-schoolers***. The colouring books were distributed at EU eco-festivals throughout the country and during the UN-UNDP information campaigns - UN Express 70 and Inclusive Belarus. They were in great demand and were re-printed with a total circulation of more than 4000 copies;
* 1 ***board game on EE issues (****Energopolis)*;
* 28 ***articles in printed media***;
* 24 ***TV and radio stories***;
* ***Support in organizing and conducting the national contest "Energomarathon***": around 300 school students took part in the competition in 2014-2016; and
* Toolkit on teaching EE

The full list of the materials is presented in Annex 4. The interviewees for this evaluation had a very high opinion about the informational materials. Some of these have become real hits with the users. As an example:

* The game “*Energopolis*” was very popular among the kids and parents and additional run of 600 copies was issued;
* The game “*Savers”* developed at the Viciebsk State Vocational Technical College of Mechanical Engineering after M.F. Shmyreva has proved to be one of the successes of the project. The statistics obtained in March 2017 indicated that there has been a 10 percent increase of the visitors standing at 42394 in April 2017 with 77478 unique views and 30302 downloads. Those playing the game were based not only in Belarus but also in Russia, Ukraine, Kazakhstan, etc.
* The college in Viciebsk created and carried out an on -line contest “EE Experts”. 657 people from 60 settlements of Belarus took part in the contest (see Figure 7)

Figure 7: Participants in the on -line contest “Energy Efficiency Experts” Viciebsk college

The ***Educational tools***, which are covered by the list above deserve a more detailed discussion

For the additional educational programme (outside the formal curricula, i.e. for coteries, elective or extracurricular classes etc.) the requirements are as follows to ensure that the certain educational aids could be used: [[24]](#footnote-24)

* The teachers could use their own materials at this classes but they should be approved by educational-methodical unit in frame of the District Educational Departments.
* For kindergartens, **all** materials used in educational programme have to approved by Ministry of Education.

The educational aids under this project were produced both by the pilot educational institutions and by the project team:

* ***by the pilot educational institutions***: In this case, the educational tools were sent for review to the respective Educational Departments of the Regional Executive Councils, and even if there is no formal letter of approval of the Ministry of Education, the process is sufficient;
* ***by the project team:*** in this case, these educational aids (coloring books, board game), apart from being used as *promo tools* during various exhibitions both by the project directly[[25]](#footnote-25) or by the Educational Departments of the Regional Executive Committees[[26]](#footnote-26),
  + were sent to the EED (the project team would not have the mandate to send these to the Ministry of Educational directly). It is assumed that the EED had sent these to the Ministry of Education, as a matter of protocol. In the case of the *Manual for teaching EE in the frame of the curriculum* it has certainly happened but there are no assurances that this has happened for every single item produced;
  + were delivered to the pilot educational institutions with the intention that these could be used during teaching. In this case, these materials should have been/should be approved by Ministry of Education (not directly by the Ministry but rather, by dedicated institutes). So, it could be claimed that the project team should have cleared these in advance with the Ministry of Education. Having said that, all the pilot educational institutions have now sent applications to the Ministry of Education to get the status of the innovations educational establishments. If they get this status they could use the materials without formal approval of the Ministry of Education, but of course (a) this is a conjecture and (b) it might take time. If they get this status they could also make necessary corrections under the supervision of the scientific consultant dedicated by Ministry of Education. Assuring that the Ministry of Education reviews all the educational aids would have also provided a chance to identify those which are worth using nationwide. (see *Recommendations*).

**Project website**: The project website (<http://energybel.by/>) was developed in English and Russian and regularly updated. It features project-developed materials quite comprehensively, allowing to download many of the items. The capacity of the site server is limited, which is the reason why many of the materials for downloading were placed in different cloud disks. Unfortunately, it is not possible to trace downloads from there but it is possible to trace downloads from the project site: 1059 downloads by 429 visitors. With a slightly more effort a feedback mechanism could have been incorporated allowing the visitors to leave comments, but this was not considered (see Section 3.4). It was envisioned in the ProDoc that ***a virtual network of project participants – users of project web site*** will be established, including their on-line conferences, exchange of local news, case studies and best practices. This was not followed through due to the substantially more effort that it would have required than the project staffing levels provided (feedback from the interviews). Sharing of experiences happened rather during the project events, as well as, informally. As a testament to the latter, during the visits to the pilots in the framework of this evaluation, products developed by peers were seen used by others.

Table 6: Data on the users of the of project website

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Number of Visitors** | **Number of Visits** | **Number of pages viewed** |
| **2015** | 3471 | 4989 | 15458 |
| **2016** | 3867 | 4920 | 12197 |

***ToT:*** A report on the existing methodology of teaching elective classes on EE was developed followed by a *Manual for teaching EE in frame of curriculum* with 900 copies. The latter was approved by the Ministry of Education and disseminated/used during the ToT. Materials for trainings were prepared, printed, disseminated to the participants of the seminars and made available on the project web-site[[27]](#footnote-27). A group of 27 teachers (against the planned 10) from the pilot regions (Hrodna, Minsk and Viciebsk) was formed to provide training to their peers with a purpose of teaching EE at educational institutions. These teachers represented the following education entities: 3 – kindergartens, 5 – colleges, 18 – schools and 1 – regional Palace of Children and Youth. These 27 teachers took part in 3 seminars:

* ***Seminar No. 1 "Energy School: idea, conditions, becoming"*** held in Minsk on November 13-14, 2014 with 40 participants;[[28]](#footnote-28)
* ***Seminar No. 2 "Transfer of the participants to the energy efficiency lifestyle in the education entities and local communities"*** held in Hrodna on November 26-27, 2014 with 29 participants;[[29]](#footnote-29) and
* ***Seminar No. 3 "Life and way of education entities as a factor in increasing the energy efficiency of local community members"*** held in Viciebsk on December 9-10, 2014 with 29 participants,[[30]](#footnote-30)

The perceptions of the participants were gathered through a small survey by the project team. The vast majority reported gaining new knowledge which would allow them to more effectively teach EE related subjects as well as better communicate with local communities and act as a center for promoting lifestyle and behavior change in an energy efficient manner. More than 80 percent also reflected that they will include EE in the schools’ curricula in some way.

***A school-based elective course on EE was planned to be designed and run for children.*** Roundtable on teaching EE as extracurricular subject, with 25 representatives from the EED, Ministry of Education, regional and local educational bodies, among others, was organized. During the project execution:

* at the School in Dziarzhynsk and the 2 kindergartens (Hrodna and Ashmiany) the extracurricular activities during the project execution came in the form of creative events (see Table 7 and Photo 1);
* at the college in Viciebsk such classes are already in place (and before the project as well) based on the methodological guidelines developed years before the project.

While for the small children and middle classes creative events might be sufficient, the graduate level students at the schools would arguably benefit more from formal extracurricular classes. The School in Dziarzhynsk plans to organize formal extracurricular teaching in EE starting next year only, and it would be important to follow that through. Arguably they could have already introduced it, but on the other hand it could be also argued that it is important to first increase the level of interest in a new subject before introducing it as part of formal extracurricular teaching. This argument reinforces the observation that the following targets from the text of the ProDoc were vague and ambitious (and not in the RF as discussed in Section 3.1.6, but rather in the body of the text):

* *By the end of the project, 100 percent of target project regions will establish school-based EE elective curriculum*: this was too ambitious and it is an unclear what is meant under the word “Region”, and
* *100 percent of schools, covered by the elective curriculum, will report that students and their parents demonstrate an increased EE awareness;* this could have been achieved perhaps in case of a more active involvement of the Ministry of Education.

The formal indicator from the RF, namely *“percent of project territories in the region covered by the information campaign within the project*” is met with 100 percent coverage.

|  |  |  |  |
| --- | --- | --- | --- |
| Photo 1: Extracurricular activities at the pilot educational institutions | | | |
| ***State Educational Institution "High School No. 4 in Dziarzhynsk"*** | |  |  |
| ***State educational institution "Kindergarten No. 6 in Ashmiany*** | |  |  |
| ***Kindergarten No. 45 in Hrodna"*** | |  |  |
| ***Viciebsk State Vocational Technical College of Mechanical Engineering named after M.F. Shmyreva*** |  | |  |

Table 7: Examples of extracurricular activities

| Pilot educational institution | Examples of extracurricular activities |
| --- | --- |
| ***State Educational Institution "High School No. 4 in Dziarzhynsk"*** | * The ***project initiative "Be an energy saver*** (Berezhliv)!": the school hosted a festival of pedagogical ideas to raise the level of pedagogical skills related to teaching energy saving culture, promoting rational use of energy resources, and respect for the environment. The list of the guests and participants of the festival included the teachers of the educational institutions of the Dziarzhynsk district, employees of the Educational Department of the Dziarzhynsk District Executive Committee, the parents of the schoolchildren, the members of the PAB of the project, the employees of the Eco-technopark “Volma”. There is a possibility that this will become an annual event. * Performance staged by the team of the school committee "Energo-WE" whereby the children distributed calendars, booklets, posters and leaflets on energy saving * Younger schoolchildren attended the sponsored pre-school institution - the nursery school No. 7 in Dziarzhynsk, where they told the kids about the need for a diligent attitude to natural resources, gave out colouring books for energy-saving topics and performed in the staged performance based on a fairy tale "How Egorki escaped electrical appliances." |
| ***State educational institution "Kindergarten No. 6 in Ashmiany*** | * As part of the ***project initiative "We care about heat and light"*** thepre-schoolers performed at various institutions of the city of Ashmiany; the kids from the nursery conducted a staged performance on saving energy resources for the elderly and people with disabilities at the Day Care Department of the Territorial Center for Social Services for Population of Ashmiany District * The “Kashtan” Kindergarten No. 6 in Ashmiany has been cooperating with the Ashmiany Electric Networks (branch of RUE "Hrodnaenergo") for a long time. Excursions for the groups of preschool children are held regularly: children are told in an accessible form what is electricity, what is an electric current, how it gets into houses, why an electric bulb lights up, why it's important to save electricity and how to be safe when dealing with electric appliances. The pre-schoolers in turn perform during the events. * Mutual study tours were organized between the kindergarten with a similar kindergarten in Lithuania. The kindergarten in Ashmiany borrowed certain good practices and tools. |
| ***Kindergarten No. 45 in Hrodna*** | * Under the initiative "***School for Cultivating Energy Saving Culture (SHREK*)** “regular meetings of the Parents' Club were held. Parents of the preschool children visited the exhibition of drawings of children "*By saving heat, electricity and water we will be more prosperous!"* and an exhibition of educational materials on EE, developed by kindergarten teachers. Pre-schoolers presented performances for their parents and read poems, sang and danced. During the meetings, the parents of preschool children are not only spectators, but also active participants of the events. They take part in the contests and competitions: they draw posters on energy saving, etc. All participants of such meetings receive a fresh edition of the newspaper about energy efficiency of "SHREK", which is published by kindergarten teachers as part of their project initiative. * Kindergarten No. 45 in Hrodna took the second place at the regional stage of the Republican contest of energy saving "Energomarathon 2015" in the nomination *"Cultural and entertainment event for the promotion of effective and rational use of energy resources*." The award was presented for the theatrical performance of preschool children and teachers "*How Kolobok was looking for new ways to save energy*" on the motives of the well- known fairy tale, which was first demonstrated in Hrodna in the framework of the "Express train UN-70" events. Children with disabilities were the first spectators of this production, which was held with the participation of the Belarusian Red Cross and the Belarusian Children's Fund. |
| ***Viciebsk State Vocational Technical College of Mechanical Engineering named after M.F. Shmyreva*** | * The region is the leader in Belarus in implementing various measures to improve EE and introduce EE technologies in educational institutions. Viciebsk State Vocational Technical College of Mechanical Engineering after M.F. Shmyreva is a leader in the Viciebsk region among educational institutions in teaching and promoting a EE. Exhibitions, presentation of their own creations related to energy saving, contests contexts students and many other activities on EE are held regularly at the college. * The site "*Creating the Future Together*", developed by the team of the methodological experts of the College, has a large number of educational materials on energy saving, ecology, introduction of ideas and methods of energy conservation into the educational process, and the development of skills of an environmentally sustainable lifestyle. * The college is actively using modern technologies to work with students. For example, students are asked to do homework in the "cloud", and the tasks themselves can be obtained using a mobile phone or tablet, A group of college enthusiasts created the online game "Savers", with the goal to promote ideas of EE and rational use of natural resources |

##### **Achievement of expected Outcome: increased awareness**

The analysis of the results of the ***Energy Efficiency Awareness Survey (EEAS) 2014/2016*** indicate that the awareness raising activities carried out by the Project for the period 2014-2016 did contribute to an increased level of awareness in 23 educational institutions that took part in this survey, but that the increase varied across the topics covered. In particular:

* The share of the respondents indicating that they possessed enough information on the topic of energy saving was slightly more in 2016 compared to 2014: 80 percent compared to 78 percent;
* In 2016, at the High School No. 4 in Dziarzhynsk 14 percent more compared to 4 percent in the region answered positively to the question on “*whether they think about the burden of the payments on energy bills*”; in Hrodna kindergarten 20 percent more compared to 10 percent in the region;
* In 2016, the share of those not being able to answer the question about the share of the payments on heating and electricity in the household budgets was by third less at the High School No. 4 in Dziarzhynsk compared to regional average; in Viciebsk State Vocational Technical College it was 4 percent compared to 6 percent of the region;
* In 2016, at the High School No. 4 in Dziarzhynsk 26 percent more answered positively to the question on the sufficiency of information on energy saving, compared to the 3 percent increase in the region; and
* The increased awareness about RES is more pronounced than in the case of differences observed for other indicators (listed above, although the difference is more visible in the level, quality and depth of answers to open questions) and this is much more the case for the pilot schools. At the high School No. 4 in Dziarzhynsk 47 percent more respondents answered positively about the opportunities of using solar energy at home, summer house, work, school compared to 4 percent in the region. For the Kindergarten No. 6 in Ashmiany this comparison was 21percent to 4 percent; for the Hrodna kindergarten – 35 percent to 4 percent, and for the Viciebsk college -15 percent more than in the region. Also, at all the pilots more respondents knew about the use of biomass and wind energy (difference was less than in the case of solar power).

The formal indicator from the RF, namely “percent *of pilot schools acknowledge improved awareness of pupils and their parents on the benefits of rational use of energy and energy efficient measures*” is met.

### **Outcome 2: Energy efficiency pilot projects implemented via a competitive grants scheme.**

#### **Outputs:**

Component 2 followed through the following steps:

***1) Selection mechanism*** ***was developed.*** With Viciebsk, Hrodna and Minsk regions preselected, the following were the main principles of the selection mechanism, spelled out in the “*Instructions to the applicants*”:

* Technical
  + Utilization of the heat of the vented air;
  + Use of solar energy for hot water supply/heating;
  + Thermal rehabilitation of building envelopes;
  + Introduction of energy efficient windows
  + Reconstruction of the roofs using energy-efficient heat-insulating materials;
  + Energy-efficient lighting;
* ABD
  + Information and education;
  + Strengthening the capacity of local executive and administrative bodies;
  + Increasing the level of involvement of the local population and public organizations in activities related to energy conservation;
* The funding requested for the implementation of the Technical part
  + determined based on the results of the energy audit of the educational institution (in its absence of it – based on calculations);
  + Component of the ABD - in the range from 1 to 50 thousand US dollars;
  + Minimum 40 percent contribution from local sources;
* Other things being equal, preference was to be given to:
  + winners and prize winners of the Republican contest "Energomarathon" in 2008-2014;
  + those with actively functioning parents’ committees of the educational institutions (boards of trustees);
  + level of co-financing from other sources; and
  + social significance and importance to other institutions of education.

***2) Preselection and energy audits***: Based on the mechanism identified (above) 27 schools were identified for further energy audits[[31]](#footnote-31) The list of schools was approved by the Education Departments of the Hrodna, Minsk and Viciebsk Regional Executive Committees, EED and the PSC[[32]](#footnote-32). The Plans for energy audits in the selected schools was approved by the EED. 3 experts – certified energy auditors, for conducting energy audits of the selected educational buildings were contracted.

***3) Training*** ***on the procedure for receiving grants***. 68 representatives of schools, lyceums, vocational schools (27 participants from 18 education entities from Hrodna region, 15 participants from 8 education entities from Viciebsk region, 26 participants from 18 education entities from Minsk region) were trained on the procedure for receiving grants within the project (November 2015). A full *package of methodological materials* necessary for potential applicants (local governments or the educational institutions’ authorities) were developed. Project experts provided guidance (group, individual and on-line) to the applicants and issued clarifications on the application process, were necessary and on request (1 workshop in each target community was organized).

4) ***Review of the grant applications and selection of the pilots***. Grant applications were collected by the PMU and presented to the PSC.[[33]](#footnote-33) The PSC reviewed and ranked the applications using the selection criteria (including data from the audits). As a result of the competition 4 educational institutions were selected as pilots (see Photo 2 for the images after the rehabilitation):

* State Educational Establishment "Kindergarten № 45 Hrodna" (Hrodna region) with 205 children;
* State Educational Establishment "Kindergarten No. 6 in Ashmiany" (Hrodna region) with 150 children;
* State "Secondary school No. 4 in Dziarzhynsk" (Minsk region) with 784 students; and
* "Viciebsk State Vocational and Technical College of Mechanical Engineering named after M.F. Shmyreva” (Viciebsk region) with 530 students.

It should be noted that the ProDoc specified “at least 3 pilot” projects, so in this part the project has delivered more than the minimum requirement.

|  |  |
| --- | --- |
| Photo 2: 4 pilot sites | |
| ***"High School No. 4 in Dziarzhynsk"*** | ***"Kindergarten No. 6 in Ashmiany*** |
|  |  |
| ***Viciebsk State VTC of Mechanical Engineering named after M.F. Shmyreva*** | ***Kindergarten No. 45 in Hrodna"*** |
|  |  |

***5) Necessary design documentations*** were developed (a feasibility study, basic design, and detailed construction documents in accordance with local regulations) for the pilot projects.[[34]](#footnote-34)

***6) Identification of co-funding opportunities***. The Project Team supported the local governments in searching for additional co-funding sources for pilot initiatives, including in the form of preparation of necessary documents. It was expected that at least 40 percent of total pilot project costs will be covered by means mobilization of local resources in cash and in-kind (work, services, goods and etc.). This criterion was even surpassed in reality (see Table 10)

***7) Implementation of EE increasing measures***. The following EE measures were implemented at all four pilot educational institutions (see Figure 8):

* ***Installation of solar collectors***, which were expected to reduce the consumption of thermal energy for hot water supply in educational institutions by 50-70 percent. This technology has not yet become widespread in residential and administrative buildings in Belarus. Pilot educational institutions were to become demonstration sites for the promotion and dissemination of this technology and, as the interviews indicated, this expectation has materialized;
* ***Installation of the ventilation systems with heat recovery*** expected to allow heat loss reduction during air exchange by 28-30 percent. The pilots were expected to demonstrate the economic efficiency of this technology. This technology is a novelty in Belarus and the evidence suggests that even the energy experts visit the sites to see this in operation (in Viciebsk in particular);
* ***Warming of walls and roofing:*** using heat insulation with the expectation to reduce heat losses due to increased thermal resistance;
* ***Installation of new modern windows with triple glazing;***
* ***Replacing incandescent lamps with energy efficient ones***;
* ***Installation of new energy-efficient kitchen equipment;***
* ***Installation of heat reflecting screens; and***
* ***Modernization of heat substations (replacement and automation of all heat substation equipment):*** this was not in ProDoc but was implemented as important one.

The installation of new energy-efficient kitchen equipment was almost entirely funded by the local budgets with the idea forming during the design stage. Similarly, at the Hrodna kindergarten, there was a need identified to build a separate section for the heat unit and it was entirely funded by the local government.

Figure 8: Main technical components of the pilots

|  |  |  |
| --- | --- | --- |
| коллектор | рекуператор | Снимок-стена |
| ***Solar collectors*** | ***Ventilation systems with heat recuperation*** | ***Warming of walls*** |
|  |  |  |
| ***Double glazed windows*** | ***Energy efficiency lighting*** | ***Energy efficient kitchen equipment*** |
|  |  |  |
| ***Solar panels*** | ***Heat unit (Viciebsk)*** | ***heat reflecting screens.*** |

***8) Opening ceremonies for the pilot sites*** were held at four pilot sites during September – December 2016, involving all key stakeholders as well as authorities and residents who have participated in the implementation. The benefits of pilot initiatives (energy savings, financial savings, etc.) were presented, ensuring mass media coverage.

9) ***Training of the local authorities and pilot projects implementers in the target districts in both (a) the rules of grants administration and good practices in project managemen***t (1 workshop in each target community was organized) and (b) ***Regular project monitoring***. Site owners and local authorities were made responsible for monitoring EE and energy savings at pilot sites as a contribution to project implementation. Site owners collected and recorded day to day measurements of heat and electricity consumption, inside and outside temperature, fixing data in written form in special journals, further used for analysis by the Project Team. Monitoring relied on heat and electricity meters. The project EE expert trained 1 staff member from each pilot institution to be in charge of this. During the project implementation, regular site visits were made to pilot projects sites to check on the operation of the equipment installed and to undertake additional measurements needed. Monitoring reports on the pilot projects were made available on the project web-site.

All 4 institutions had signed contracts with the suppliers as well as companies to provide services connected with maintenance and repair.

10) ***Study tour to Estonia (December 7-11, 2015).*** 19 representatives of the key stakeholders (4 – EED, 8 – Regional and District Educations Departments, 7 – educational establishments) familiarized themselves with Estonian experience in modern approaches and methodologies for teaching EE issues to children by participating in the study tour to Estonia in December 7-11, 2015. The participants visited energy efficient public buildings, schools and kindergartens, furnished with smart equipment for heat energy and electricity saving (Smart Buildings). The participants from the educational institutions in their evaluation feedback forms indicated that they will use the knowledge gained for planning new educational curricula with EE aspects included along with introducing EE measures in their respective educational establishments in Belarus.

**Peer-to-peer (P2P) learning**

* 30 representatives of the educational departments of the local and regional governments and educational establishments from Mogilev region learned from the Viciebsk College about their experience and good practices related to energy saving and promotion of energy-efficient lifestyle through a study tour to Viciebsk College. The participants learned also about the energy and monetary benefits. During the study-tour a seminar on EE measures that can be applied in social and residential buildings was organized jointly with the representatives of the pilot site. Other pilots serve as demonstration sites as well, with the educational institutions of the same level visiting to get acquainted with the experience;
* To support the replication of the best practices, the Project Team organized presentations in 3 of the pilot locations, targeting the representatives of the same type/level of educational institution in October 2016, February 2017 and March 2017. The results which will feature final and analysed monitoring data from the pilots are planned to be presented in the Final Conference in April 2017. A separate Lessons Learned Report is also planned (see *Recommendations*)

**The formal RF indicators were met:**

* 1. *No. of successfully implemented pilot initiatives demonstrating basic energy saving measures and innovative energy saving measures in the area of EE in schools*: all 4
  2. *No. of completed energy audits*: 27

##### **Outcome** **Pilot sites demonstrating application of innovative energy efficiency technologies in social buildings are established.**

Four pilot sites demonstrating the application of innovative EE technologies in educational institutions of different types are now established and operational. The monitoring results demonstrate savings in both heat energy and electricity (see Table 8). For electricity, the achieved savings are more or close to the expected levels. As for the heating the achieved savings are somewhat less than expected, mostly due to pre-existing technical reasons, e.g. the heating systems in all four buildings not being well balanced and hence the need to overheat some of the rooms: based on the results of heat consumption monitoring recommendations on heating system balancing were provided to the management of these institutions[[35]](#footnote-35). Also, it should be noted however, that the expected heat saving includes savings due to the use of heat recovery ventilation: taking into account, that actually old ventilation system was not used, this amount of saving was only expected, but not actual.

Table 8: Expected and actual energy saving parameters at the pilot sites

|  | Viciebsk State Vocational and Technical College of Mechanical Engineering named after M.F. Shmyreva » | State Educational Establishment "Kindergarten No. 45 in Hrodna" | State Educational Establishment "Kindergarten No. 6 in Ashmiany" | State institution of education "Secondary school No. 4 in Dziarzhynsk" |
| --- | --- | --- | --- | --- |
| Expected | | | | |
| Reduction of heat energy consumption Gcal /year | 715.27 (80 %) | 331.44 (76 %) | 363.3 (73 %) | 648.93 (79 %) |
| Reduction of electricity consumption; kWh/year | 22,095 (20 %) | 24,210 (54 %) | 24,000 (52 %) | 41,130 (51 %) |
| Reducing greenhouse gas emissions, tons CO2-eq. /year | 208.43 | 102.32 | 111.11 | 197.76 |
| Actual: heating | | | | |
| Saving of heat energy during 6 months in Gcal 2015 | 2014 | 309,3  317,67 | 128,35  141,17 | 165,25  152,59 | 426,72  448,19  . |
| 2015/2016 reduction in usage, percent | 38.16% | 39.62% | 44.56% | 54.79% |
| 2014/2016 Reduction in usage, percent | 38.79% | 41.91% | 42.60% | 56.00% |
| Actual Electricity | | | | |
| Reduction in usage kWh | 33799.0 | 7746.0 | 8004.0 | 25890.0 |
| Reduction in usage, percent | 55.8% | 38.6% | 56.52% | 32.2% |

*Source: Project data*

These savings translate into monetary savings as described in Table 9 (lowest 13644 highest 50982 rubles)

Table 9: estimated monetary savings

| Monetary savings | "Viciebsk State Vocational and Technical College of Mechanical Engineering named after M.F. Shmyreva » | State Educational Establishment "Kindergarten No. 45 in Hrodna" | State Educational Establishment "Kindergarten No. 6 in Ashmiany" | State institution of education "Secondary school No. 4 in Dziarzhynsk" |
| --- | --- | --- | --- | --- |
| related to heating | tariff for 1 Gcal in rubles | | | |
| 106,4911 | 106,53 | 209,585 | 126,2329 |
| ***Monetary saving related to heating (rubles)*** | | | |
| 29437 | 11373 | 27889 | 49118 |
| ***Monetary saving related to electricity (rubles)*** | 8391 | 2271 | 1989 | 5864 |
| **Total (rubles)** | **37828** | **13644** | **29878** | **54982** |

*Source: Project data*

The temperature in representative rooms and cabinets at all floors of pilot educational establishments was measures during 3 years on daily basis: before and after modernization. The result shows that temperature comfort increased essentially after modernization. However, data on *socioeconomic impact*of the pilots could have been also collected systematically (e.g. before-and-after data on incidence of illnesses; absences due to illness, number of registered students, etc.) although this was not required. The interviews with the directors of the educational institutions and the staff during the visit to Belarus indicate that there is evidence of reduced incidence of illnesses (colds/flu)[[36]](#footnote-36); improved attendance/reduced absenteeism, and increase in the number of students. Of course, no attribution could be claimed to the project but it is reasonable to assume strong contribution given the improved level of comfort, renovation, quality of meals.

### **Outcome 3: The use of an area-based development (ABD) approach within the framework of sustainable energy management at the local level**

**Outputs**

UNDP and the Regional Executive Committees signed ***Memorandums of Understanding (MoU)*** at the start of the projects. These MOUs were supposed to witness the willingness and readiness to cooperate and provide mutual support within the framework of EU-UNDP project implementation. MoUs were rather generic: had they specified the roles with more level of detail and covering all activities, the lack of clarity in relation to the roles pertaining to the local EE strategies would have been clarified and sooner in the process. Also, ***Partnership Agreements*** were signed with the pilot institutions (2 each) spelling out UNDP and implementing entity roles during the pilot initiatives implementation process using the ABD approach as well as covering the responsibilities under the National Implementation Modality (NIM).

***Creation and facilitation of EE Public Advisory Boards (PABs) operating under local authorities.*** The 4 public meetings aimed at raising awareness of the Project’s goal, objectives, activities and expected results[[37]](#footnote-37) were also used as platforms to promote the creation of the PABs: since there were representatives of the same organizations present, the project had rightly used the opportunity. Participants were invited to participate actively in the relevant project activities to be organized at the pilot sites, including PAB meetings and PR events. According to the Progress reports of the project, it took time, however, to agree with the pilot regional authorities on the responsible party (institution) to host the respective PABs: the ProDoc specifies 2 options, at the level of the Regional Executive Committees or at the level of the pilot institutions. It was finally agreed that PABs will be established on the basis of the pilot educational institutions (kindergartens in Ashmiany and Hrodna, college – in Viciebsk and secondary school – in Dziarzhynsk). Additional discussions were required to reach an agreement among all the stakeholders and this led to the delay in the formation of the PABs and lesser number of meetings (quarterly)***.*** By the time of the evaluation the PABs were present with 15 members at each pilot (13 in Ashmiany). The Project provided technical assistance in the process of formation and functioning of the PABs as well as ensured the availability of relevant information regarding the project implementation process, including with:

* ***Manuals for local governments and other stakeholders*** on EE issues, citizens’ participation and planning at local level; and
* ***Public meetings***: 92 people participated in 2 public meetings[[38]](#footnote-38) on EE measures and ABD activities implemented at the pilot sites in Hrodna (58 participants) and Ashmiany (34 participants). The participants of public meetings represented the parents, NGOs, and local society. These meetings were also used as platforms to discuss progress of the pilot initiatives and to find solutions to emerging challenges.

The PABs do serve their primary role (as envisioned) in terms of ensuring the involvement of local authorities and local stakeholders in the regular monitoring of the project interventions in the target districts. According to the feedback received during the interviews conducted as part of this evaluation, the PAB meetings were lively with participants suggesting ideas on potential improvements. The existence of such participatory bodies in target districts allows being close to local specifics with PABs serving as an arena for information exchange and coming up with ideas on joint activities among the members. For example

* the fact that the Red Cross was present at the PAB in the kindergarten in Hrodna helped to reach out with the extracurricular events to the children with special needs;
* the High School No. 4 in Dziarzhynsk now cooperates with OJSC Amkador-Dziarzhynsk, with which they conduct joint actions aimed at promoting ideas of energy saving.

PAB meetings were also expected “*to ensure involvement of all stakeholders into the process of planning, negotiation, decision making and monitoring of the local development”*, according to the Description of Action of the EU-UNDP Financing Agreement: this was a too ambitious objective given the level of the PABs (not at the level of the regional executive bodies).

The target specified in the ProDoc (page 12): *“By the end of the project, 80 percent of key stakeholders in target districts are expected to report that they use basic ABD techniques”* is unclear and too ambitious.

***Assistance in developing local EE strategies.*** Working meetings were supposed to be held with the representatives of local executive and administrative authorities and stakeholder groups with the (a) analysis of the needs of the target districts in the EE in education sphere and (b) determination of the main priorities of the districts and education sphere for reducing energy consumption in education establishments. This was supposed to be followed up next by the preparation of recommendations and proposals for the development of the local EE strategies in education sphere.

This is perhaps the one subcomponent of the project which was the least successful and the reasons are multiple:

* Neither the ProDoc nor the Description of Action of the EU-UNDP Financing Agreement specified the level of the government where there was a proven need and interest in such strategies (this was insufficiently analysed during the drafting of these document, as was argued in the Section 3.1.2). Actively probing into this was left until quite late by the project team with the argument that until the pilots were identified it was not possible to know which would be the counterpart level, i.e. regional or city administration. Arguably, such probing could have been done much earlier, right at the start at both levels, had the project had sufficient resources and funding specifically for that;
* There is no funding allocated in the project budget. It would have been logical to expect that this would require EE planning experts, e.g. hired as consultants; and
* There was no clarity of the respective roles. It is logical to assume that the role of the project team should have been advisory only, with the local public administration bodies writing the drafts. But this was not clearly specified and given that the level of interest turned out not to be high – at least at the level of the regional executive bodies (who already have 5-year plans of Economic Development where EE is addressed as well annual EE plans), the delays continued. This is reflected in the PSC meeting minutes. One option would have been to eliminate this activity from the project workplan and PSC could have voted on that, but this route was not pursued

In the end, the project team collected some data and other information about the core economic activities in target districts and analysed, producing brief draft EE Strategies with potential activities and recommendations. These were sent to the Viciebsk city, Ashmiany region, Hrodna city and Dziarzhynsk region administrations. At the time of the visit to Belarus for this evaluation, the strategies had a “draft” status (not being formally approved by the respective local government bodies) and the level of interest in them was low in the 3 locations where the respective officials were interviewed.

A ***survey on the awareness level of the population on EE and the use of RES*** (the ***Energy Efficiency Awareness Survey (EEAS) 2014/2016*** mentioned in this report earlier) was conducted by the project. The results of a comparative analysis of both surveys of 2014 and 2016 was made available in January 2017. Ideally the questionnaire should have also looked into the Willingness to Pay (WTP) for EE investments. But EEAS has produced many interesting results and they could be much better organized in terms of the findings (see *Recommendations)*

##### **Outcome: Active participation of local governments, educational institutions and local population in energy-saving pilot initiatives at the local level, along with demonstration of best practices and replication ensured**

The outcome specified in the Project Document (as one of the 3 Tasks on page 9), namely “*Active participation of local governments, educational institutions and local population in energy-saving pilot initiatives at the local level, along with demonstration of best practices and replication ensured”* is hard to capture with quantifiable but given the scope of the activities of the project, and the due to the existence of the PAGs, it could be said that this was achieved.

Against the baseline of **“***Local population is not actively involved into sustainable local development planning*”, the RF of the ProDoc had 2 indicators (NB: these do not capture the specified Outcome).

* *No. of representatives of local stakeholders trained in ABD participatory practices*. 536 representatives of local stakeholders trained in ABD participatory practices in Viciebsk, Hrodna and Minsk region; and
* *No. of public hearings conducted in every target region/territory.* *Town Hall Meetings are conducted in target districts on a regular basis.* 8 project public meetings were held in target districts of Viciebsk, Hrodna and Minsk regions, with 373 people participating, including[[39]](#footnote-39) the parents and the representatives of NGOs and local community. These meetings were also used as platforms for discussing the progress of pilot initiatives and finding creative solutions to complex challenges.

It was expected that the project will also work with local governments to improve their capacity to undertake energy saving investments: this is not in the ProDoc, but in the Description of Action of the EU-UNDP Financing Agreement: this would be hard to claim, given the status and level of interest in the local EE strategies.

### **Achievement of results – a summary**

Table 10 summarizes the ratings for the achievement of project results.

Table 10: Rating- effectiveness

|  |  |  |
| --- | --- | --- |
| **Project Results** | | |
| **Overall Achievement of Objective and Outcomes (Effectiveness):** *Are the actual project outcomes commensurate with the original or modified project objectives? In case the original or modified expected results are merely outputs/inputs then the Consultant should assess if there are any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such a project.* | | |
| **Objective** | **S** |  |
| Outcome 1 | S | A stronger coordinating role of the project team in the information activities would have results in increased effectiveness of the project |
| Outcome 2 | HS | The pilots are innovative and well executed |
| Outcome 3 | MS | Only formal delivery of the local EE strategies |

## 

## **Prospects for sustainability and replication**

### **Rehabilitation with EE technologies**

#### **Sustainability**

The high co-financing figures for the pilots (see Table 11) indicate strong local ownership and high likelihood that the provided infrastructure will be looked after. This is also supported by the fact that the 4 institutions have contracts with the supplier companies in case there is a need in spare parts as well as contracts for maintenance. One person from each institution was trained by the Project Team in carrying out routine daily monitoring function.

#### **Replication**

The pilots serve as examples of an *integrated approach* to EE rehabilitation of public buildings: a need to shift to this approach rather than category- specific renovations (e.g. replacing the windows in certain number of buildings, then lighting, etc.) has been recognized by the EED. There is evidence that the interest on behalf of educational institutions in the regions and beyond is high in similar rehabilitation. The pilots also demonstrated that there is interest in co-funding such initiatives resulting in “pooled” funding model: with central government (EED), local government, enterprises- sponsors, the beneficiaries themselves (e.g. parents). In other words, securing half of the necessary funding from a dedicated funding (EU in this case, but it could be WB, EBRD, etc.,) may well attract other funders contributing to funding of the remaining amount. But the barriers in the form of the financial mechanisms, as well as of legislative and institutional nature that were discussed in Section 3.1.2 are significant, and therefore the potential for large scale replication with government sources is not high. There is one more barrier characteristic for the whole country: lack of technical specialists able to provide routine technical maintenance services, but there are already ideas for 2 regions on the establishment of specialized colleges.

Table 11: Co- funding

| Educational institutions | Main funding sources and amounts in US$ | Other |
| --- | --- | --- |
| "Viciebsk State Vocational and Technical College of Mechanical Engineering after M.F. Shmyreva” | * EU:US$422 586 * Co-financing by the local budget: US$ 342,906 * Co-financing by the EED: US$ 75,000 | In-kind contribution (working time of the teachers and others, own materials for production of the stands etc.): US$10 615 – |
| State "Kindergarten No. 45 in Hrodna" | * EU: US$211 293 * Co-financing by the local budget: US$ 207,410 | * Sponsorship: US$2 244 * Parents: US$2 871 * In-kind contribution of the teachers and parents (working time): US$1 125 * Education Division of the Leninski District of the Hrodna city: US$7 620 |
| State "Kindergarten No. 6 in Ashmiany" | * EU: US$211 293 * Co-financing by the local budget: US$ 211,893 | Representatives of the Ashmiany Electric Networks installed energy-saving light bulbs in the sleeping rooms of the educational institution. |
| State "Secondary school No. 4 in Dziarzhynsk" | * EU: US$422 586 * Co-financing by the local budget: US $ 355,809 * Co-financing by EED: US$ 15,000 |  |

*Source: Project data*

Within the UNDP/GEF project on *Improving Energy Efficiency in Residential Buildings in the Republic of Belarus****, 2012-2016*”** Technical regulations for the new and renovated buildings were developed and expected to be adopted as a law before the end of the 2017: this will apply also to the public buildings, and will stimulate the replication of the project approach and technical solutions.

### **EE as an extracurricular subject**

While there is no certainty, it is possible that at least for the near future the 4 educational institutions might continue in some form the ***creative educational activities*** involving other schools in the regions- provided that there is an interest on behalf of the Educational Departments of the Regional Executive Committees and financial reward for extra activities (which was present in the current project).[[40]](#footnote-40)

As for ***teaching EE as a formal extracurricular subject***, there is a good chance that the *Manual for teaching EE in the school curricula* will be used in the educational institutions since it has been already approved by the Ministry of Education. This was developed with the help of the experts from the Association for the Education for Sustainable Development (AESD), who have now, at the project end also expressed a keen interest in becoming the “home” for educational materials developed under the project. They have also expressed a commitment to ensure that all the products are reviewed by the Ministry of Education. This will also make it more likely that the best ones will be used more widely in Belarus (see *Recommendations)*

The AESD unites juridical entities which are involved in the promotion of education in sustainable development. It is a non-for profit entity with the mission to coordinate the activities of the members vis a vis non-members (and in particular, the Ministry of Education). 3 of the pilots of the project are now members of the AESD (see Table 12). All 3, as well as the state educational institution "Kindergarten No. 6” in Ashmiany have already developed proposals to strengthen their role as the designated leaning centres: these proposals will need to be approved by the Educational Departments of the Reginal Executive bodies as well as the Ministry of Education (expected in August 2017). Staff of the Belarusian State Pedagogical University, the Academy of Postgraduate Education and the Republican Institute of Vocational Education are consultants of these innovative projects

Table 12: 3 pilot institutions as members of AESD

|  |  |
| --- | --- |
| **Educational Institution** | **Status at AESD** |
| State Educational Institution "High School No. 4 in Dziarzhynsk" | Resource centre for complex support for sustainable development practices in the urban context |
| Viciebsk State Vocational Technical College of Mechanical Engineering named after M.F. Shmyreva | Resource centre for scientific technical support in the practical learning in sustainable development |
| Kindergarten No. 45 in Hrodna" | Resource centre for complex support of sustainable development in pre-school educational institutions |

### **Active participation of local population in sustainable development**

It would be perhaps too speculative to believe that the PAGs will continue to exist beyond the project. There are, however, interesting developments worth mentioning, In Hrodna for example, the director of the kindergarten plans to include some of the members of the PAG in the membership of its Board of Trustees. In Viciebsk, while the cooperation between the college and the local branch of EED was always strong, it has become even stronger as a result of the project and at least in the near horizon it looks like the college will serve as a demonstration basis for the EED to train the industry personnel and a basis for bringing together also other interested parties.

### **Sustainability and replication potential – a summary**

Both EU and UNDP have more initiatives that directly or indirectly promote EE. At the time of evaluation EU had a grant competition open for non-state actors and, to the information available, the regional executive bodies which hosted the pilots were planning to apply.

The EU/UNDP project "*Support to Local Development in the Republic of Belarus"* is implemented by UNDP in partnership with the Ministry of Economy of the Republic of Belarus. Another EU-UNDP project, “*Supporting the Transition to a Green Economy in the Republic of Belarus*” 2014-2017) aims at promoting “green growth” concepts and environmentally sustainable production and consumption patterns through support of local “green” initiatives and an information campaign as a support measure all over the Republic of Belarus.

UNDP/GEF project (2016-2021) “*Supporting Green Urban Development in Small and Medium-Sized Cities in Belarus (Green Cities)*” promotes the elaboration of green urban development plans and pilot green urban development initiatives related to EE and sustainable transport in small and medium cities in Belarus. The project is implemented in the following areas:

* a development and adoption of green urban development plans;
* development of pilots on sustainable urban transport in Novopolotsk and Polotsk;
* development of pilots on EE in Novogrudok; and
* replication mechanisms for green urban development in Belarus.

These projects will potentially help in promoting the replication of the best practices from the current project

Table 13 Sustainability Ratings

|  |  |  |
| --- | --- | --- |
| **Sustainability Ratings\*\***  (4 - Likely, 3 - Moderately Likely, 2 - Moderately Unlikely, 1 - Unlikely) | | |
| **Sustainability** |  | ML/L |
| Financial sustainability | ML | The pilots per se are likely to be have the financial means to ensure the sustainable operation of the technical site of the pilots.  Financial barriers exist which will be a hindrance for replication. Plus, the link with the EE investment planning at the regional and city administration level turned out to be weak |
| Institutional sustainability | ML | Legal and institutional barriers exist which will complicate replication of the technical side of the pilots. As for the PAGs, there is no certainty. As for the sustainable use of the educational tools, there is more work to be done to claim that this will happen with certainty. |
| Socio-economic sustainability | L | The socio- economic sustainability of the pilots is likely to last in the pilot locations given the large-scale nature of the information campaign as well as the improved conditions of the educational institutions. |
| Ecological sustainability | L | The operation of the pilots will be saving energy having positive impact e.g. related to GHG emissions |

## **Project implementation**

### **Project planning, implementation and adaptive management**

Overall the project execution was satisfactory, as the project has achieved almost all the planned deliverables (with the exception of the website- based virtual network and with the caveat that the delivery of the local EE strategies could be considered as “achieved” in a rather formal sense of the word): this is noteworthy given that the project duration was too short, especially compared to its ambitious objectives. In relation Component 2, the execution of the project was indeed exemplary.

In the case of Component 1, the project could have taken arguably a more active coordinating role vis a vis the Ministry of Education: as discussed this would have had positive impact on many aspects of the project, its effectiveness and sustainability potential. Another aspect where the project management could have been more efficient is in assessing the effectiveness of its multiple information products, even though this was not reflected in the formal results framework of the project.

More challenges exist in relation to Component 3. Some of these originate from the ProDoc, whereby the logical interconnections were not fully worked out and diverge between the Description of Action of the EU- UNDP Financing Agreement and the ProDoc. In the case of the local EE strategies, as argued earlier, the regions were known from the start and the negotiations could have started at the very start of the project and not left to the end, something that was complicated by not having budget allocated to provide support to the local authorities in developing the local EE strategies.

The risk identified in the project’s log was “*Lack of technical information, knowledge or skills for local partners/subcontractors to be able to plan and implement local energy efficiency*”. As the project implementation demonstrated, this was not a substantial barrier. The 2nd identified risk was related to “*Lack of initiative of local actors, limited functional capabilities of local authorities and/or the lack of leaders of educational departments at the local level”.* This was only partially the case, as the local stakeholders displayed strong ownership in relation to the technical part of the pilots, educational programs as well as PAGs. The risk that was not explicitly identified and dealt with was related to the lack of interest in the “Local EE Strategies”.

The project effectiveness was impacted also by the fact that it was understaffed. The prime example of the latter is that the idea of the virtual network was abandoned solely because of the limited time available to the PR expert. The ADB expert covered large chunk of the Component 1 as well (in the part concerning the educational institutions directly). There were many activities which required logistics support and the experts had to take time out of their expert role to ensure the smooth organization of the events logistics-wise. Arguably steps could have been taken to mitigate this situation.

The project was registered at the Ministry of Economy in September 2013 (with the duration of 36 months) but it got fully staffed only in August 2014. This delay has impacted the project in terms of the not full utilization of the very valuable first 6 months of the project to the full potential. Eventually it was extended to May 1st, 2017 (by 7 months): while the key reason was to enable the project team to monitor the results of the EE measures (given that the 2016-2017 heating season ends in April 2017) the late staffing of the project had also affected this outcome.

### **Financial management**

The project was executed in the National execution modality (NIM). The financial management followed UNDP rules with the necessary due diligence in place.

#### **Cost effectiveness**

One of the project aims was to involve local companies and equipment producers from Belarus in the process of modernization of the pilot sites as much as possible. This target was reached: the majority of equipment and construction materials were purchased from local producers, for instance:

* Special thermal insulation for roof and walls insulation for all pilot sites;
* New energy efficient windows with thermal resistance not lower than 1 m2K/W for all pilot sites;
* Heat recovery ventilation equipment for all pilot sites;
* Heat substations heat exchange, control equipment and all appliances for all sites;
* Heat meters for all sites; and
* Energy efficient lighting.

The equipment for the solar collectors is an exception: it is supplied from abroad, as solar collectors are not produced in Belarus. So, approximately 80 percent of equipment is local made. Based on monitoring results all equipment installed is working well. Total direct actual financial saving during 6 months for all pilot sites is 158203 Belarusian Rubles (approximately US$84 000). Total expected financial saving for the whole year will be around US$120 000. Precise data will be available only in October 2017. This amount of savings reflects only energy costs (heat and electricity) and does not reflect savings due to reduction of greenhouse gases emissions. As far as the expenses (EU and Belarus) are concerned for correct cost efficiency assessment of EE measures one needs to separate (for each pilot site) direct expenses (expenses directly related to EE measures) and other expenses (construction, repair and other works and services which do not relate to energy efficiency). For the time being there is information about all expenses without any separation.

As for the *information component*, it is difficult to assess its cost effectiveness since the evidence on the effectiveness of the information campaign in terms of increased awareness is patchy.

The project prolongation in July 2016 had effects on the cost effectiveness, as the share of the administrative budget grew in the face of already short staffing. The prolongation request of the project was approved together with the request of reallocation of budget items. In particular, the HR budget was increased by 13439 Euro (from 428,320.20 Euro to 441.759.20 Euro). The project finances also suffered due to the declining value of Euro compared to USD. There were predominantly 3 sources for covering the gap (a) there were savings in the HR budget due to late hiring of the staff; (2) no rent was paid although it was budgeted and (c) reallocation of some of the program budget, by combining certain events and/or shortening. The review of the latter list does not raise concerns, however/ Moreover, instead of planned 6 seminars for 20 participants each (as in the Description of Action of the EU -UNDP Financing Agreement), project team organized 4 seminars but with 286 participants

#### **co-financing**

The promised co-financing materialized in full and even exceeded expectations (see Table 14) The contribution from the local governments was US$1,117 million instead of US$0,92 million exceeding the required 40 percent mark.

Table 14; Planned and Actual co-financing

| **Co-financing (Type/**  **Source)** | **IA own Financing (mill US$)** | | **Government (mill US$)** | | **Other (local authorities) (mill US$)** | | **other** | **Total (mill US$)** | | **Total Disbursement (mill US$)** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Planned** | **Actual** | **Planned** | **Actual** | **Planned** | **Actual** | **Actual** | **Planned** | **Actual** | **Planned** | **Actual** |
| Grants | 1,268 | 1,268 | 0 | 0,09 | 0,92 | 1,117 | 0.013 | 2,187 | 2,488 | 2,187 | 2.488 |
| In-kind support |  |  |  |  |  |  | 0.012 |  |  |  |  |
| Totals | 1,268 | 1,268 | 0 | 0,09 | 0,92 | 1,117 | 0.025 | 2,187 | 2,488 | 2,187 | 2,488 |

*Source: Project data*

### **Reporting, Monitoring and RBM**

Project followed the *bare minimum* approach following the requirements of the RF (which has limited and very basic indicators). This reflects also to the quality of the RF of ProDoc which was discussed in 3.1.6 whereby there are targets specified in the body of the text of the ProDoc but not reflected in the RF (this was discussed in Section 3.1.6). In many respects, more could have been done, in particular with respect to:

* Capturing the effectiveness of various information products, e.g. ensuring that there are mechanisms for capturing the feedback of the users and using this feedback to adjust the next rounds of information campaign- in line with the best practices of results based management (RBM);
* Analysing and reflecting upon the feedback received from the participants of various workshops (feedback was collected but not analysed)

Similarly, project reporting could have been better with reflections on lessons learnt as the project progressed. The lessons learned log was regularly monitored and updated by the project team, but the best practice is that lessons learnt are captured during the project implementation and published (see *Recommendations).*

* + 1. **Contribution of implementing and executing agencies**

EED provided strong support to the project especially in terms of ensuring the successful implementation of the pilots through its regional branches. EED could have assisted the project more in relation of attracting a closer involvement of the Ministry of Education. Perhaps EED could also have been more explicit in terms of ensuring the visibility of this project as a supporter of EED mandate and strategy. UNDP requirements outlined in the UNDP Programme and Operations Policies and Procedures, concerning the Project Assurance were pursued as expected.

The project also benefitted from the oversight of the EU office in Belarus: there were cases where the timely observations from the EU have helped the project to address some of the issues (e.g. related to ensuring EU visibility).

### **Coordination and synergies**

The fact that the 2 UNDP projects – the current one and the UNDP/GEF project “*Improving energy efficiency in residential building in the Republic of Belarus*” - are co-located had perhaps helped to establish closer links between the two. For example, a conference dedicated to EE in public and residential sectors was organized jointly (and cost shared) on the 15th of October 2015 within the framework of *Energy and Environment Forum*. 149 representatives of local authorities, teachers and other stakeholder groups from the pilot regions learned about modern technologies and approaches to increase EE of social and residential buildings

There were no formal linkages established with other international development agencies, and WB in particular. The EE expert engaged in the project has worked in the previous WB projects, and hence, informally the learning from these WB projects was transferred to the current project in the part concerning technical solutions. Closer links would have benefitted the project, e.g. in shaping the survey questions, in the light of the upcoming WB project related to EE in heating in residential buildings.

### **Rating for project Implementation (efficiency)**

The ratings for project implementation (efficiency) are summarized in Table 15

Table 15: Ratings for project implementation

|  |  |  |
| --- | --- | --- |
| **Project Implementation** | | |
| **Implementation (Efficiency):** *Is the project cost effective? Is the project the least cost option? Is the project implementation delayed and if it is, does that affect cost-effectiveness? Wherever possible, the Consultant should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects* | | |
| Use of the logical framework | S |  |
| Adaptive management | S |  |
| Use/establishment of information technologies | S |  |
| Operational relationships between the institutions involved | S |  |
| Technical capacities | S |  |
| Monitoring and Evaluation | MS | Mechanisms could have been put in place to assess the effectiveness of the information component |
| **Stakeholder Participation** | S |  |
| Production and dissemination of information | S |  |
| Local resource users and NGOs participation | S |  |
| Establishment of partnerships | S |  |
| Involvement and support of governmental institutions | MS | Insufficient involvement of the Ministry of Education |

# **Conclusions and lessons learnt**

The project delivered almost all of its planned deliverables, and even more for some of the activities, e.g. training more people and completing the pilots not in 3 but 4 educational institutions. This is commendable given the large scope and complexity of the project compared to the short project duration and lean staffing, and the fact that it suffered delays caused by the lengthy process of hiring the staff. The pilots in their technical part were ahead of the peers in the country leading to significant interest in the innovation technologies that were piloted. Whether large scale replication will be forthcoming or not will depend on many external factors.

The educational institutions had the chance to develop creative approaches in teaching energy saving especially to the lower and middle grades. The quality of the information products, including teaching aids is appreciated by the stakeholders, but – and this is a lesson learnt- in similar projects in the future it is important to secure more active participation of the Ministry of Education. The sheer quantity and variety of the information products developed under this project, as a sum of both streams (produced by the pilots and the project team) was huge; while this has advantages, the project could have had a stronger coordinating role and interface with the Ministry of Education. This is another lesson learnt, and particularly important when there are teaching aids/tools involved which require approval front eh Ministry of Education. And finally, in the part concerning the information campaign, there should have been mechanisms to capture the feedback of the recipients of the products (also a lesson learnt): timely analysis and learning from this analysis and acting upon this learning would have increased the effectiveness of the information component

The PABs proved to be effective mechanisms for public monitoring of the pilot projects at the local level, but expecting that these would have an influence on the planning/investment at the local government level in EE was perhaps overly optimistic. The only activity where the project has hardly succeeded is related to the development of local EE strategies at the pilot locations, whereby, in a nutshell there was no apparent interest on their behalf in having such plans; the fact that there was no budget allocated for that activity did not help.

The survey among the 23 schools, including schoolchildren, parents and teachers shows that while there is some increase in the awareness (more in the pilot schools) compared to the baseline, some are more effective than the others (and again this is more notable in the pilot schools). Awareness was raised more in relation to the potential of using solar energy than on importance of saving energy, and for the latter more in theory and not in the application to, say own household expenses. This shows that awareness raising must be well targeted and timely to affect the level of awareness and change behaviour (e.g. coincide with reforms). Another lesson is that apart from and in parallel to implementing awareness raising activities there is a need to institute mechanisms to assess the effectiveness and create feedback loops.

Table 16 Summary ratings table

| **Ratings of Relevance, Efficiency and Effectiveness\*** | |
| --- | --- |
| **Project Formulation** | |
| **Overall Project Formulation (Relevance):** *Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities?* | |
| 1. Conceptualization/design | MS |
| 1. Stakeholder participation | S |
| **Project Implementation** | |
| **Implementation Approach (Efficiency):** *Is the project cost effective? Is the project the least cost option? Is the project implementation delayed and if it is, does that affect cost-effectiveness? Wherever possible, the Consultant should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects* | |
| 1. Use of the logical framework | **MS** |
| 1. Adaptive management | **S** |
| 1. Use/establishment of information technologies | **S** |
| 1. Operational relationships between the institutions involved | **S** |
| 1. Technical capacities | **S** |
| **Monitoring and Evaluation** | **S** |
| **Stakeholder Participation** | **S** |
| 1. Production and dissemination of information | S |
| 1. Local resource users and NGOs participation | S |
| 1. Establishment of partnerships | S |
| 1. Involvement and support of governmental institutions | MS |
| **Project Results** | |
| **Overall Achievement of Objective and Outcomes (Effectiveness):** *Are the actual project outcomes commensurate with the original or modified project objectives? In case the original or modified expected results are merely outputs/inputs then the Consultant should assess if there are any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such a project.* | |
| 1. Objective | **S** |
| 1. Outcome 1 | S |
| 1. Outcome 2 | HS |
| 1. Outcome 3 | MS |
| **Sustainability Ratings\*\*** | |
| **Sustainability** | **L** |
| 1. Financial sustainability | ML |
| 1. Institutional sustainability | ML |
| 1. Socio-economic sustainability | L |
| 1. Ecological sustainability | L |
| **Overall Project Achievement and Impact** | **S** |

\*6 - Highly Satisfactory, 5 - Satisfactory, 4 - Marginally Satisfactory, 3 - Marginally Unsatisfactory, 2 - Unsatisfactory, 1 - Highly Unsatisfactory)

\*\* 4 - Likely, 3 - Moderately Likely, 2 - Moderately Unlikely, 1 - Unlikely)

# **Recommendations**

***Corrective actions.*** Provided that the idea is supported by EED, work on the handover to the Association for the Education for Sustainable Development (AESD) of all the soft copies of information product based on a MoU which will specify that (a) AESD will work with the Ministry of Education to review of all the products to ensure that all are cleared as well as identify the ones that could be recommended to be used country wide (b) and all those that are cleared will be made available to the public free of charge,.

***To strengthen or reinforce benefits from the project***

Produce a Lessons Learnt report. There could be several booklets, with

* one of them dedicated to the analysis of economic costs and benefits of the pilots. As was mentioned in Section 3.1.2, the WB (2015) reports identified a need in evidence on the benefits of such projects to reach to the thermal retrofit contractors, Hence, these booklets should be distributed in targeted manner and feature on EED website as well as other relevant bodies;
* the other one could feature the learning from the financing side of the pilots (“pooled” funding) with an analysis of the potential for replication as well as remaining challenges;
* the third one could feature the findings from the survey on awareness levels but the findings need to be repackaged and presented better. In particular, the way the report on the survey is written currently does not feature differences between pilots and non-pilots for the while project in one place (only for each pilot separately). It needs to be presented in the form of clear messages. The interview conducted for this evaluation with the representative from the WB indicated that there would be an interest in the findings of this survey from the international community. EED could also benefit from a better articulation of the survey findings to target its information campaign better, and so would the regional executive committees and the city administrations;
* The forth one could feature the experience from the work of the PAGs, and the extracurricular activities with an analysis of which activities were met with more enthusiasm form the students, their parents and the PAG members;
* And finally, one of the booklets could feature the most interesting (in terms of promoting learning) lessons learnt from the project implementation

***Potential follow up***

Given that upcoming tariff reform there might be justified need to support the population with further projects targeting public awareness raising as well as support the government with developing a subsidy scheme that will target the poor with their energy costs.

# Annexes

## Annex 1: Evaluation TOR



|  |  |
| --- | --- |
| TERMS OF REFERENCE / INDIVIDUAL CONTRACT | |
| Position title: | Consultant for Project Evaluation |
| Position type: | International or Local Consultant, IC |
| Office/Project: | m |
| Conditions of work: | Home-based with one mission to Belarus |
| Duration of contract: | Feb 15, 2017 – Apr 10, 2017  30 working days (**including one mission to Belarus of 7 days total**) |
| Requirement for travel: | **One 7-day mission** to Belarus. Transportation to/from pilot sites will be provided by the project. |
| Conditions of payment: | The total payment for the assignment will be a lump sum fee paid in 3 installments as specified in the table below:   |  |  |  | | --- | --- | --- | | *Installment No.* | *Milestone No. (see Section 8 below) and timeframe* | *percent of total contract amount* | | 1 | 1 (5 days) | 20 | | 2 | 2 and 3 (15 days) | 40 | | 3 | 4 and 5 (10 days) | 40 |   Each of the installments shall be paid within 10 days after completion and approval of the reports as required in Section 8 – “Milestones and Deliverables” below. **Travel expenses shall be included in the lump sum.** |
| Qualifications: | 1. Advanced university degree (at least the Master level) in any of the following fields: engineering, economics or business. 2. Practical experience (within last five years) in mid-term or final performance evaluation of at least three international and/or regional projects funded by multilateral agencies. 3. Experience in performance evaluation of such projects in CEE or/and FSU countries is preferred. 4. Extended knowledge of UNDP and EU monitoring and evaluation policy demonstrated by performance evaluation of at least one other UNDP project. 5. Solid knowledge, demonstrated by at least 3 relevant publications and/or evidences in professional experience records (e.g., certifications, awards, inventions, membership of professional associations and ad-hoc panels, lecturing, training, participation in exhibitions and professional events, presentations, etc.), about principles, best international policy, best investment practice, project cycle and monitoring / auditing, applicable to energy efficiency improvement of administrative or residential buildings is preferred. 6. Familiarity with regulations in EU and CIS region in the field of energy efficiency is preferred. 7. Familiarity with relevant Belarusian regulations and standards is an asset. 8. Excellent written and spoken English is a must. 9. Good knowledge of written and spoken Russian is a strong advantage. |
| Competencies: | * Strong report writing skills and experience in writing and presenting reports to a high professional level (which includes graphs, pictures, diagrams, figures and other illustrative tools to enhance the reporting quality). |
| Direct supervisor: | Throughout the assignment, the Consultant will work in close collaboration with the UNDP Country Office in Minsk.  S/he will report on his/her work to:  Mr. Igar Tchoulba <igar.tchoulba@undp.org>, Programme Analyst, UNDP Country Office in Minsk,  Mr. Siarhei Nikitsin <siarhei.nikitsin@undp.org>, EU/UNDP Project Manager. |

|  |
| --- |
| 1. **General background information on the context of the assignment**   **1.1. Project background information**  UNDP Belarus supports the Government of the Republic of Belarus in a wide range of areas. They all fall within the National Sustainable Socio-Economic Development Strategy till 2020, which was approved by the Government on 22 June 2004. UNDP plays an important role as a partner to the Government of Belarus in energy efficiency improvement policy and programs. In particular, UNDP has supported the Government of Belarus through capacity building and expert advice to achieve its GDP energy intensity reduction target and increasing of renewable energy sources utilization through the project “Developing an Integrated Approach to a Stepped-Up Energy Saving Programme” funded by EU.  Belarus lacks domestic energy resources, and has thereby to import around 90percent of energy consumed in the country. Practically since independence, Belarus has worked actively to reduce its dependence on energy imports by reducing its own energy consumption and by increasing its use of local fuels. Improving energy efficiency in all sectors of the economy and reducing greenhouse gas emissions have become national priorities, and many efforts have been taken to modernize generation facilities, improve energy efficiency, and increase the use of local and renewable energy resources.  These efforts have had a significant economic effect: the energy intensity per unit of Gross Domestic Product (GDP) has been reduced by more than twice over the past decade. However, in spite of these improvements, energy intensity per unit of GDP is still 1.5 - 2 times higher than in EU member states with similar climate conditions. This comparison indicates that Belarus still needs to make substantial efforts to achieve a high level of energy efficiency in all sectors. Two important paths to improving energy efficiency are clear: 1) broadening public participation in energy saving programmes; and 2) bringing new energy saving and renewable energy technologies to the Belarusian market.  According to the previous experience in similar projects implementation, institutional buildings (i.e. schools, kindergartens, boarding schools, vocational-technical schools (VTC)) are a natural point of entry for energy efficiency activities at a local level for the following reasons: 1) high visibility is secured; 2) a natural setting is provided for educating students and their families; 3) a vast geographic coverage; 4) a significant source of potential energy savings (and associated savings in operational costs); 5) the use of design prototypes for institutional buildings means that successful renovation initiatives can be replicated relatively easily; and 6) institutional buildings retrofits produce important improvements in the learning environment (comfort, visibility) that will contribute enhancing the quality of education.  Furthermore, energy-saving measures in institutional buildings can generate substantial global benefits by reducing related greenhouse gas emissions. The buildings sector in Belarus consumes 40percent of heat used in the country, and as such represents an important potential source of greenhouse gas emission reductions through fuel savings.  Measures such as the replacement of old windows with new energy-efficient ones, thermal insulation for exterior walls and roofs, automatic controls for heat, and efficient lighting systems with controlled luminance have previously been used in institutional buildings in Belarus. However, this project will implement these measures according to the new energy-saving regulations adopted in 2010 in the construction sector, which require much higher thermal resistance in roofs, walls and windows compared to the previous ones. In this way, the pilot buildings will serve as an important blueprint for other local governments and population, and they will also provide a visible demonstration of the fuel-saving and money-savings results of the new higher standards.  One of the key energy-efficient technologies to be piloted in the participating buildings is waste heat recovery. In institutional buildings, losses through exhaust ventilation represent approximately 40percent of total heat loss. According to preliminary estimates, application of relevant energy efficient technologies will allow to reduce heat waste by 28-30percent. Heat recovery system will solve the problem of ventilation in rooms in schools: that of providing a constant supply of fresh, warm plenum air. In old systems, plenum and exhaust ventilation systems are frequently switched off in an attempt to conserve heat (because too much energy is consumed in heating fresh air from outside). Furthermore, the use of waste heat recovery in selected pilot buildings represents economic efficiency of using such technologies in schools.  The innovative renewable technology to be used is the solar thermal collectors to heat up domestic hot water during the warm period of the year. Though Belarus is not a country with a naturally high level of solar radiation, local conditions are sufficient to pre-heat or even fully heat hot tap water to the required temperature from March through September. Therefore, solar collectors will operate in parallel with traditional hot water heat exchangers to pre-heat the water. If the temperature of the water is still not sufficient after passing through the solar collector, an automatic control system will switch on traditional heat exchangers to ensure that the requirements for water temperature are met. Depending on the intensity of solar radiation, the systems are expected to reduce 50-100percent of heat usually consumed in hot water heat exchangers in institutional buildings. While this technology is not new to the field of renewable energy, it has not been used in the buildings sector in Belarus before, and the pilot sites should provide important information, not just for educational institutions, but also for other institutional and administrative buildings where year-round use will lead to even greater potential savings.  **1.2. Project overview**  The aim of the project, planned for 3 years, is to enhance efficient use of energy resources at the local level in Belarus through application of energy-saving technologies and measures in educational buildings. The objective will be reached through establishing pilot sites demonstrating application of innovative energy efficiency technologies in school buildings, raising awareness and capacity building of local authorities, specialists and local population to carry out energy saving measures at the local level. The project also aims at increasing involvement of local governments and population in implementation of pilot initiatives in the EE area and further replication of best practices.  In particular, the project will help achieve the following objectives:   * To raise awareness and build capacity within communities to carry out energy saving measures at local level that improve energy efficiency and utilize renewable energy sources. * To establish pilot sites in local communities demonstrating application of innovative energy efficiency technologies in school buildings. * To ensure active participation of local governments, educational institutions and local population in energy-saving pilot initiatives implementation as well as increase demonstration of best practices, and their replication at the local level. |
| 1. **Objectives of the assignment**   *Global objective*  The global objective of this Final Evaluation is to assess the efficiency, effectiveness, impact and viability of the project in order to verify that the activities and results of the project are in line with those outlined in the Financing Agreement and in the Project Document.  *Specific objective*  The specific objective of the Final Evaluation is to assess the overall impact of the project with reference to the provisions of the relevant Financing Agreement, logframe and work plan. The project should be evaluated using the standard assessment criteria with particular focus on questions of longer term impact and sustainability.  In line with the UNDP Monitoring and Evaluation (M&E) guidelines, this Final Evaluation is initiated by UNDP Country Office in Belarus in order to assess the overall project progress, make sure the project is on track to deliver the agreed outcomes, produce recommendations on any adjustments needed, as well as to strengthen the adaptive management and monitoring function of the project and suggest strategy and policy options for more effective achievement of the project’s expected results within the project timeframe and their further replication.  The evaluation has the following complementary purposes:   * To promote accountability and transparency, and to assess and disclose levels of project accomplishments and assess their sustainability; * To synthesize lessons learned that may help improve the selection, design and implementation of future UNDP energy-efficiency projects; * To provide feedback on issues that are recurrent and need attention, and on improvements regarding previously identified issues; * Provide appraisal on the validity/relevance of the outcome for UNDP supported interventions, and the extent to which the set objectives and outcomes have been achieved; * Identify gaps/weaknesses in the current Project design and provide recommendations as to their improvements in similar projects; * Identify lessons learnt from previous and ongoing interventions in this area; * Assess the role of the Project in building local leadership capacities at the local levels; * Review and assess the Project’s partnership with the government bodies, civil society and private sector, international organizations in Project implementation and comment on its sustainability; * Review and assess the efficiency of implementation and management arrangements of the Project; * Support UNDP in identifying the future interventions of Socio-Economic Development and Community-based Projects, aligning it with the national priorities, UNDP’s mandate and expertise.   Respective activity is included in the Project Detailed Work Plan for 2017, Outcome 2: Documented, disseminated and institutionalized project results providing a basis for further replication, and poses the following activities:   * 2.13.1 – Conducting of the final evaluation of the project by means of collecting and analyzing data of Project's results and comparing them with the objectives, targets, baseline scope and requirements stipulated in the Project Document. Compile and present a Final Evaluation Report describing the progress of the Project and proving necessary recommendations for future developing of the energy-efficiency projects.   This assignment has an objective to provide consultation and advice to the PIU, UNDP Belarus Country Office, Energy Efficiency Department of the State Standardization Committee (National Implementing Agency), members of the Project Steering Committee, project partners, district authorities and other relevant stakeholders as follows:  (i) To assess overall performance against the project objective and outcomes as set out in the Project Document, project's Logical Framework, and other related documents;  (ii) To assess the effectiveness and efficiency of the project;  (iii) To analyze critically the implementation and management arrangements of the project;  (iv) To assess the progress towards achievement of the outcomes;  (v) To review planned strategies and plans for achieving the overall objective of the project within the timeframe;  (vi) To assess the sustainability of the project's interventions;  (vii) To list and document initial lessons concerning project design, implementation and management;  (viii) To assess project relevance to national priorities;  (ix) To provide lessons learned for the future.  This assignment must provide a comprehensive and systematic evaluation of project performance by assessing project design, process of implementation and achievements. |
| 1. **Evaluation requirements**   **3.1. Standard UNDP monitoring and evaluation requirements**  The Monitoring and Evaluation (M&E) policy at the project level in UNDP has four objectives: i) to monitor and evaluate results and impacts; ii) to provide a basis for decision making on necessary amendments and improvements; iii) to promote accountability for resource use; and iv) to document, provide feedback on, and disseminate lessons learned. A combination of tools should be used to ensure effective project M&E. These might be applied continuously throughout the lifetime of the project – e.g. periodic monitoring of indicators, or as specific time-bound exercises such as mid-term review, audit reports and independent evaluations.  In accordance with UNDP M&E policies and procedures, all projects are strongly encouraged to conduct a mid-term evaluation (MTE) and/or final evaluation. In addition to providing an independent in-depth review of implementation progress, this type of evaluation is responsive to decisions on transparency and better access to information during implementation.  The Final Evaluation is intended to assess progress towards the achievement of objectives, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP projects), and to make recommendations regarding specific actions that might be taken to improve the project. It is expected to serve as a mean of validating or filling the gaps in the initial assessment of relevance, effectiveness and efficiency obtained from monitoring. |
| 1. **Scope of work**   The evaluation shall cover the following project aspects:  Project Concept and Design: The Consultant will review the problem addressed by the project and the project strategy, encompassing an assessment of the appropriateness of the objectives, planned outputs, activities and inputs as compared to cost-effective alternatives. The executing modality and managerial arrangements should also be judged. The Consultant will assess the achievement of indicators and review the work plan, planned duration and budget of the project.  Project Implementation: The evaluation will assess the implementation of the project in terms of quality and timeliness of inputs and efficiency and effectiveness of activities carried out. Also, the effectiveness of management as well as the quality and timeliness of monitoring and backstopping by all parties to the project should be evaluated. In particular, the evaluation is to assess the Project team’s use of adaptive management in project implementation.  Project outputs, outcomes and impact: The evaluation will assess the outputs, outcomes and impact achieved by the project as well as the likely sustainability of project results. This should encompass an assessment of the achievement of the immediate objectives and the contribution to attaining the overall objective of the project. The evaluation should also assess the extent to which the implementation of the project had been inclusive of relevant stakeholders and to which it had been able to create collaboration between different partners. The evaluation will also examine if the project had significant unexpected effects, either of beneficial or detrimental character.  The evaluation shall judge the following project implementation features:  **4.1. Progress towards results**  a. Changes in development conditions  • Are project outcomes contributing to national development priorities and plans in accordance with relevant state and local energy conservation programmes and strategies?  • How and why project outcomes and strategies contribute to the achievement of the expected results?  • Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in project activities?  • Is the project on track to meet the global environmental benefits in terms of tones of CO2 reduced by the end of the project as defined in the project document?  b. Measurement of change  Progress towards results should be based on a comparison of indicators before and after (so far) the project intervention, e.g. by comparing current conditions for building energy efficiency (legal and regulatory frameworks, results of energy efficiency and energy conservation activities, etc.) to the baseline ones.  The evaluation should specifically look into:  • Adequacy of the level of existing regulations on energy conservation and energy efficiency improvement;  • Adequacy of the level and proposed modes of enforcement of the regulatory and programmatic documents developed within the project for creation of an enabling environment for energy efficiency improvement in institutional buildings funded from the target state and local programmes and private sector;  • Timeliness of the existing energy efficiency oriented curricula for the initial training;  • Tones of CO2e reduced (direct and indirect emissions);  • Verification of the monitoring results;  • Adequacy and effectiveness of the developed project awareness raising products on energy efficiency:  - Project’s web-site;  - Communication and promotion strategy.  c. Project strategy  • How and why outcomes (listed as outputs in the project document) and strategies contribute to the achievement of the expected results?  • Has the project been effectively undertaking adaptive management in order to respond to changing conditions?  d. Sustainability  • Assess the extent to which the benefits of the project will continue, within or outside the project scope; commitment of the government to support the initiative beyond the project.  • The Consultant may look at factors such as mainstreaming project objectives into the broader development policies and sectoral plans and economies.  The sustainability assessment will give special attention to analysis of the risks that are likely to affect the persistence of project outcomes. In particular, the evaluation should focus on the sustainability of efforts to address energy-efficiency at the Oblast level and whether or not resources will continue to be available for such investments after the end of the project. The sustainability assessment should also explain how other important contextual factors that are not outcomes of the project will affect sustainability.  Each sustainability dimension of the project outcomes should be rated. The following four dimensions or aspects of sustainability should be addressed:  • Financial resources: Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood of financial and economic resources not being available for increased investments in energy-efficiency once the EU assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project’s outcomes)?  • Socio-political: Are there any social or political risks that may jeopardize the sustenance of the project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project?  • Institutional framework and governance: Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems for accountability and transparency, and the required technical know-how are in place.  • Environmental: Are there any environmental risks that may jeopardize sustenance of project outcomes? The evaluation should assess whether certain activities will pose a threat to the sustainability of the project outcomes.  **4.2. Project’s adaptive management framework**  a. Monitoring systems  • Assess the monitoring tools currently being used:  o Do they provide the necessary information?  o Do they involve key partners?  o Are they efficient?  o Are additional tools required?  • Assess the use of the logical framework as a management tool during implementation and any changes made to it.  • What impact did the retro-fitting of impact indicators have on project management, if such?  • Assess whether or not M&E system facilitates timely tracking of progress towards project’s objectives by collecting information on chosen indicators continually; annual project reports are complete, accurate and with well justified ratings; the information provided by the M&E system is used to improve project performance and to adapt to changing needs.  b. Risk Management  • Validate whether the risks identified in the project document and Donor Reports are the most important and whether the risk ratings applied are appropriate. If not, explain why.  • Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted.  • Assess the project’s risk identification and management systems:  o Is the UNDP Risk Management System appropriately applied and if not what needs to be done?  o How can the UNDP Risk Management System be used to strengthen the project management?  c. Work Planning  • Assess the use of routinely updated work plans.  • Assess the use of electronic information technologies to support implementation, participation and monitoring, as well as other project activities.  • Are work planning processes result-based? If not, suggest ways to re-orientate work planning.  d. Financial/Project management  • Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions. (Cost-effectiveness: the extent to which results have been delivered with the least costly resources possible.). Any irregularities must be noted.  • Is there due diligence in the management of funds and financial audits?  • Assess the effectiveness of the Project Management arrangements as put in place at the start of the project.  • Did promised co-financing materialize (please fill out the co-financing form provided in **Annex 1**) and if not what needs to be done in order to improve the situation?  e. Reporting  • Assess how adaptive management changes have been reported by the project management.  • Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.  • f. Delays  • Assess if there were delays in project implementation and what were the reasons.  • Did the delay affect the achievement of project’s outcomes and/or sustainability, and if it did then in what ways and through what causal linkages?  **4.3 Contribution of implementing and executing agencies**  • Assess the role of UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus against the requirements set out in the UNDP Programme and Operations Policies and Procedures. Consider:  o Field visits;  o Participation in Steering Committee meetings;  o Project reviews, Donor Report preparation and follow-up;  o EU guidance;  o Operational support.  • Consider the new UNDP requirements outlined in the UNDP Programme and Operations Policies and Procedures, especially the Project Assurance role, and ensure they are incorporated into the project’s adaptive management framework.  • Assess the contribution to the project from UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus in terms of “soft” assistance (i.e. policy advice & dialogue, advocacy, and coordination).  • Suggest measures to strengthen UNDP’s assistance to the project management if necessary.  **4.4. Stakeholder participation, partnership strategy**  • Assess whether or not and how local stakeholders participate in project management and decision-making. Include an analysis of the strengths and weaknesses of the approach adopted by the project and suggestions for improvement if necessary.  • Does the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the implementation and evaluation of project activities?  • Consider the dissemination of project information to partners and stakeholders and if necessary suggest more appropriate mechanisms.  • Identify opportunities for stronger partnerships.  **4.5. Rating**  The range of aspects described above should be provided with the assessment based on rating of achievements. The applicable rating criteria are as follows:  **HS**: Highly Satisfactory: no shortcomings  **S**: Satisfactory: minor shortcomings  **MS**: Moderately Satisfactory: moderate shortcomings  **MU**: Moderately Unsatisfactory: significant shortcomings  **U**: Unsatisfactory: major problems  **HU**: Highly Unsatisfactory: severe problems  Ratings for sustainability assessment are as follows:  **LS**: Likely sustainable: negligible risks to sustainability  **MLS**: Moderately Likely sustainable: moderate risks  **MUS**: Moderately Unlikely sustainable: significant risks  **US**: Unlikely sustainable: severe risks.  Additional ratings may be also relevant:  **N/A**: Not Applicable  **U/A**: Unable to Assess  All ratings given should be properly substantiated.  To determine the level of achievement of project outcomes and objectives the following three criteria should be assessed according to the ratings provided above:  • Relevance: Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities?  • Effectiveness: Are the actual project outcomes commensurate with the original or modified project objectives? In case the original or modified expected results are merely outputs/inputs then the Consultant should assess if there are any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such a project.  • Efficiency: Is the project cost effective? Is the project the least cost option? Is the project implementation delayed and if it is, does that affect cost-effectiveness? Wherever possible, the Consultant should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects. |
| 1. **Methodology for evaluation approach**   The Consultant should seek guidance for his/her work in the following materials:  • UNDP Handbook on Monitoring and Evaluation for Results;  • UNDP Evaluation Policy kit.  It is recommended that the evaluation methodology include the following:  • Documentation review (desk study), to include Project Document, Inception Report, Donor Reports, Minutes of the Steering Committee meeting (for more details see **Annex 4**);  • Interviews with PIU and key project stakeholders, including UNDP Belarus, Delegation of the EU to Belarus, Energy Efficiency Department of the State Committee on Standardization, relevant administrations of Hrodna, Minsk and Viciebsk Regional Executive Committees, Education Departments of the Hrodna, Minsk and Viciebsk Regional Executive Committees, relevant administrations of Ashmiany and Dziarzhynsk District Executive Committees, administration of the Leninski District of Hrodna city, other beneficiaries and project partners, such as relevant legislative bodies, Hrodna, Minsk and Viciebsk Regional Energy Efficiency Divisions, etc.;  • In-country visits of project pilot sites (State Education Establishment “Kindergarten No.45 of Hrodna city”, State Education Establishment “Kindergarten No.6 of Ashmiany town”, State Education Establishment “Secondary School No.4 of Dziarzhynsk city”, Education Establishment “Viciebsk State Vocational Mechanical-Engineering College named after M.F.Shmyrev”).  The evaluation must provide evidence-based information that is credible, reliable and useful. It must be easily understood by project partners. |
| 1. **Evaluation report**   The core product of the Final Evaluation will be the Final Evaluation Report that will include:  • Executive summary;  • Introduction;  • Findings and conclusions in relation to issues to be addressed identified under the Scope of Evaluation section of this TOR;  • Recommendations;  • Lessons Learned;  • Annexes.  The draft and final report will be written in the format outlined in **Annex 2** of this TOR. The expected length of the report is around 50 pages in total, not including annexes. The first draft of the report and a final report are expected to be submitted to the UNDP Belarus within deadlines stipulated in Section 8 below. The first draft shall include the results of the in-country mission and subsequently circulated to the key project stakeholders for comments. Any discrepancies between the interpretations and findings of the Consultant and the key project stakeholders shall be explained in an annex to the final report.  The reports shall be submitted both electronically and in printed version, in Russian and English. The reports shall be supplemented by rate tables (**Annex 3**). |
| 1. **Duties and responsibilities**   The Consultant shall work in a team with a local Expert on energy efficiency and Area-Based Development Expert and also in close coordination with other PIU members who are to assist him/her in collecting necessary information requested by the Consultant and in communicating with all stakeholders. The Consultant must not have restrictions for off-hour work and should not have participated in preparation and/or implementation of this very project and should not have conflict of interest with project related activities. |
| 1. **Milestones and deliverables**   The following table defines the main milestones, as per the activities stipulated in the Section “**Scope of work**” above, for which formal reports are required. These reports are to be submitted to the PIU, UNDP, Energy Efficiency Department for review before the deadlines specified below. Approval of these reports by the UNDP Country Office will govern payment under the contract for this assignment.  Prior to approval of the final report, a draft version shall be circulated for comments to the PIU, UNDP CO and stakeholders. The PIU, UNDP CO and the stakeholders will submit comments and suggestions within 10 working days after receiving the draft. All comments and suggestions (if any) shall be addressed and the report will be considered as the final deliverable as soon it is accepted by UNDP CO.  The final version of the evaluation report should be submitted in electronic format (MS Word) to UNDP CO ([igar.tchoulba@undp.org](mailto:igar.tchoulba@undp.org)), PIU ([siarhei.nikitsin@undp.org](mailto:siarhei.nikitsin@undp.org)) no later than **April 10**, 2017.   |  |  |  |  | | --- | --- | --- | --- | | *No* | *Milestone* | *Report type and size* | *Deadline* | | 1 | Evaluation methodology compiled and desk review completed | Report of 20 pgs. | Feb 25, 2017 | | 2 | Mission to Belarus conducted, including briefings by PIU and UNDP CO, Delegation of the EU to Belarus, in-country field visits, all necessary interviews, data collection, and de-briefings for UNDP CO | Report of 10 pgs. | Mar 10, 2017 | | 3 | Drafting of the evaluation report completed, and the draft sent for comments | Report of 50 pgs. | Mar 24, 2017 | | 4 | Circulation and other types of feedback mechanisms for reviewing and commenting on the draft completed, and comments received | List of comments and summary of 10 pgs. | Apr 3, 2017 | | 5 | Finalization of the evaluation report (incorporating comments received on the draft report) | Report of 50 pgs. | Apr 10, 2017 | |
| **Supervisor** |
| **Supervisee** |

*Annex 1.*

CO-FINANCING AND LEVERAGED RESOURCES

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Co-financing (Type/Source)** | **IA own Financing (mill US$)** | | **Government (mill US$)** | | **Other\* (mill US$)** | | **Total (mill US$)** | | **Total Disbursement (mill US$)** | |
| **Planned** | **Actual** | **Planned** | **Actual** | **Planned** | **Actual** | **Planned** | **Actual** | **Planned** | **Actual** |
| Grants |  |  |  |  |  |  |  |  |  |  |
| Loans/Concessional (compared to market rate) |  |  |  |  |  |  |  |  |  |  |
| Credits |  |  |  |  |  |  |  |  |  |  |
| Equity investments |  |  |  |  |  |  |  |  |  |  |
| In-kind support |  |  |  |  |  |  |  |  |  |  |
| Other types \*\*\* |  |  |  |  |  |  |  |  |  |  |
| Totals |  |  |  |  |  |  |  |  |  |  |

**\*** Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

**\*\*** Planned stands for co-financing proposed at CEO endorsement

**\*\*\*** Please briefly describe other types of co-financing identified

**Leveraged Resources**

Leveraged resources are additional resources – beyond those committed to the project itself at the time of approval – that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO’s, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project’s ultimate objective.

Annex 2. OUTLINE OF FINAL EVALUATION REPORT

1. **Executive summary**

* Brief description of project
* Context and purpose of the evaluation
* Main conclusions, recommendations and lessons learned

1. **Introduction**

* Project background
* Purpose of the evaluation
* Key issues to be addressed
* The outputs of the evaluation and how will they be used
* Methodology of the evaluation
* Structure of the evaluation

1. **The project and its development context**

* Project start and its duration
* Implementation status
* Problems that the project seeks to address
* Immediate and development objectives of the project
* Main stakeholders
* Results expected

1. **Findings and Conclusions**

***4.1 Project formulation***

* + - Project relevance
    - Implementation approach
    - Country ownership/Driveness
    - Stakeholder participation
    - Replication approach
    - Cost-effectiveness
    - Sustainability
    - Linkages between project and other interventions within the sector
    - Management arrangements

***4.2 Project implementation***

* + - Project execution
    - Project implementation
    - Project administration
    - Project planning
    - Financial management
    - Monitoring and evaluation
    - Management and coordination
    - Identification and management of risks (adaptive management)

***4.3 Results***

* + - Attainment of outputs, outcomes and objectives
    - Project’s Impact
    - Prospects for sustainability

1. **Conclusions and recommendations**

* Corrective actions for the design, duration, implementation, monitoring and evaluation of the project
* Actions to strengthen or reinforce benefits from the project
* Proposals for future directions underlining main objectives
* Suggestions for strengthening ownership, management of potential risks

1. **Lessons learned**

* Good practices and lessons learned in addressing issues relating to effectiveness, efficiency and relevance

1. **Annexes**

* Evaluation TOR
* Itinerary
* List of persons interviewed
* Summary of field visits
* List of documents reviewed
* Questionnaire used (if any) and summary of results
* Co-financing and leveraged resources (see **Annex 1**)
* Comments by stakeholders (only in case of discrepancies with evaluation findings and conclusions)

1. **Other relevant materials**

**Annex 3: RATE TABLES**

***Table 1.* STATUS OF OBJECTIVE / OUTCOME DELIVERY AS PER MEASURABLE INDICATORS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **OBJECTIVE** | **MEASURABLE INDICATORS FROM PROJECT LOGFRAME** | **PROJECT’S TARGET** | **RISKS AND ASSUMPTIONS** | **MEANS OF VERIFICATION** | **STATUS OF DELIVERY\*** | **RATING\*\*** |
|  |  |  |  |  |  |  |
| **OUTCOMES** | **MEASURABLE INDICATORS FROM PROJECT LOGFRAME** | **PROJECT’S TARGET** | **RISKS AND ASSUMPTIONS** | **MEANS OF VERIFICATION** | **STATUS OF DELIVERY** | **RATING** |
| **Outcome 1** |  |  |  |  |  |  |
| **Outcome 2** |  |  |  |  |  |  |
| **Outcome 3** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **\* Status of Delivery:** | |  |  |  |  | |
| GREEN / COMPLETED | = Indicators show successful achievement | | | | | |
| YELLOW | = Indicators show expected completion by end of Project | | | | | |
| RED | = Indicators show poor achievement - unlikely to be completed by end of Project | | | | | |

###### \*\*For RATING see Table 2.

***Table 2.* PROJECT RATINGS**

|  |  |
| --- | --- |
| Project Component or Objective | **Rating** |
| **Ratings of Relevance, Efficiency and Effectiveness\*** (6 - Highly Satisfactory, 5 - Satisfactory, 4 - Marginally Satisfactory, 3 - Marginally Unsatisfactory, 2 - Unsatisfactory, 1 - Highly Unsatisfactory) | | |
| **Project Formulation** | | |
| **Overall Project Formulation (Relevance)** |  |
| 1. Conceptualization/design |  |
| 1. Stakeholder participation |  |
| **Project Implementation** | | |
| **Implementation Approach (Efficiency)** |  |
| 1. Use of the logical framework |  |
| 1. Adaptive management |  |
| 1. Use/establishment of information technologies |  |
| 1. Operational relationships between the institutions involved |  |
| 1. Technical capacities |  |
| **Monitoring and Evaluation** |  |
| **Stakeholder Participation** |  |
| 1. Production and dissemination of information |  |
| 1. Local resource users and NGOs participation |  |
| 1. Establishment of partnerships |  |
| 1. Involvement and support of governmental institutions |  |
| **Project Results** | | |
| **Overall Achievement of Objective and Outcomes (Effectiveness)** |  |
| 1. Objective |  |
| 1. Outcome 1 |  |
| 1. Outcome 2 |  |
| 1. Outcome 3 |  |
| 1. Outcome 4 |  |
| **Sustainability Ratings\*\***  (4 - Likely, 3 - Moderately Likely, 2 - Moderately Unlikely, 1 - Unlikely) | | |
| **Sustainability** |  |
| 1. Financial sustainability |  |
| 1. Institutional sustainability |  |
| 1. Socio-economic sustainability |  |
| 1. Ecological sustainability |  |
| **Overall Project Achievement and Impact** |  |

**\*** Evaluations pertaining to the relevance, effectiveness and efficiency of the project to be evaluated using the six ratings recommended by GEF:

**6: Highly Satisfactory (HS)** The project has no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency

**5: Satisfactory (S)** The project has minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency

**4: Moderately Satisfactory (MS)** The project has moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency

**3: Moderately Unsatisfactory (MU)** The project has significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency

**2: Unsatisfactory (U)** The project has major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency

**1: Highly Unsatisfactory (HU)** The project has severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency

\*\* Evaluations pertaining to the sustainability of the project to be evaluated using a using the four ratings recommended by GEF:

**4: Likely (L)** There are no or negligible risks that affect this dimension of sustainability

**3: Moderately Likely (ML)** There are moderate risks that affect this dimension of sustainability

**2: Moderately Unlikely (MU)** There are significant risks that affect this dimension of sustainability

**1: Unlikely (U)** There are severe risks that affect this dimension of sustainability

**Additional ratings** where relevant:

**N/A:** Not Applicable

**U/A:** Unable to Assess

**Annex 4: List of documents to be reviewed by the evaluators**

**General documentation**

* UNDP Programme and Operations Policies and Procedures
* UNDP Handbook for Monitoring and Evaluating for Results
* EU Monitoring and Evaluation Policy
* EU focal area strategic program objectives
* A Practitioner’s Guide to Area-Based Development Programming

**Project documentation**

* EU approved project document and Request for CEO Endorsement
* Annual work plans
* Donor Reports 1, 2 and Final
* CDRs
* Financial audit reports
* Project Steering Committee minutes
* Updated risk log

## Annex 2: Itinerary and List of persons interviewed

|  |  |  |
| --- | --- | --- |
| Sunday, March 12, 2017 | 14:25 | Arrival to Minsk, transfer to the hotel (Renessance Marriott Hotel, Dziarzhynskogo avenue, 3E) |
| Monday, March 13, 2017 | 9:00 – 10:00 | Meeting with project team (project premises, Skoriny str. 21) |
| 10:30 – 11:30 | Meeting with EU project coordinator Elena Rakova (Елена Ракова) (EU Delegation, Engelsa str., 34a) |
| 11:30 – 12:30 | Meeting with UNDP Programme Analyst Igar Tchoulba (Игоь Чульба) and Programme Assistant Ina Klimenkova (Инна Клименкова) (UNDP Country Office, Kirova str., 17) |
| 12:30 – 13:30 | Meeting with national project coordinator, head of the division of scientific and technical policy and foreign economic relations of the Department of Energy Efficiency Andrei Miniankou (Миненков Андрей Владимирович, начальник отдела научно-технической политики и внешнеэкономических связей Департамента по энергоэффективности, национальный координатор Проекта) (Department of Energy Efficiency, Svobody sq., 17) |
| 14:00 – 18:00 | Trip to Dziarzhynsk (30 km from Minsk).  Meeting with First Deputy Head of the Dziatzhynsk District Executive Committee Siarhei Savitski (Савицкий Сергей Константинович, первый заместитель председателя Дзержинского районного исполнительного комитета).  Meeting with head of the Education division of the Dziarzhynsk District Executive Committee Vatslau Matusevich (Матусевич Вацлав Иванович, начальник отдела образования, спорта и туризма Дзержинского районного исполнительного комитета).  Meeting with director of the SEE “Secondary School No.4 of Dziarzhynsk city” Luidmila Luksha (Лукша Людмила Константиновна, директор государственного учреждения образования «Средняя школа №4 г.Дзержинска»).  Meeting with the teachers of the SEE “Secondary School No.4 of Dziarzhynsk city”.  Meeting with representatives of the parent’s society. |
| Tuesday, March 14, 2017 | 9:00 – 14:30 | Trip to Ashmiany (120 km from Minsk).  Meeting with Head of the Ashmiany District Executive Committee Miraslau Sarosek (Саросек Мирослав Эдмундович, председатель Ошмянского районного исполнительного комитета).  Meeting with head of the Education division of the Ashmiany District Executive Committee Sviatlana Barkouskaya (Барковская Светлана Николаевна, начальник отдела образования, спорта и туризма Ошмянского районного исполнительного комитета).  Meeting with head of the SEE “Kindergarten No.6 of Ashmiany town” Maryna Melnikava (Мельникова Марина Валерьевна, заведующая ГУО «Ясли-сад №6 г.Ошмяны»). |
| 14:30 – 17:00 | Trip to Hrodna (220 km from Ashmiany, night in Hrodna) |
| 17:00 – 19:00 | Meeting with head of the SEE “Kindergarten No.45 of Hrodna city” Luidmila Kushniruk (Кушнирук Людмила Ивановна, заведующая ГУО «Ясли-сад №45 г.Гродно») and deputy head of the SEE “Kindergarten No.45 of Hrodna city” Natallia Yanusheuskaya (Янушевская Наталья Ивановна, заместитель заведующей ГУО «Ясли-сад №45 г.Гродно»). |
| Wednesday, March 15, 2917 | 9:00 – 14:30 | Meeting with Deputy Head of the Education Department of Hrodna Regional Executive Committee Aleh Rakhunok (Рахунок Олег Григорьевич, заместитель начальника управления образования Гродненского областного исполнительного комитета).  Meeting with Head of the Hrodna Regional Department for supervision of the rational use of energy resources Anatoli Bulava (Булова Анатолий Дмитриевич, начальник Гродненского областного управления по надзору за рациональным использованием топливно-энергетических ресурсов) and Deputy Head of the Hrodna Regional Department for supervision of the rational use of energy resources Andrei Minko (Минько Андрей Николаевич, заместитель начальника Гродненского областного управления по надзору за рациональным использованием топливно-энергетических ресурсов). |
| 13:30 – 17:00 | Trip to Minsk (290 km from Hrodna) |
| Thursday, March 16, 2017 | 8:30 – 20:00 | Trip to the pilot site in Viciebsk (300 km from Minsk) and back to Minsk.  Meeting with Deputy Head of the Viciebsk Regional Executive Committee Uladzimir Penin (Пенин Владимир Петрович, заместитель председателя Витебского областного исполнительного комитета).  Meeting with Deputy Head of the Education Department of Viciebsk Regional Executive Committee Siarhei Arekhau (Орехов Сергей Владимирович, заместитель начальника управления образования Витебского областного исполнительного комитета).  Meeting with Deputy Head of the Viciebsk Regional Department for supervision of the rational use of energy resources Victar Vaitulianets (Войтулянец Виктор Игнатьевич, заместитель начальника Витебского областного управления по надзору за рациональным использованием топливно-энергетических ресурсов).  Meeting with the Siarhei Soglayev, Head of Department, Viciebsk City Administration and Oksana Kuzina, Senior expert of the department  Meeting with director of the EE “Viciebsk State Vocational Mechanical-Engineering College named after M.F.Shmyrev” Tatsiana Trushanina (Трушанина Татьяна Ивановна, директор УО «Витебский государственный профессионально-технический колледж машиностроения имени М.Ф.Шмырева»). |
| Friday, March 17, 2017 | 9:00 – 11:30 | Meeting with project team (project premises, Skoriny str. 21) |
| 11:30 – 12:00 | Meeting with UNDP-GEF “Improving Energy Efficiency in Residential Buildings in the Republic of Belarus” Project Manager Alexandre Grebenkov (Александр Гребеньков, руководитель проекта ПРООН-ГЭФ «Повышение энергоэффективности в жилых зданиях в Республике Беларусь»). |
| 14:30 – 16:00 | Meeting with UNDP Programme Analyst Igar Tchoulba and Programme Assistant Ina Klimenkova (UNDP Country Office, Kirova str., 17) |
| 16:30 – 18:00 | Meeting with executive director of Association “Education for Sustainable Development” Anatoli Muraviev (Муравьев Анатолий Владимирович, исполнительный директор Ассоциации «Образование для устойчивого развития») and Head of the Coordination Center for Education for Sustainable Development of the “Belarusian State Pedagogical University named after Maxim Tank” Sophia Savelova (Савелова София Борисовна, начальник Координационного центра по образованию в интересах устойчивого развития УО «Белорусский государственный педагогический университет имени Максима Танка»). |
| Saturday | 11:30 | Departure from Minsk (from hotel) |

## **Annex 3: List of documents reviewed**

* Annual reports of the project for UNDP CO in Belarus (2014, 2015, 2016)
* Annual reports of the project for the EU Office in Belarus (2014, 2015)
* Annual Workplans (2014, 2015, 2016, 2017)
* Project Document
* Description of Activities attached to UNDP-EU contract for the project
* PSC Minutes (2014, 2015, 2016)
* Correspondence of the project team with the regional executive committees related to the EE strategies
* A template of PAG statues developed by the project
* Project website
* Decision on the extension of the project taken in July 2016
* Information products developed under the project
* Third party reports (EB, EBRD)

## **Annex 4: List of PR materials**

**Media Coverage and Promo – 2016-2017**

**Interviews**

* **Людміла Кушнірук**, загадчыца ДУА «Яслі-сад № 45 г. Гродна»: «Змяніліся не толькі выхаваўчыя працэсы, але і ўся дзейнасць установы» <http://energybel.by/energoeffektivnost-v-shkolax-informacionnyj-byulleten-7/>
* 21.04.2016 **TV Viciebsk** Interview with the pilot site director **Tatyana Trushanina** [www.youtube.com/embed/wTiqPWfsij4?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD](http://www.youtube.com/embed/wTiqPWfsij4?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD)
* 8.02.2016  **Hrodna city portal “S13.ru” Lyudmila Koushniruk** Solar collector to be installed on the kindergarten building in Hrodna<http://s13.ru/archives/131124>
* 20.04. 2016 **“Nashe TV” (Viciebsk)** Report on pilot site. Interview with **Valentina Stalygo** <https://youtu.be/shqLdy9J8dc?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
* 19.03.2016 **Belarus 1** TV Report on pilot site. Interview with the pilot site director **Tatyana Trushanina** <https://youtu.be/UF9j52KwAFU?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
* 9.03. 2016 **“Nashe TV”** (Viciebsk) Report on pilot site. Interview with **Sergei Orekhov**, Deputy Head of Viciebsk Oblispolkom Department of Education <https://youtu.be/7LXXL7tgIHc?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
* 19.03.2016 **Belarus 1 TV** Report on pilot site. Interview with **Lyudmila Koushniruk**, Head of Hrodna №45 kindergarten [http://www.tvr.by/news/kra\_na/v\_kontse\_maya\_svoi\_dveri\_v\_Hrodna\_otkroet\_pervyy\_energoeffektivnyy\_sadik/](http://www.tvr.by/news/kra_na/v_kontse_maya_svoi_dveri_v_grodno_otkroet_pervyy_energoeffektivnyy_sadik/)
* 6.07.2016 **“Zvyazda” newspaper**. **M. Melnikova**, Head of Ashmiany kindergarten –“ Who can wait gets the best”.
* 20.09.2016 **Belarus 1 TV** В Гродно открыли энергоэффективный детский сад. Интервью с директором детского сада **Людмилой Кушнирук** [http://www.tvr.by/mobile/news/obshchestvo/v\_Hrodna\_otkryli\_energoeffektivnyy\_detskiy\_sad/](http://www.tvr.by/mobile/news/obshchestvo/v_grodno_otkryli_energoeffektivnyy_detskiy_sad/)
* 16.09.2016 **Гродно-плюс ТВ** В Гродно открылся первый энергоэффективный детский ясли-сад Интервью с директором детского сада **Людмилой Кушнирук** <https://www.youtube.com/watch?v=ezad01oka7c>
* 14.11.2016 **Belarus 1 TV** Report on pilot site in Dziarzhynsk. Interview with **Igor Tchoulba**, UNDP projects” coordinator and **Lyudmila Louksha**, director of the school<http://www.tvr.by/news/obshchestvo/v_belarusi_otkrylas_pervaya_energoeffektivnaya_shkola/>
* 28.11.2016 **National Radio Channel One “Adkryty micrafon”** program. Interview with **Siarhei Nikitsin**, project manager and **Lyudmila Koushniruk**, Head of Hrodna №45 kindergarten [https://www.dropbox.com/s/4a4oloahwz6o0lw/percentD0percentADpercentD0percentBDpercentD0percentB5percentD1percent80percentD0percentB3percentD0percentBEpercentD1percent8DpercentD1percent84percentD1percent84percentD0percentB5percentD0percentBApercentD1percent82percentD0percentB8percentD0percentB2percentD0percentBDpercentD0percentBEpercentD1percent81percentD1percent82percentD1percent8Cpercent20percentD0percentB2percent20percentD1percent88percentD0percentBApercentD0percentBEpercentD0percentBBpercentD0percentB0percentD1percent85percent20percentD0percent90percentD0percent9C.mp3?dl=0](https://www.dropbox.com/s/4a4oloahwz6o0lw/%D0%AD%D0%BD%D0%B5%D1%80%D0%B3%D0%BE%D1%8D%D1%84%D1%84%D0%B5%D0%BA%D1%82%D0%B8%D0%B2%D0%BD%D0%BE%D1%81%D1%82%D1%8C%20%D0%B2%20%D1%88%D0%BA%D0%BE%D0%BB%D0%B0%D1%85%20%D0%90%D0%9C.mp3?dl=0)
* 22.06.2016 **“Nashe TV” (Viciebsk**) Report on pilot site. Interview with UN Resident Coordinator/UNDP Resident Coordinator in Belarus **Sanaka Samarasinkha** <https://www.youtube.com/watch?v=E9T-dk-g6Yg&index=3&list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
* 22.04.2016 **Vecherniy Viciebsk TV** Interview with Viciebsk pilot site director **Tatyana Trushanina** <https://www.youtube.com/watch?v=wTiqPWfsij4>
* 15.11.16 **National Radio Channel One “Radiofact” program** Report on Dziarzhynsk pilot. Interviews with director of the school **Lyudmila Louksha** and EU projects coordinator **Elena Rakova** <https://yadi.sk/i/WB73LpQ033KpKq>
* 9.12.2016 **National Radio Channel One** Opening of Viciebsk pilot**.** Interview with Head of EU Delegation to Belarus **Andrea Wiktorin and Sergei Orekhov**, Deputy Head of Viciebsk Oblispolkom Department of Education <https://yadi.sk/i/qJ0Fa1bb33KpU4>
* July 2016 **“Energoeffectivnost” magazine** Let us be thrifty! Interview with director of Dziarzhynsk school **Lyudmila Louksha**
* 28.02.2017 L. Louksha. School living the “green” life-style [**https://medium.com/undp-in-belarus-english/school-living-the-green-life-style-c795851be616#.lwgvzrrfc**](https://medium.com/undp-in-belarus-english/school-living-the-green-life-style-c795851be616#.lwgvzrrfc)

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* 8.02.2016 **BELTA national news agency** Solar collector to be installed on the kindergarten building in Hrodna <http://www.belta.by/regions/view/solnechnyj-kollektor-ustanovjat-na-zdanii-grodnenskogo-detsada-180652-2016/>
* 8.02.2016 **ENPI Info Centre** (Belgium) Energy Saving Ambulance in outer space <https://www.facebook.com/enpi.eu/posts/10153476060309912?fref=nf&pnref=story>
* 9.02. 2016 **Dzerzinsk.by info portal** On the way to thrifty lifestyle <http://dzerginsk.by/news/2016/02/09/po-puti-k-berezhlivosti-festival-pedagogicheskih-idey>
* 10.02 2016 **Dzerzinsk.by** Festival of pedagogical ideas[http://Dziarzhynsk.by/novosti/po-puti-k-berezhlivosti.-v-srednej-shkole-4-proshel-festival-pedagogicheskih-idej/](http://dzerzhinsk.by/novosti/po-puti-k-berezhlivosti.-v-srednej-shkole-4-proshel-festival-pedagogicheskih-idej/)
* 29.02.2016 **Dzerzinsk.by info portal** Public advisory board meeting <http://dzerginsk.by/news/2016/02/29/energoeffektivnost-v-shkolah-zasedanie-obshchestvenno-konsultativnogo-soveta>
* 18.03.2016 **“SB-Belarus Today”** Results of Energomarafon in Gomel <http://www.sb.by/v-belarusi/article/v-gomele-podveli-itogi-respublikanskogo-konkursa-energomarafon.html>
* 27.05.2016 **«Your Style” Hrodna** info portal Creative kindergarten <http://www.t-styl.info/by/119/politics/17111/>
* 25.05.2016 **BELTA national news agency** On-line game on energy efficiency created in Viciebsk [http://atom.belta.by/ru/news\_belta/view/onlajn-igru-po-energoeffektivnosti-sozdali-v-Viciebske-8233/](http://atom.belta.by/ru/news_belta/view/onlajn-igru-po-energoeffektivnosti-sozdali-v-vitebske-8233/)
* 24.05.2016 **Interfax.by news agency** On-line game on energy efficiency created in Viciebsk <http://www.interfax.by/news/belarus/1206607>
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* 01.08.2016 **News.21.by** New dwelling after renovation <http://news.21.by/society/2016/08/01/1223742.html>
* 05.07.2016 **Department for EE site** Ashmiany hosts the PSC <http://energoeffekt.gov.by/news/2411-20160705_new>
* 04.08.2016 **News.21.by** EE kindergarten will emerge in Hrodna soon <http://news.21.by/society/2016/08/04/1225294.html>
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* 28.09.2016 **Press-release.by** The 2nd EE kindergarten is opened in Ashmiany <http://www.press-release.by/v-oshmyanax-otkrylsya-vtoroj-energoeffektivnyj-detskij-sad-v-belarusi/>
* 16.09.2016 **BELTA national news agency** EE kindergarten is opened in Hrodna [http://www.belta.by/regions/view/v-Hrodna-nachal-rabotu-pervyj-v-gorode-energoeffektivnyj-detsad-210572-2016/](http://www.belta.by/regions/view/v-grodno-nachal-rabotu-pervyj-v-gorode-energoeffektivnyj-detsad-210572-2016/)
* 16.09.2016 **Grodzenskaya prauda** EE kindergarten is opened in Hrodna [http://Hrodnanews.by/category/glavnoe/news28045.html](http://grodnonews.by/category/glavnoe/news28045.html)
* 17.09.2016 **tutHrodna.com** 1st EE kindergarten opened in Hrodna[http://tutHrodna.com/2016/09/v-Hrodna-otkrylsya-pervyj-energoeffektivnyj-sad/](http://tutgrodno.com/2016/09/v-grodno-otkrylsya-pervyj-energoeffektivnyj-sad/)
* 16.09.2016 **Shliah** 1st EE kindergarten started its work in Hrodna <http://www.shliah.by/news/obshhestvo/news4053.html>
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* 19.09.2016 **Ashmiansky vesnik** Energy efficient kindergarten opened in Hrodna. A similar project is being implemented in Ashmiany <http://www.osh.by/?p=24750>
* 27.09.2016 **IzHrodna** EE kindergarten opened in Ashmiany [http://izHrodna.com/?p=17981](http://izgrodno.com/?p=17981)
* 19.09.2016 **Wildlife** 1st EE kindergarten opened in Hrodna <http://www.wildlife.by/node/50664>
* 19.09.2016 **News.21.by** Energy efficient kindergarten opened in Hrodna. A similar project is being implemented in Ashmiany <http://news.21.by/other-news/2016/09/19/1241875.html>
* 28.09.2016 **Department for EE site.** The 2nd EE kindergarten is opened in Ashmiany <http://energoeffekt.gov.by/news/22-news-2016/2512>
* 21.09.2016 **Kraj**  Power consumption in Ashmiany kindergarten after modernization has decreased in 2 times <https://kraj.by/belarus/news/ekonomika/-energopotreblenie-detskogo-sada-v-oshmyanah-posle-modernizatsii-snizilos-v-2-raza-2016-09-21>
* 05.11.2015 **Ecolog.by** Международный День энергосбережения с юными участниками проекта ЕС/ПРООН «Энергоэффективность в школах». <http://www.ecolog.by/news/7007-mezhdunarodnyy-den-energosberezheniya-s-yunymi-uchastnikami-proekta-esproon-energoeffektivnost-v-shk/>
* 28.08.2016 **Grodzenskaya prauda.** The sun will heat the water for kindergarten pool [http://Hrodnanews.by/category/stroitel-stvo/news27730.html](http://grodnonews.by/category/stroitel-stvo/news27730.html)
* 20.09.2016 **BELTA national news agency** Power consumption in Ashmiany kindergarten after modernization has decreased in 2 times <http://m.belta.by/regions/view/energopotreblenie-detskogo-sada-v-oshmjanah-posle-modernizatsii-snizilos-v-2-raza-211000-2016>
* 24.09.2016 **Polymya** Energy efficient nursery garden №6 inaugurated after upgrade In Ashmiany <http://www.polymia.by/2016/09/v-oshmyanax-torzhestvenno-otkryli-energoeffektivno-modernizirovannyj-yasli-sad-6/>
* 27.09.2016 **Tut.by.** The energy-efficient kindergarten opened in Ashmiany, modernized for the EU funds <http://news.tut.by/society/513656.html>
* 23.09.2016 **News.21.by** EE kindergarten opened in Ashmiany <http://news.21.by/other-news/2016/09/23/1243639.html>
* 27.09.2016 **Дзержинск.by** Working to achieve results [http://Dziarzhynsk.by/novosti/rabota-na-rezultat.-v-ssh-4-proshlo-vyezdnoe-zasedanie-prezidiuma-ck-profsojuza-rabotnikov-obrazovanija-i-nauki/](http://dzerzhinsk.by/novosti/rabota-na-rezultat.-v-ssh-4-proshlo-vyezdnoe-zasedanie-prezidiuma-ck-profsojuza-rabotnikov-obrazovanija-i-nauki/)
* 19.10.2016 **Department for EE site** Sharing positive experience <http://energoeffekt.gov.by/news/22-news-2016/2537>
* 15.11.2016 **GreenBelarus** $ 740,000 invested to Dziarzhynsk school for EE modernization [http://greenbelarus.info/articles/15-11-2016/v-energoeffektivnost-Dziarzhynskoy-shkoly-vlozhili-740-000](http://greenbelarus.info/articles/15-11-2016/v-energoeffektivnost-dzerzhinskoy-shkoly-vlozhili-740-000)
* 31.03.2016 **GreenBelarus** Viciebsk Engineering College sets the tone for the entire city [http://greenbelarus.info/articles/31-03-2016/Viciebskiy-kolledzh-mashinostroeniya-po-energoeffektivnosti-zadayot-ton-vsemu](http://greenbelarus.info/articles/31-03-2016/vitebskiy-kolledzh-mashinostroeniya-po-energoeffektivnosti-zadayot-ton-vsemu)
* 6.12.2016 **Press-release.by** 1st EE College will emerge in Viciebsk [http://www.press-release.by/v-Viciebske-poyavitsya-pervyj-energoeffektivnyj-kolledzh/](http://www.press-release.by/v-vitebske-poyavitsya-pervyj-energoeffektivnyj-kolledzh/)
* 11.11.2016 **BELTA national news agency** EE school opened in Dziarzhynsk [http://www.belta.by/regions/view/energoeffektivnaja-shkola-otkrylas-v-Dziarzhynske-218841-2016/](http://www.belta.by/regions/view/energoeffektivnaja-shkola-otkrylas-v-dzerzhinske-218841-2016/)
* 1.04.2016 **Vitbichy** EE technologies have been being introduced to Viciebsk college <http://www.vitbichi.by/news/ekonomika/innovatsii_investitsii/post8245.html>
* 11.11.2016 **Дзержинск.by** Being most energy efficient <http://dzerginsk.by/news/2016/11/11/kogda-ty-samyy-energoeffektivnyy-na-rayone>
* 9.12.2016 **Vitbichi.by** Unique project implemented in Viciebsk college <http://www.vitbichi.by/news/ekonomika/post14171.html>
* 12.12.2016 **Viciebskiye vesti** Solar collector and smart ventilation in Viciebsk college <http://vitvesti.by/ekologiia/solnechnyi-kollektor-i-umnuiu-ventiliatciiu.html>
* 23.05.2016 **Дзержинск.by** Energysaving: step by step [http://Dziarzhynsk.by/novosti/energosberezhenie-shag-za-shagom.-v-ssh-4-prodolzhaetsja-realizacija-proekta-esproon/](http://dzerzhinsk.by/novosti/energosberezhenie-shag-za-shagom.-v-ssh-4-prodolzhaetsja-realizacija-proekta-esproon/)
* 29.01.2016 **BELTA national news agency** “Energomarafon” in Hrodna region <http://photobelta.by/ru/photos?rubric_id&theme_id=50351&id=262334&page=1>

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* 17.02.2016 **«Uzvyshsha**” newspaper. Not easy way to benefits
* 18.03.2016 “**SB-Belarus Today**” Results of Energomarafon in Gomel <http://www.sb.by/v-belarusi/article/v-gomele-podveli-itogi-respublikanskogo-konkursa-energomarafon.html>
* March,2016 **“Belarus” magazine** Emergency energy races to rescue <http://www.sb.by/by-belarus-magazine/zhytstse_bel/article/khutkaya-energetychnaya-spyashaetstsa-na-dapamogu-albo-karysnyya-rok-dlya-daroslykh.html>
* May, 2016 **«Education in Minsk region” magazine** Report on Dziarzhynsk pilot
* 21. 09.2016 **“Zvyazda” newspaper»** EE in schools’ project is being implemented in Ashmiany <http://zviazda.by/be/news/20160920/1474394608-praekt-energaefektyunasc-u-shkolah-realizuyuc-u-ashmyanah>
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* 03.05.2016 **Viciebskiy kouryer** 600$: the way Viciebsk college saves energy
* 12.12.2016 **Viciebskiye vesti** Solar collector and smart ventilation in Viciebsk college <http://vitvesti.by/ekologiia/solnechnyi-kollektor-i-umnuiu-ventiliatciiu.html>
* July 2016 **“Energoeffectivnost” magazine** Let us be thrifty! Interview with director of Dziarzhynsk school **Lyudmila Louksha**
* 26.01.2017 **“Teacher’s newspaper**” Energy Efficient Way of Life Interview with director of Dziarzhynsk school Lyudmila Louksha

**TV and Radio reports:**

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* 20.04. 2016 **“Nashe TV” (Viciebsk)** Report on pilot site. <https://youtu.be/shqLdy9J8dc?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
* 19.03.2016 **Belarus 1** TV Report on pilot site. <https://youtu.be/UF9j52KwAFU?list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
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* 22.06.2016 **“Nashe TV” (Viciebsk**) Report on pilot site. <https://www.youtube.com/watch?v=E9T-dk-g6Yg&index=3&list=PLls2SDwF9khjAw61Csmo4ToP8qs6uNNRD>
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* 15.11.16 **National Radio Channel One “Radiofact” program** Report on Dziarzhynsk pilot. Interviews with director of the school **Lyudmila Louksha** and EU projects coordinator **Elena Rakova** <https://yadi.sk/i/WB73LpQ033KpKq>
* 9.12.2016 **National Radio Channel One** Opening of Viciebsk pilot**.** Interview with Head of EU Delegation to Belaru1s **Andrea Wiktorin and Sergei Orekhov**, Deputy Head of Viciebsk Oblispolkom Department of Education <https://yadi.sk/i/qJ0Fa1bb33KpU4>

**Press releases**

* Mar 21, 2016 Best Students Projects on Energy Efficiency honored in Gomel with UNDP support <http://www.by.undp.org/content/belarus/en/home/presscenter/pressreleases/2016/03/21/best-students-projects-on-energy-efficiency-honored-in-gomel-with-undp-support.html>
* May 24, 2016 UNDP and EU Launch “SaveMan” MMRPG about Energy Efficiency <http://www.by.undp.org/content/belarus/en/home/presscenter/pressreleases/2016/05/24/undp-pilot-launches-saveman-mmrpg-on-energy-efficiency-.html>
* Jun 27, 2016 “Green Economy” and “Energopolis”: UNDP Projects Present Interactive Games during Eco-Fest in Novogrudok <http://www.by.undp.org/content/belarus/en/home/presscenter/pressreleases/2016/06/27/-.html>
* Sep 26, 2016 EU-UNDP “Energy Efficiency in Schools” project opens the 2nd energy efficient kindergarten in Belarus <http://www.by.undp.org/content/belarus/en/home/presscenter/pressreleases/2016/09/26/eu-undp-energy-efficiency-in-schools-project-opens-the-2nd-energy-efficient-kindergarten-in-belarus.html>
* Oct 17, 2016 Sharing positive experience in complex approach to energy efficiency <http://www.by.undp.org/content/belarus/en/home/presscenter/pressreleases/2016/10/17/sharing-positive-experience-in-complex-approach-to-energy-efficiency-.html>
* 12.12.2016 “Energopolis” board game is out! <http://en.energybel.by/energopolis-board-game-is/>
* June 17, 2016 “Great job!” Sanaka Samarasinha visits “Energy Efficiency in Schools” pilot site <http://en.energybel.by/great-job-sanaka-samarasinha-visits-energy-efficiency-in-schools-pi/>
* February 12, 2016 Dziarzhynsk on the way to thrifty lifestyle [http://energybel.by/Dziarzhynsk-na-puti-k-berezhlivosti/](http://energybel.by/dzerzhinsk-na-puti-k-berezhlivosti/)
* April 27, 2016 PSC at the pilot site <http://energybel.by/koordinatsionny-sovet-proekta-na-pilotnom-obekte/>
* May 18, 2016 “Saveman” –saving the world from energy-eaters. <http://energybel.by/saveman-online-igra/>
* May 30, 2016 “Energy Saving Ambulance” tells about SDGs in Polotsk <http://energybel.by/skoraya-energeticheskaya-pomoshh-rasskazala-o-celyax-ustojchivogo-razvitiya-v-polocke/>
* June 10, 2016 Project reporting peculiarities <http://energybel.by/tonkosti-proektnoj-otchetnosti-2/>
* June 30, 2016 Ashmiany hosts PSC [http://energybel.by/Ashmiany-prinimayut-koordinacionnyj-sovet-proekta/](http://energybel.by/oshmyany-prinimayut-koordinacionnyj-sovet-proekta/)
* September 19, 2016. The first one is opened <http://energybel.by/pervyj-poshel/>
* November 13, 2016 International Energy Saving Day: EE school in Dziarzhynsk is opened [http://energybel.by/energoeffectivnaya-shkola-Dziarzhynsk/](http://energybel.by/energoeffectivnaya-shkola-dzerzhinsk/)
* December 11, 2016 Two kindergartens, high school and now college! <http://energybel.by/dva-detsadika-sr-shkola-kolledzh/>

**UNDP Facebook posts**

* January 15. The sixth issue of EU / UNDP Project "Energy Efficiency in Schools" newsletter is out <https://www.facebook.com/UNDPinBelarus/posts/1673176169638330>
* February 1. A small victory for our pilot! <https://www.facebook.com/UNDPinBelarus/posts/1679800775642536>
* February 10 "Energy-Saving Ambulance" of EU/UNDP "Energy Efficiency in Schools" project dropped in for a moment to the EU Neighbourhood Info Centre:) <https://www.facebook.com/UNDPinBelarus/posts/1683168041972476>
* February 10 Teplusha, Elik and Kaplyusha. Dolls for preschoolers tell how to save energy. <https://www.facebook.com/UNDPinBelarus/posts/1683178091971471>
* February 12 “On the way to thrifty lifestyle” <https://www.facebook.com/UNDPinBelarus/posts/1683806098575337>
* March 15 Test your knowledge on energy efficiency! <https://www.facebook.com/UNDPinBelarus/posts/1696216874000926>
* March 21 «Energomarafon-2015»: Sharing creative approaches to energy saving <https://www.facebook.com/UNDPinBelarus/posts/1699145680374712>
* March 21 "Save energy” – «Energomarafon-2015» Best Video <https://www.facebook.com/UNDPinBelarus/posts/1699200837035863>
* May 19. First Energy Efficient Kindergarten soon opens in Hrodna <https://www.facebook.com/UNDPinBelarus/posts/1726344960988117>
* May 19 The world is in danger! <https://www.facebook.com/UNDPinBelarus/posts/1726375274318419>
* May 31 “Energy Saving ambulance” tells about #SDGs in Polotsk <https://www.facebook.com/UNDPinBelarus/posts/1731580710464542>
* June 16 “Great job!” Sanaka Samarasinha visits “Energy Efficiency in Schools” pilot site <https://www.facebook.com/UNDPinBelarus/posts/1739487523007194>
* June 16 UN Resident Coordinator / UNDP Resident Representative in Belarus Sanaka Samarasinha shares experiences with local journalists on his visit to EU-UNDP "Energy Efficiency in Schools" pilot site - Viciebsk M.F. Shmyryev State Vocational Engineering College <https://www.facebook.com/UNDPinBelarus/posts/1739592002996746>
* June 27 “Green Economy” and “Energopolis”: green EU-UNDP projects present interactive games at eco-fest in Navahrudak <https://www.facebook.com/UNDPinBelarus/posts/1744710522484894>
* October 13 Sharing positive experience in complex approach to energy efficiency <https://www.facebook.com/UNDPinBelarus/posts/1796012230688056>
* November 12 to celebrate November 11, International Energy Saving Day <https://www.facebook.com/UNDPinBelarus/posts/1813506695605276>
* November 15 First energy-efficient school is opened in Belarus <https://www.facebook.com/UNDPinBelarus/posts/1814921655463780>
* December 10 Two Kindergartens, High School and now College! <https://www.facebook.com/UNDPinBelarus/posts/1829315720691040>

**Video:**

* “Energy Saving Ambulance” in outer space <https://www.youtube.com/watch?v=9xixz6BwDuw>
* Children's performance "How Kolobok was seeking energy savings" <https://www.youtube.com/watch?v=scrZAKU-uGY&feature=youtu.be>

**Comic strips**

* + Adventures of “Energy Saving Ambulance” in outer space <https://yadi.sk/i/l2VRxe28ren23>
  + Adventures of “Energy Saving Ambulance in Energopolis <https://yadi.sk/i/5fiGrCvf322ZfK>

**“Energopolis” board game** <http://en.energybel.by/energopolis-board-game-is/>

**Media Coverage in 2015**

**Web media and info agencies:**

* 20.05.2015 “**Belta” National News Agency** **–** Belarus is ready to implement integrated solutions for energy saving <http://www.belta.by/ru/all_news/society/Belarus-gotova-realizovyvat-kompleksnye-reshenija-po-energosberezheniju---ekspert_i_705920.html>
* 23.04.2015 «**Interfax”** **–** The waders eco-festival will take place in Turov MAY 1: all nature lovers are welcomed <http://www.interfax.by/news/belarus/1182528http://www.interfax.by/news/belarus/1182528>
* 24.04.2015 **energoeffekt.gov.by** – Energy Efficiency Becomes Excellent Platform for Self-Fulfillment <http://energoeffekt.gov.by/news/22-news/1993-2015-04-24-05-42-48.html>
* 24.04.2015 **agronews.by** The waders eco-festival will take place in Turovs <http://agronews.by/news/agroecoturism/11955.html>
* 14.07.2015 **European-Union-in-Belarus** Welcome to "Projects in people" photo exhibition <https://www.facebook.com/pages/European-Union-in-Belarus/159580370757975>
* 15.05.2015 **Press-release.by** The project "Energy Efficiency in Schools" invites to participate in the round table <http://www.press-release.by/proekt-energoeffektivnost-v-shkolax/>
* 16.07.2015 **adnak.by** Animated video of EU / UNDP project "Energy Efficiency in Schools" about the adventures of "Energy-saving Ambulance" took the third place at the Festival of Belarusian advertising "Adnak" in the category "The best social video." <http://adnak.by/peramozhtsyi-ad-nak-2015-pounyi-spis/>
* 10.09.2015 **energoeffekt.gov.by** Preschool Kids Teach the Elderly to Save Energy – an Unusual Event in Ashmiany <http://energoeffekt.gov.by/news/22-news/2110-2015-09-10-06-01-29.html>
* 28.08.2015 Time to change habits <https://sad6osh.schools.by/news/91171>
* 5.10.2015 **energoeffekt.gov.by** The third meeting of the Steering Committee of the project "Energy Efficiency in Schools" was held in the Department of Energy Efficiency <http://energoeffekt.gov.by/news/22-news/2132-2015-10-05-05-53-52.html>
* 05.11.2015 **Ecolog.by** International Day of Energy Saving with young participants of EU / UNDP project "Energy Efficiency in Schools”. Http
* 05.11.2015 **Ecoidea.by** Announcement of the action on energy efficiency [**http://ecoidea.by/afisha/927**](http://ecoidea.by/afisha/927)
* 10.11.2015 **Portal “Kraj.by”** Preschoolers will visit Ashmiany power networks <https://kraj.by/oshmjany/news/sobitiya/-vospitanniki-detskogo-sada-6-posetyat-oshmyanskie-elektricheskie-seti-2015-11-10>
* 13.11.2015 **Press-release.by** Here is Magical Electric Sun! International Energy Saving Day with the Project “Energy Efficiency in Schools” <http://www.press-release.by/vot-ono-magicheskoe-solnce-elektricheskoe-mezhdunarodnyj-den-energosberezheniya-s-proektom-energoeffektivnost-v-shkolax/>
* 12.11.2015 **Magazin “Dikaya priroda Belarusi” WildLife.by** Energy efficient matinee was held in Ashmiany <http://www.wildlife.by/node/42047>
* 13.11.2015 **Belaruskí zyaleny partal** How Belarusian schools and gardens of EU/UNDP Project are becoming energy efficient <http://greenbelarus.info/articles/13-11-2015/fotarepartazh-yak-z-dapamogay-praekta-eurazvyazu-belaruskiya-shkoly-i-sadki>
* 15.11.2015 **“DelaemVmeste.BY**” "Energy Efficiency in Schools": taking care of the energy from an early age <http://delaemvmeste.by/energoeffektivnost-v-shkolah-beregi-energiyu-smolodu/>
* 15.11. 2015 **Wordpress.com** Day of energy saving in Ashmiany kindergarten № 6 <https://alinatsaryova.wordpress.com/2015/11/15/658/>
* 16.11.2015 **Portal communal literacy of population** Tell the children how electricity is born <http://gkx.by/novosti/604-rasskazhite-detyam-kak-rozhdaetsya-elektrichestvo>
* 16.11.2015 **Portal “Kraj.by** Kindergarten №6 in Ashmiany: employees of electricity networks have replaced incandescent bulbs with fluorescent <https://kraj.by/belarus/news/sobitiya/-fotoreportag-v-detskom-sadu-6-v-oshmyanah-sotrudniki-elektricheskih-setey-zamenili-lampochki-nakalivaniya-na-lyuminestse-2015-11-16>
* 18.11.2015 Website Newspaper “**Oshmyanskiy vestnik”** Ašmiany preschoolers learn to save <http://www.osh.by/?p=17348>
* 21.08.2015 **Dziarzhynsk News Portal**. A unique energy efficiency project is being implemented In Dziarzhynsk [http://dzerginsk.by/news/2015/08/21/v-Dziarzhynske-realizuetsya-unikalnyy-proekt-po-energoeffektivnosti](http://dzerginsk.by/news/2015/08/21/v-dzerzhinske-realizuetsya-unikalnyy-proekt-po-energoeffektivnosti)
* 21.11.2015 The project "Energy Efficiency in Schools” "<https://ssi-ozery.schools.by/news/115761>
* 7.09.2015 **Dziarzhynsk News Portal** School of the future: solar panels and energy-saving lighting. School №4 preparing for the implementation of the UNDP project [http://Dziarzhynsk.by/novosti/shkola-buduschego-solnechnye-batarei-i-energosberegajuschee-osveschenie.-ssh-4-gotovitsja-k-realizacii-proekta-proon/](http://dzerzhinsk.by/novosti/shkola-buduschego-solnechnye-batarei-i-energosberegajuschee-osveschenie.-ssh-4-gotovitsja-k-realizacii-proekta-proon/)
* 30.11.2015 **Zautra.by** "Energy-saving Ambulance" visited Ashmiany with a set of energy-saving light bulbs, a new coloring book and journalists. <http://zautra.by/art.php?&sn_nid=20053>

**Printed media:**

* **“Ashmiany Herald”** 21. 11.2015 **Ašmiany** preschoolers learn to save
* **“Energy Efficiency” magazine**, **September.** To find a gold bar, you need to look not up, but under your feet
* **“Busya” magazine for kids, August** "Energy Efficiency in Schools" pilot Ashmiany kindergarten №6 Project Initiative “Birthday of electric bulbs"
* **“Praleska” magazine for teachers, October** 2015 **“**Time to change habits”
* **“Praleska” magazine for teachers, October** 2015 “Beregosha and his friends”
* **“Teachers Newspaper**” 23.05.2015 **“**We will work together to address the important issue”
* **“Ashmiany Herald”** 25.04.2015 **“**We live efficiently with heat and energy being saved”
* **“Teachers Newspaper**” 10.11.2015 “Energy-efficient activities of the project "Energy Efficiency in Schools" in Hrodna and Ashmiany”
* **“Uzvyshsha” newspaper (Dziarzhynsk)** № 62. Fruitful cooperation in the field of energy saving
* **“Power and Energy” magazine** 24.11.2015.International Day for Energy Saving in Ashmiany

**TV and Video reports:**

* **“Ashmiany Herald”** 22.04.2015 “Energomarafon” <https://www.youtube.com/watch?v=ezad01oka7c>
* **“Belarus 1” TV channel** 29.10.2015, Project’s pilot in Viciebsk [http://www.tvr.by/news/obshchestvo/Viciebskiy\_region\_podderzhal\_tseli\_ustoychivogo\_razvitiya\_oon/](http://www.tvr.by/news/obshchestvo/vitebskiy_region_podderzhal_tseli_ustoychivogo_razvitiya_oon/)
* **“Viciebsk” TV & Radio Company** 30.10.2015 UN70 Express + Project’s pilot
  + <https://www.youtube.com/watch?v=Ox_HB209G_Y>

**Radio reports:**

* **National Radio Channel 1** 13.11.2015, "Radiofact" information-analytical program - How to save energy <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>
* **National Radio Channel 1** 31.08.2015, "Radiofact" information-analytical program. More efficient use of energy resources at the local level through the introduction of energy-saving technologies in educational institutions <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>
* **National Radio Channel 1** 25.08.2015, News release: time to change habits - a series of energy-efficient actions starts today in Hrodna region. <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>
* **Radio “Belarus» international** 15.11.2015 Action on Energy-Saving took place in Ashmiany <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>

**Interviews:**

* **Project’s Newsletter № 4 Tatiana Trushanina, Director of Viciebsk M.F. Shmyryev State Vocational Engineering College:** "Energy efficiency and conservation - an integral part of the educational process in college." <http://energybel.by/energoeffektivnost-v-shkolax-informacionnyj-byulleten-4/>
* **Project’s Newsletter № 5 Lyudmila Luksha, Director of Dziarzhynsk school № 4: “**Being good stewards of the school, district, country” <http://energybel.by/energoeffektivnost-v-shkolax-informacionnyj-byulleten-5/>
* **Project’s Newsletter № 6 Marina Melnikova, Director of Ashmiany kindergarten № 6:** “Our children will live in conditions of limited resources” <http://energybel.by/energoeffektivnost-v-shkolax-informacionnyj-byulleten-6/>
* **“Ashmiany Herald”** 22.04.2015 **Siarhei Nikitsin**, Project Manager <https://www.youtube.com/watch?v=ezad01oka7c>
* **“Belarus 1” TV channel** 29.10.2015 **Siarhei Nikitsin**, Project Manager [http://www.tvr.by/news/obshchestvo/Viciebskiy\_region\_podderzhal\_tseli\_ustoychivogo\_razvitiya\_oon/](http://www.tvr.by/news/obshchestvo/vitebskiy_region_podderzhal_tseli_ustoychivogo_razvitiya_oon/)
* **“Energy Efficiency” magazine**, **September . Siarhei Nikitsin,** Project Manager, **Valentina Stalygo,** Expert
* **“Viciebsk Herald”** 30.10.2015 **Siarhei Nikitsin,** Project Manager<https://www.youtube.com/watch?v=Ox_HB209G_Y>
* **National Radio Channel 1** 13.11.2015 **Siarhei Nikitsin, Project Manager** <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>
* **National Radio Channel 1** 31.08.2015 **Siarhei Nikitsin, Project Manager** <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>
* **National Radio Channel 1** 25.08.2015 **Siarhei Nikitsin, Project Manager** <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>
* **Radio “Belarus» international** 15.11.2015 **Siarhei Nikitsin, Project Manager** <https://drive.google.com/folderview?id=0B8SC92ZeOyeaZklrMWItcDdnNlU&usp=sharing>

**Promo Production**

* **Project’s Newsletters (№№ 4-6)** <http://energybel.by/category/public/bulleten/>
* **Animated Video №3** Adventures of “Energy-saving ambulance” “The Pool and the Solar Collector” <https://www.youtube.com/watch?v=U84C9uReTug/>
* **Animated Video №4** Adventures of “Energy-saving ambulance” “Energy-Saving Ambulance Space Walks” <https://www.youtube.com/watch?v=9xixz6BwDuw>
* **Documentary (promotional video)** The video demonstrates mutual work and collaboration of The Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus, European Union and United Nations Development Programme on energy efficiency issues and the use of local and renewable energy resources in the Republic of Belarus. The video was produced especially for the 20th Anniversary Belarusian Energy and Ecology Forum, which was held in Minsk from 13 to 16 of October 2015 by two UNDP projects on energy efficiency. <https://youtu.be/FlNEkYpmrJE>
* **Coloring book** on “Energy-saving ambulance” adventures №1 <http://energybel.by/prygody-hutkai-energadapamogi-mozhna-razmaliavats/>
* **Coloring book** on “Energy-saving ambulance” adventures №2 <https://yadi.sk/d/LNHuezK1mKRae>

**Media Coverage in 2014**

* 1 октября 2014 **Департамент по энергоэффективности Сергей Семашко: «Энергосбережение должно стать стилем жизни, а не тяжелой обязанностью»**
  + [**http://energoeffekt.gov.by/publications/1770--l-r.html**](http://energoeffekt.gov.by/publications/1770--l-r.html)
* 6 октября 2014
  + **Проект «Энергоэффективность в школах» начинает серию семинаров по энергоэффективности**
  + [**http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/10/06/-/**](http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/10/06/-/)
* 11 октября 2014 **Газета «Гродненская правда»**
  + **«Цель – энергоэффективность» (Семинар в Гродно)**
* 11 октября 2014[**www.by.undp.org**](http://www.by.undp.org)
  + **Семинары по энергоэффективности: подключаем Минскую область**
  + [**http://www.by.undp.org/content/belarus/ru/home/presscenter.html?pagePos=2**](http://www.by.undp.org/content/belarus/ru/home/presscenter.html?pagePos=2)
* 23 октября 2014[**http://www.by.undp.org/**](http://www.by.undp.org/)
  + **Проект «Энергоэффективность в школах»: Витебщина в тренде**
  + [**http://www.by.undp.org/content/belarus/ru/home/presscenter.html?pagePos=2**](http://www.by.undp.org/content/belarus/ru/home/presscenter.html?pagePos=2)
* 30 октября 2014 **Газета «Витьбичи» №122 (3591)**
  + **«Чтобы снизить энергозатраты» (семинар в Витебске)**
* 30 октября 2014 **Департамент по энергоэффективности** [**http://energoeffekt.gov.by**](http://energoeffekt.gov.by)
  + **Проект «Энергоэффективность в школах»: семинар в Витебске** [**/http://energoeffekt.gov.by/news/22-news/1801--l-r-.html**](file:///C:\http:\energoeffekt.gov.by\news\22-news\1801--l-r-.html)
* 30 октября 2014 **Газета «Витьбичи»** 
  + **Евросоюз профинансирует переоборудование одной из Витебских школ в энергоэффективную.**
  + [**http://www.vitbichi.by/?p=34002**](http://www.vitbichi.by/?p=34002)
* 30 октября 2014 **Viciebskcity.net**
  + **Евросоюз профинансирует переоборудование одной из Витебских школ в энергоэффективную**
  + [**http://Viciebskcity.net/nws.php?id=4359**](http://vitebskcity.net/nws.php?id=4359)
* 06 ноября 2014 **Сайт** [**www.by.undp.org**](http://www.by.undp.org)
* **Международный День энергосбережения с проектом «Энергоэффективность в школах»**  <http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/11/06/-/>
* 7 ноября 2014 **Департамент по энергоэффективности** <http://energoeffekt.gov.by/>
  + **«К международному Дню энергосбережения»**
  + <http://energoeffekt.gov.by/news/22-news/1812-2014-11-06-08-18-06.html>
* 12 ноября 2014 **БЕЛТА** (Белорусское информационное агенство)
  + **Теплоотражающие экраны позволят Витебскому колледжу имени Шмырева**
  + **экономить в год до Br12 млн**
* 12 ноября 2014 **21.by** 
  + **Витебский колледж сократил потери тепла с минимумом затрат**
  + [**http://news.21.by/society/2014/11/12/1018342.html**](http://news.21.by/society/2014/11/12/1018342.html)
* 12 ноября 2014 **Tut.by (информационный портал)**
  + **Витебский колледж сократил потери тепла с минимумом затрат**
  + [**http://news.tut.by/society/423342.html**](http://news.tut.by/society/423342.html)
* 12 ноября 2014 **Mts.by** 
  + **Витебский колледж сократил потери тепла с минимумом затрат**
  + [**http://wap.mts.by/yb/6238100156/world\_news?wt\_rp=2068&id=288533632**](http://wap.mts.by/yb/6238100156/world_news?wt_rp=2068&id=288533632)
* 12 ноября 2014 **Belgid.by** 
  + **Витебский колледж сократил потери тепла с минимумом затрат**
  + [**http://belgid.by/news/life/5151**](http://belgid.by/news/life/5151)
* 12 ноября 2014 **«Ежедневник»** (интернет-газета) [www.ej.by](http://www.ej.by)
  + **Витебский колледж сократил потери тепла на 3percent с минимумом затрат**
  + [**http://www.region.ej.by/Viciebsk/2014/11/12/Viciebskiy-kolledzh-sokratil-poteri-tepla-na-3-s-minimumom-zatrat.html**](%20http:/www.region.ej.by/vitebsk/2014/11/12/vitebskiy-kolledzh-sokratil-poteri-tepla-na-3-s-minimumom-zatrat.html)
* 12 ноября 2014 **Belport.by**
  + **Витебский колледж сократил потери тепла на 3percent с минимумом затрат**
  + [**http://belport.by/230671-Viciebskiy-kolledzh-sokratil-poteri-tepla-s-minimumom-zatrat.html**](http://belport.by/230671-vitebskiy-kolledzh-sokratil-poteri-tepla-s-minimumom-zatrat.html)
* 12 ноября 2014 **Bravica.su** 
  + **Витебский колледж сократил потери тепла на 3percent с минимумом затрат**
  + [**http://www.bravica.su/belarus/Viciebsk.htm**](http://www.bravica.su/belarus/vitebsk.htm)
  + **Витебский колледж сократил потери тепла с минимумом затрат**
  + [**http://gramotey.by/news/32-Viciebskij\_kolledzh\_sokratil\_poteri\_tepla\_s\_minimumom\_zatrat.html**](http://gramotey.by/news/32-vitebskij_kolledzh_sokratil_poteri_tepla_s_minimumom_zatrat.html)
* Ноябрь 2014 **Журнал «Энергетика и ТЭК»**
  + **Энергоэффективность в школах. 11 ноября –международный День энергосбережения.**
* 13 ноября 2014 **Телеканал «Скиф» Новости региона**
  + **Энергоэффективность в школах-международный День энергосбережения**
  + [**http://vk.com/video-32410281\_170489521?hash=256d6633359a4bf4**](http://vk.com/video-32410281_170489521?hash=256d6633359a4bf4)
  + [**http://skif.by/index.php?limitstart=12**](http://skif.by/index.php?limitstart=12)
  + [**https://www.dropbox.com/sh/muc3mly8u9wy4vc/AAC0TZ37m79I02XcVzbIAHKZa?dl=0**](https://www.dropbox.com/sh/muc3mly8u9wy4vc/AAC0TZ37m79I02XcVzbIAHKZa?dl=0)
* 13 ноября 2014 **YOUTUBE.COM/Telekanal “SKIF” Новости региона**
  + [**http://www.youtube.com/watch?v=0w5\_IxE6GVI**](http://www.youtube.com/watch?v=0w5_IxE6GVI)
* Ноябрь 2014 **Журнал «Энергоэффективность»**
  + **В Витебском колледже стало теплее.**
* 13 ноября 2014 **Радиостанция «Беларусь»**
  + **Энергоэффективность в школах-международный День энергосбережения**
  + [**https://www.dropbox.com/sh/hhr6ampa60vsb93/AACZrqCtj1754WWsj0yUMtyga?dl=0**](https://www.dropbox.com/sh/hhr6ampa60vsb93/AACZrqCtj1754WWsj0yUMtyga?dl=0)
* 14 ноября 2014 **Первый канал Национального Радио**
  + **Энергоэффективность в школах-международный День энергосбережения**
  + [**https://www.dropbox.com/sh/wrxpcks833tpi4v/AACk8SLG-CRftr-T2nw3go66a?dl=0**](https://www.dropbox.com/sh/wrxpcks833tpi4v/AACk8SLG-CRftr-T2nw3go66a?dl=0)
* 14 ноября 2014 **Energobelarus.by** 
  + **Витебск. Энергосбережение без сенсаций, но с большими перспективами.**
  + [**http://energobelarus.by/articles/energosberezhenie/Viciebsk\_energosberezhenie\_bez\_sensatsiy\_no\_s\_bolshoy\_perspektivoy/**](http://energobelarus.by/articles/energosberezhenie/vitebsk_energosberezhenie_bez_sensatsiy_no_s_bolshoy_perspektivoy/)
* 17 ноября 2014 **Департамент по энергоэффективности** [**http://energoeffekt.gov.by/**](http://energoeffekt.gov.by/)
  + **Адреса энергосбережения. В Витебском колледже стало теплее.** [**http://energoeffekt.gov.by/news/22-news/1820-2014-11-17-05-39-16.html**](http://energoeffekt.gov.by/news/22-news/1820-2014-11-17-05-39-16.html)
* 17 ноября 2014[**http://www.by.undp.org/**](http://www.by.undp.org/)
  + **Проект "Энергоэффективность в школах": обучаем обучать энергоэффективности**.
  + <http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/11/17/-1/>
* 17 ноября 2014 **Департамент по энергоэффективности** http://energoeffekt.gov.by/
  + «**К международному Дню энергосбережения»**
  + <http://energoeffekt.gov.by/news/22-news/1820-2014-11-17-05-39-16.html>
* 18 ноября 2014 **Ecolog.by** 
  + **Проект «Энергоэффективность в школах» провел акцию в Витебском колледже машиностроения** [**http://www.ecolog.by/news/5920-proekt-energoeffektivnost-v-shkolakh-provel-aktsiyu-v-Viciebskom-kolledzhe-mashinostroeniya/**](http://www.ecolog.by/news/5920-proekt-energoeffektivnost-v-shkolakh-provel-aktsiyu-v-vitebskom-kolledzhe-mashinostroeniya/)
* 18 ноября 2014 **Press-release.by** 
  + **Проект «Энергоэффективность в школах» провел акцию в Витебском колледже машиностроения** [**http://www.press-release.by/proekt-energoeffektivnost-v-shkolax-provel-akciyu-v-Viciebskom-kolledzhe-mashinostroeniya/**](http://www.press-release.by/proekt-energoeffektivnost-v-shkolax-provel-akciyu-v-vitebskom-kolledzhe-mashinostroeniya/)
* 18 ноября 2014 **Газета «Витебская ярмарка»**
  + **В Витебском колледже станет теплее.**
* 18 ноября 2014 **Журнал «Дикая природа Беларуси» Wildlife.by**
  + **Как сберегают энергию в учебных заведениях?** [**http://wildlife.by/node/32574**](http://wildlife.by/node/32574)
* 18 ноября 2014 **Газета «Витьбичи»** 
  + **Теплоотражающие экраны, установленные в Витебском ГПТК машиностроения, позволят сэкономить на отоплении 12 млн. рублей в год.**
  + [**http://www.vitbichi.by/?p=34556**](http://www.vitbichi.by/?p=34556)
* 19 ноября2014 **Newsvit.by**
  + **Проект «Энергоэффективность в школах» провел акцию в Витебске**
  + [**http://newsvit.by/index.php/biznes-nashego-goroda/item/proekt-energoeffektivnost-v-shkolakh-provel-aktsiyu-v-Viciebske**](http://newsvit.by/index.php/biznes-nashego-goroda/item/proekt-energoeffektivnost-v-shkolakh-provel-aktsiyu-v-vitebske)
* 19 ноября 2014 **Департамент по энергоэффективности** 
  + <http://energoeffekt.gov.by/news/22-news/1822-2014-11-19-07-52-15.html> **Цикл семинаров-практикумов для педагогов по вопросам энергоэффективности проходит в Департаменте по энергоэффективности**
* 25 ноября 2014 **Itogi.info** 
  + **В Беларуси учебные заведения соревнуются в экономии тепла и электричества**
  + [**http://itogi.info/novostnaya-lenta/v-belarusi-uchebnye-zavedeniya-sorevnuyutsya-v-ekonomii-tepla-i-elektrichestva.html**](http://itogi.info/novostnaya-lenta/v-belarusi-uchebnye-zavedeniya-sorevnuyutsya-v-ekonomii-tepla-i-elektrichestva.html)
* 4 декабря **2014 ProViciebsk.by** (интернет-газета)
  + **ЕС оплатит энергоэффективную модернизацию трех школ.**
  + [http://proViciebsk.by/novosti/tehnologii/es-oplatit-energoeffektivnuyu-modernizaciyu-treh-shkol](http://provitebsk.by/novosti/tehnologii/es-oplatit-energoeffektivnuyu-modernizaciyu-treh-shkol)
* 4 декабря 2014 <http://www.by.undp.org/>
  + **Проект «Энергоэффективность в школах»: к приему заявок на конкурс проектных инициатив – готовы**
  + [**http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/12/04/-0/**](http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/12/04/-0/)
* Декабрь 2014 **Журнал «Экология на предприятии»**
  + **В Витебском колледже стало теплее**
* 17 декабря 2014 <http://www.by.undp.org/>
  + **Практикумом в Витебске проект «Энергоэффективность в школах» завершил цикл семинаров по вопросам энергоэффективности для группы учителей**
  + [**http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/12/17/-/**](http://www.by.undp.org/content/belarus/ru/home/presscenter/pressreleases/2014/12/17/-/)

## **Annex 5: Technical details of each pilot site**

|  |  |
| --- | --- |
|  | energy-efficient technologies |
| **Dziarzhynsk** | * Installation of new modern windows with triple glazing will reduce thermal losses through windows by at least 50percent (21percent of total heat consumption). * The introduction of energy-efficient lighting will reduce energy consumption by 10percent. * Solar collectors, which are expected to reduce heat consumption for hot water supply by 50-100percent (depending on the season) (about 7percent of total energy consumption). This technology is still not widely distributed in the educational institutions of Belarus and the school will serve as a demonstration pilot facility for the promotion of new technology. * Utilization of the heat energy of the vented ventilation air will reduce heat losses in the ventilation system by 60-70percent (8.5percent of total heat consumption), and also demonstrate the economic efficiency of using this technology in educational institutions * Thermal insulation of walls and roof. These measures make it possible to reduce heat losses by increasing the thermal resistance of enclosing structures. As a result, heating costs will be reduced by 35percent of the total heat consumption. * Installation of new energy-efficient kitchen equipment will reduce energy consumption by 20percent. |
| **Ashmiany** | * The installation of new modern windows with triple glazing will reduce thermal losses through windows by at least 50percent (21percent of total heat consumption). * The introduction of energy-efficient lighting will reduce energy consumption by 10percent. * Solar collectors, which are expected to reduce heat consumption for hot water supply by 50-100percent (depending on the season) (about 7percent of total energy consumption). This technology is still not widely distributed in the educational institutions of Belarus and the kindergarten will serve as a demonstration pilot facility for the promotion of new technology. * Utilization of the heat energy of the vented ventilation air will reduce heat losses in the ventilation system by 60-70percent (8.5percent of total heat consumption), and also demonstrate the economic efficiency of using this technology in educational institutions * Thermal insulation of walls and roof. These measures make it possible to reduce heat losses by increasing the thermal resistance of enclosing structures. As a result, heating costs will be reduced by 35percent of the total heat consumption. * Installation of new energy-efficient kitchen equipment will reduce energy consumption by 20percent. |
| **Hrodna** | * + - * Solar collectors, which are expected to reduce heat consumption for hot water supply by 50-100percent (depending on the season) (about 7percent of total energy consumption). This technology is still widespread in the educational institutions of Belarus and the kindergarten will serve as a demonstration pilot for the spread of new technology.       * Thermal insulation of walls and roof. These measures make it possible to reduce heat losses by increasing the thermal resistance of enclosing structures. As a result, heating costs will be reduced by 35percent of the total heat consumption.       * Installation of new modern windows with triple glazing will reduce thermal losses through windows by at least 50percent (21percent of total heat consumption).       * The introduction of energy-efficient lighting will reduce energy consumption by 10percent.       * Installation of new energy-efficient kitchen equipment will reduce energy consumption by 20percent. |
| **Viciebsk State Vocational Technical College of Mechanical Engineering named after M.F. Shmyreva:** | * It is expected that solar collectors will reduce the cost of heating, which is usually consumed in heat exchangers of the hot water system in departmental buildings, by 50-100percent (depending on the season) (about 7percent of the total amount of heat energy consumed). These technologies have not previously been widely used in the construction sector in Belarus, and the college will act as a demonstration and pilot site for the promotion of new technologies. * The use of a heat recovery system will reduce heat energy output outside the exhaust air by 60-70percent (8.5percent of the total amount of heat energy consumed) and will determine the economic efficiency of the use of such technologies in schools. * Warming of walls and roof. Thermal insulation helps to reduce heat losses due to increased thermal resistance. As a result, the heat energy consumption for space heating will be reduced by 35percent of the total heat consumption. * Installation of new, modern windows with double-glazed windows will reduce heat losses through windows by at least 50percent (21percent of total heat consumption). * The installation of energy-saving lamps will reduce energy consumption by 10percent. * The installation of new energy-efficient equipment in the kitchen will reduce energy consumption by 20percent. * The installation of heat reflecting screens will reduce the consumption of thermal energy by 3percent. |

## **Annex 6 Additional information pertaining to the Evaluation scope and Methodology**

Table 17: Mapping of evaluation criteria and issues

| Evaluation Criteria | | Explanation of the evaluation criteria |
| --- | --- | --- |
| Project formulation | Relevance of project concept | an assessment of the appropriateness of the objectives, planned outputs, activities and inputs as compared to cost-effective alternatives. The executing modality and managerial arrangements will also be assessed along with the adequacy of the work plan, planned duration and budget of the project. In addition, the evaluation will assess whether project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities |
| Implementation approach | How and why outcomes (listed as outputs in the project document) and strategies contribute to the achievement of the expected results? Has the project been effectively undertaking adaptive management in order to respond to changing conditions? |
| Country ownership/  Driveness  Stakeholder participation | Whether or not and how local stakeholders participated in project management and decision-making. This will include an analysis of the strengths and weaknesses of the approach adopted by the project and suggestions for improvement if necessary;  Whether the project consulted and made use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the implementation and evaluation of project activities?  Adequacy of the dissemination of project information to partners and stakeholders and if necessary suggesting more appropriate mechanisms and  Opportunities for stronger partnerships. |
| Replication approach |  |
| Cost-effectiveness | The evaluation will specifically consider the financial management of the project, with specific reference to the cost-effectiveness (the extent to which results have been delivered with the least costly resources possible.) of interventions. Is the project cost effective? Is the project the least cost option? Is the project implementation delayed and if it is, does that affect cost-effectiveness?  Wherever possible, the cost-time vs. outcomes relationship of the project will be compared with that of other similar projects, noting any irregularities. |
| Sustainability |  |
| Linkages with other interventions within the sector |  |
| Management arrangements |  |
| Project Implementation: Efficiency | Project Implementation quality | The evaluation will assess the implementation of the project in terms of the timeliness of inputs, the effectiveness of management as well as the quality and timeliness of monitoring and backstopping by all parties to the project. In particular, the evaluation will assess the Project team’s use of adaptive management in project implementation.  In terms of delays the evaluation will look into:   * + - * Assessing if there were delays in project implementation and what were the reasons; and       * Assessing whether the delay affected the achievement of project’s outcomes and/or sustainability, and if it did then in what ways and through what causal linkages. |
| Project’s adaptive management framework | Validate whether the risks identified in the project document and Donor Reports are the most important and whether the risk ratings applied are appropriate. If not, explain why.   * Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted. * Assess the project’s risk identification and management systems, addressing the following questions * Is the UNDP Risk Management System appropriately applied and if not what needs to be done? * How can the UNDP Risk Management System be used to strengthen the project management? |
| Project Planning | * + - * Assess the use of routinely updated work plans;       * Assess the use of electronic information technologies to support implementation, participation and monitoring, as well as other project activities;       * Are work planning processes result-based? If not, suggest ways to re-orientate work planning. |
| Financial Management | The evaluation will specifically seek to answer the following questions:   * + - * + Is there due diligence in the management of funds and financial audits?         + Assess the effectiveness of the Project Management arrangements as put in place at the start of the project.         + Did promised co-financing materialize (the form in Annex 3 will be filled as requested in the TOR) and if not what needs to be done in order to improve the situation? * Is the project implementation delayed and if it is, does that affect cost-effectiveness? |
| Monitoring and evaluation | M&E System: The Monitoring and Evaluation (M&E) policy at the project level in UNDP has four objectives:   1. to monitor and evaluate results and impacts; 2. to provide a basis for decision making on necessary amendments and improvements; 3. to promote accountability for resource use; and 4. to document, provide feedback on, and disseminate lessons learned.   The M&E policy prescribes that a combination of tools should be used to ensure effective project M&E. These might be applied continuously throughout the lifetime of the project – e.g. periodic monitoring of indicators, or as specific time-bound exercises such as mid-term review, audit reports and independent evaluations.  Specific questions:   * + - * + Assessing the monitoring tools currently being used:   + Do they provide the necessary information?   + Do they involve key partners?   + Are they efficient?   + Are additional tools required? * Assessing the use of the logical framework as a management tool during implementation and any changes made to it; * Assessing the impact of the indicators on project management, if such * Assessing whether or not M&E system facilitates timely tracking of progress towards project’s objectives by collecting information on chosen indicators continually; annual project reports are complete, accurate and with well justified ratings; the information provided by the M&E system is used to improve project performance and to adapt to changing needs.   **Reporting**: The evaluation will specifically   * Assess how adaptive management changes have been reported by the project management; and * Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners. |
| Contribution of implementing and executing agencies | The evaluation will specifically  Assess the role of UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus against the requirements set out in the UNDP Programme and Operations Policies and Procedures. The following will be considered: field visits; participation in Steering Committee meetings; project reviews, Donor Report preparation and follow-up; EU guidance; operational support; etc. In addition, the new UNDP requirements outlined in the UNDP Programme and Operations Policies and Procedures, especially the Project Assurance role will be considered to ensure they are incorporated into the project’s adaptive management framework.  Assess the contribution to the project from UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus in terms of “soft” assistance (i.e. policy advice & dialogue, advocacy, and coordination); and  Suggest measures to strengthen UNDP’s assistance to the project management if necessary |
| Project results: Effectiveness | assessment of the achievement of the immediate objectives and the contribution to attaining the overall objective of the project. The evaluation will also examine if the project had significant unexpected effects, either of beneficial or detrimental character | **Measurement of change**  The assessment of the progress towards results will be based on the comparison of indicators before and after (so far) the project intervention, e.g. by comparing current conditions for building energy efficiency (legal and regulatory frameworks, results of energy efficiency and energy conservation activities, etc.) to the baseline ones. The evaluation will assess whether the actual project outcomes are commensurate with the original or modified project objectives: in case the original or modified expected results are merely outputs/inputs then it will be assessed if there are any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such a project,  The evaluation will specifically look into:   * Adequacy of the level of existing regulations on energy conservation and energy efficiency improvement; * Adequacy of the level and proposed modes of enforcement of the regulatory and programmatic documents developed within the project for creation of an enabling environment for energy efficiency improvement in institutional buildings funded from the target state and local programmes and private sector; * Timeliness of the existing energy efficiency oriented curricula for the initial training; * Tones of CO2 reduced (direct and indirect emissions); * Verification of the monitoring results; * Adequacy and effectiveness of the developed project awareness raising products on energy efficiency: Project’s web-site; - Communication and promotion strategy.  **Changes in development conditions**  The evaluation will specifically look into the following questions:   * Are project outcomes contributing to national development priorities and plans in accordance with relevant state and local energy conservation programmes and strategies? * How and why project outcomes and strategies contribute to the achievement of the expected results? * Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in project activities? * Is the project on track to meet the global environmental benefits in terms of tones of CO2 reduced by the end of the project as defined in the project document? |
| Potential for Sustainability |  | The sustainability assessment will give special attention to analysis of the risks that are likely to affect the persistence of project outcomes. In particular, the evaluation will focus on the sustainability of efforts to address energy-efficiency at the Oblast level and whether or not resources will continue to be available for such investments after the end of the project. The sustainability assessment should also explain how other important contextual factors that are not outcomes of the project will affect sustainability.In particular, the evaluation will specifically assess the extent to which the benefits of the project will continue, within or outside the project scope; commitment of the government to support the initiative beyond the project. The factors that will be analyzed include, inter alia, mainstreaming project objectives into the broader development policies and sectoral plans and economies.The following four dimensions or aspects of sustainability will be addressed:Financial resources: Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood of financial and economic resources not being available for increased investments in energy-efficiency once the EU assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project’s outcomes)?Socio-political: Are there any social or political risks that may jeopardize the sustenance of the project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project?Institutional framework and governance: Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems for accountability and transparency, and the required technical know-how are in place.Environmental: Are there any environmental risks that may jeopardize sustenance of project outcomes? The evaluation should assess whether certain activities will pose a threat to the sustainability of the project outcomes. |

Table 18: Evaluation Matrix

|  |  |  |  |
| --- | --- | --- | --- |
|  | Evaluation questions and criteria | | Sources of information |
|  | Relevance: Project formulation | |  |
| 1 | * 1. How relevant is the project for Belarus?   2. How relevant are the outputs, activities and inputs as compared to cost-effective alternatives?   3. Has the project been effectively undertaking adaptive management in order to respond to changing conditions? | Desk review of project documents, government and 3rd party reports. Interviews | | |
| 2 | 2,1. Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities? | Desk review. Interviews | | |
| 3 | * 1. How adequate are the managerial arrangements of the project?   2. How adequate are the workplan and duration? | Desk review. Interviews | | |
| 4 | * 1. How adequate was the approach related to the participation of the local stakeholders in project management and decision-making as well as engagement more broadly? | Desk review. Interviews | | |
| 5 | * 1. How adequate was the strategy on the dissemination of project information to partners and stakeholders? | Desk review. Interviews | | |
| 6 | * 1. Is the project cost effective? | Desk review. Interviews | | |
|  | Project implementation |  | | |
| 7 | * 1. Were there delays in project implementation?   7.1.a. If yes, what were the reasons; and how did they affect the achievement of project’s outcomes and/or sustainability as well as cost effectiveness? | Desk review. Interviews | | |
| 8 | * 1. Are the logframe and the monitoring tools currently being used adequate (providing the necessary information and involving key partners; allowing timely tracking) and sufficient?   2. Is the logical framework being used as a management tool? | Desk review. Interviews | | |
| 9 | * 1. Were the risks identified correctly and were the risk management strategies adequate?   2. In particular, is the UNDP Risk Management System appropriately applied and if not what needs to be done? | Desk review. Interviews | | |
| 10 | * 1. Is there due diligence in the management of funds and financial audits? | Desk review. Interviews | | |
| 11 | * 1. How adequate were the Project Management arrangements as put in place at the start of the project?   2. Did the project display effective adaptive management? | Desk review. Interviews | | |
| 12 | * 1. Did promised co-financing materialize and if not what needs to be done in order to improve the situation? | Desk review. Interviews | | |
| 13 | * 1. Were the lessons derived from the adaptive management process documented, shared with key partners and internalized by partners? | Desk review. Interviews | | |
| 14 | * 1. What roles were played by UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus against the requirements set out in the UNDP Programme and Operations Policies and Procedures?   2. What was their contribution? How effective was the role of UNP in providing quality assurance? | Desk review. Interviews | | |
|  | Results |  | | |
|  | Effectiveness |  | | |
| 15 | * 1. Were all the planned project outputs and outcomes achieved? If not then why? | Desk review of project documents. Interviews | | |
| 16 | * 1. What was the quality of the deliverables, e.g. policy papers, adequacy of the level and proposed modes of enforcement of the regulatory and programmatic documents, etc.? | Desk review. Interviews | | |
| 17 | * 1. How timely were the project deliverables, e.g. the EE oriented curricula for the initial training? | Desk review. Interviews | | |
| 18 | * 1. How effective were the developed project awareness raising products on energy efficiency (project’s web-site; Communication and promotion strategy, etc.)? | Desk review. Interviews | | |
| 19 | * 1. Are project outcomes contributing to national development priorities and plans in accordance with relevant state and local energy conservation programmes and strategies? | Desk review. Interviews | | |
| 20 | * 1. How and why project outcomes and strategies contribute to the achievement of the expected results? | Desk review. Interviews | | |
| 21 | * 1. Is the project on track to meet the global environmental benefits in terms of tones of CO2 reduced by the end of the project as defined in the project document? | Desk review. Interviews | | |
|  | Sustainability |  | | |
| 22 | * 1. What is the extent to which the benefits of the project will continue, within or outside the project scope? | Desk review. Interviews | | |
| 23 | * 1. Were the project objectives mainstreamed into the broader development policies and sectoral plans and economies? | Desk review. Interviews | | |
| 24 | * 1. Is there a commitment of the government to support the initiative beyond the project? | Desk review. Interviews | | |
| 25 | * 1. What are the risks that are likely to affect the persistence of project outcomes?   2. In particular, at the Oblast level? Whether or not resources will continue to be available for such investments after the end of the project? | Desk review. Interviews | | |
| 26 | * 1. How will other important contextual factors that are not outcomes of the project affect sustainability? | Desk review. Interviews | | |
| 27 | ***Financial resources:***   * 1. Are there any financial risks that may jeopardize sustenance of project outcomes?   2. What is the likelihood of financial and economic resources not being available for increased investments in energy-efficiency once the EU assistance ends? | Desk review. Interviews | | |
| 28 | ***Socio-political***:   * 1. Are there any social or political risks that may jeopardize the sustenance of the project outcomes?   2. What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?   3. Do the various key stakeholders see that it is in their interest that the project benefits continue to flow?   4. Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project? | Desk review. Interviews | | |
| 29 | ***Institutional framework and governance:***   * 1. Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits?   2. Are the required systems for accountability and transparency, and the required technical know-how in place? | Desk review. Interviews | | |
| 30 | ***Environmental***:  30.1. Are there any environmental risks that may jeopardize sustenance of project outcomes?  30.2 Will any activities pose a threat to the sustainability of the project outcomes? | Desk review. Interviews | | |

Table 19’ Rating System

|  |  |
| --- | --- |
| Project Component or Objective | **Rating** |
| **Ratings of Relevance, Efficiency and Effectiveness\*** (6 - Highly Satisfactory, 5 - Satisfactory, 4 - Marginally Satisfactory, 3 - Marginally Unsatisfactory, 2 - Unsatisfactory, 1 - Highly Unsatisfactory) | |
| **Project Formulation** | |
| **Overall Project Formulation (Relevance):** *Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities?* | |
| 1. Conceptualization/design |  |
| 1. Stakeholder participation |  |
| **Project Implementation** | |
| **Implementation Approach (Efficiency):** *Is the project cost effective? Is the project the least cost option? Is the project implementation delayed and if it is, does that affect cost-effectiveness? Wherever possible, the Consultant should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects* | |
| 1. Use of the logical framework |  |
| 1. Adaptive management |  |
| 1. Use/establishment of information technologies |  |
| 1. Operational relationships between the institutions involved |  |
| 1. Technical capacities |  |
| **Monitoring and Evaluation** |  |
| **Stakeholder Participation** |  |
| 1. Production and dissemination of information |  |
| 1. Local resource users and NGOs participation |  |
| 1. Establishment of partnerships |  |
| 1. Involvement and support of governmental institutions |  |
| **Project Results** | |
| **Overall Achievement of Objective and Outcomes (Effectiveness):** *Are the actual project outcomes commensurate with the original or modified project objectives? In case the original or modified expected results are merely outputs/inputs then the Consultant should assess if there are any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such a project.* | |
| 1. Objective |  |
| 1. Outcome 1 |  |
| 1. Outcome 2 |  |
| 1. Outcome 3 |  |
| **Sustainability Ratings\*\***  (4 - Likely, 3 - Moderately Likely, 2 - Moderately Unlikely, 1 - Unlikely) | |
| **Sustainability** |  |
| 1. Financial sustainability |  |
| 1. Institutional sustainability |  |
| 1. Socio-economic sustainability |  |
| 1. Ecological sustainability |  |
| **Overall Project Achievement and Impact** |  |

* Comments by stakeholders (only in case of discrepancies with evaluation findings and conclusions)

Table 20: Matrix of questions for interviews

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Evaluation questions and criteria | UNDP | EU | | Other international | Central Government | Local Government | Final beneficiaries |
|  | Relevance: Project formulation |  |  | |  |  |  |  |
| 1 | * 1. How relevant is the project for Belarus?   2. How relevant is the project design (choice of activities) compared to cost-effective alternatives?   3. Has the project been effectively responding to changing conditions? | x | x | x | | x | x | x |
| 2 | * 1. Are the project’s outcomes consistent with the EU focal areas/operational program strategies and country priorities? |  | x |  | |  |  |  |
| 3 | * 1. How adequate are the managerial arrangements of the project?   2. How adequate are the workplan and duration? | x | x |  | | x |  |  |
| 4 | * 1. How adequate was the approach related to the participation of the local stakeholders in project management and decision-making as well as engagement more broadly? | x | x |  | | x | x |  |
| 5 | * 1. How adequate was the strategy on the dissemination of project information to partners and stakeholders? | x | x |  | | x | x | x |
| 6 | * 1. Is the project cost effective? | x | x | x | | x |  |  |
|  | Project implementation |  |  |  | |  |  |  |
| 7 | * 1. Were there delays in project implementation?      1. If yes, what were the reasons, and how did they affect the achievement of project’s outcomes and/or sustainability as well as cost effectiveness? | x | x |  | | x |  |  |
| 8 | * 1. Are the logframe and the monitoring tools currently being used adequate (providing the necessary information and involving key partners; allowing timely tracking) and sufficient?   2. Is the logical framework being used as a management tool? | x | x |  | | x |  |  |
| 9 | * 1. Were the risks identified correctly and were the risk management strategies adequate?   2. Is the UNDP Risk Management System appropriately applied and if not what needs to be done? | x | x |  | | x |  |  |
| 10 | 10.1 Is there due diligence in the management of funds and financial audits? | x | x |  | | x |  |  |
| 11 | 11.1. How adequate were the Project Management arrangements as put in place at the start of the project?  11.2. Did the project display effective adaptive management? | x | x |  | | x | x |  |
| 12 | * 1. Did promised co-financing materialize and if not what needs to be done in order to improve the situation? | x | x |  | | x |  |  |
| 13 | * 1. Were the lessons derived from the adaptive management process documented, shared with key partners and internalized by partners? | x | x |  | | x |  |  |
| 14 | * 1. What roles were played by UNDP and the Energy Efficiency Department of the State Committee on Standardization of the Republic of Belarus against the requirements set out in the UNDP Programme and Operations Policies and Procedures?   2. What was their contribution?   3. How effective was the role of UNP in providing quality assurance? | x | x |  | | x | x |  |
|  | Results |  |  |  | |  |  |  |
|  | Effectiveness |  |  |  | |  |  |  |
| 15 | * 1. Were all the planned project outputs and outcomes achieved?   15.1, a. If not then why? | x | x |  | | x |  |  |
| 16 | * 1. What was the quality of the deliverables, e.g. policy papers, adequacy of the level and proposed modes of enforcement of the regulatory and programmatic documents developed within the project for creation of an enabling environment for EE improvement in institutional buildings funded from the target state and local programmes and private sector; etc.? |  |  |  | |  |  |  |
| 17 | * 1. How timely were the project deliverables, e.g. the EE oriented curricula for the initial training? |  |  |  | |  |  |  |
| 18 | * 1. How effective were the developed project awareness raising products on energy efficiency (project’s web-site; Communication and promotion strategy, etc.)? | x | x | x | | x | x | x |
| 19 | * 1. Are project outcomes contributing to national development priorities and plans in accordance with relevant state and local energy conservation programmes and strategies? | x | x | x | | x | x |  |
| 20 | * 1. How and why project outcomes and strategies contribute to the achievement of the expected results? | x |  |  | | x |  |  |
| 21 | * 1. Is the project on track to meet the global environmental benefits in terms of tones of CO2 reduced by the end of the project as defined in the project document? | x |  |  | |  |  |  |
|  | Sustainability |  |  |  | |  |  |  |
| 22 | * 1. What is the extent to which the benefits of the project will continue, within or outside the project scope? | x | x | x | | x | x | x |
| 23 | * 1. Were the project objectives mainstreamed into the broader development policies and sectoral plans and economies? | x | x |  | | x |  |  |
| 24 | * 1. Is there a commitment of the government to support the initiative beyond the project? | x | x |  | | x |  |  |
| 25 | * 1. What are the risks that are likely to affect the persistence of project outcomes?   2. In particular, at the Oblast level? Whether or not resources will continue to be available for such investments after the end of the project? | x | x | x | | x | x |  |
|  | 26.1 How will other important contextual factors that are not outcomes of the project affect sustainability? | x | x |  | | x | x |  |
| 27 | ***Financial resources:***   * 1. Are there any financial risks that may jeopardize sustenance of project outcomes?   2. What is the likelihood of financial and economic resources not being available for increased investments in energy-efficiency once the EU assistance ends? | x | x |  | | x | x |  |
| 28 | ***Socio-political***:   * 1. Are there any social or political risks that may jeopardize the sustenance of the project outcomes?   2. What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?   3. Do the various key stakeholders see that it is in their interest that the project benefits continue to flow?   4. Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project? | x | x |  | | x | x | x |
| 29 | ***Institutional framework and governance:***   * 1. Do the legal frameworks, policies and governance structures and processes pose risks that may jeopardize sustenance of project benefits?   2. Are the required systems for accountability and transparency, and the required technical know-how in place? | x | x |  | | x | x | x |
| 30 | ***Environmental***:   * 1. Are there any environmental risks that may jeopardize sustenance of project outcomes?   2. Will any activities pose a threat to the sustainability of the project outcomes? | x |  |  | | x | x |  |

1. Calculated based on https://www.iea.org/statistics/statisticssearch/report/?country=Belarus&product=indicators [↑](#footnote-ref-1)
2. groups of Belarusian populations, including professional groups, which will benefit from the project, including

   equipment, knowledge, benefiting from enhanced legal and institutional framework, improved expert

   capacity, etc., as well as improving the quality of life, i.e. through improving environment conditions. [↑](#footnote-ref-2)
3. Respective activity is included in the Project Detailed Work Plan for 2017 (Outcome 2: Documented, disseminated and institutionalized project results providing a basis for further replication) with the following activity (2.13.1): Conducting of the final evaluation of the project by means of collecting and analysing data of Project's results and comparing them with the objectives, targets, baseline scope and requirements stipulated in the Project Document. Compile and present a Final Evaluation Report describing the progress of the Project and proving necessary recommendations for future developing of the energy-efficiency projects. [↑](#footnote-ref-3)
4. based on John Mayne, “Addressing Attribution Through Contribution Analysis: Using Performance Measures Sensibly’, The Canadian Journal of Program Evaluation Vol. 16 No. 1 Canadian Evaluation Society, 2001 [↑](#footnote-ref-4)
5. Calculated based on https://www.iea.org/statistics/statisticssearch/report/?country=Belarus&product=indicators [↑](#footnote-ref-5)
6. groups of Belarusian populations, including professional groups, which will benefit from the project, including

   equipment, knowledge, benefiting from enhanced legal and institutional framework, improved expert

   capacity, etc., as well as improving the quality of life, i.e. through improving environment conditions. [↑](#footnote-ref-6)
7. benefiting from the project, including equipment, knowledge, enhanced capacity, etc., as well as improving the quality of life, e.g. through improving environment conditions. [↑](#footnote-ref-7)
8. WB (ESMAP), 2015: “Belarus: Scaling Up Energy Efficiency Retrofit of Residential and Public Buildings Assessment of Investment Needs, Implementation Constraints, Financing Options and Delivery Models”, p.1; p/46 [↑](#footnote-ref-8)
9. WB (ESMAP), 2015: “Belarus: Scaling Up Energy Efficiency Retrofit of Residential and Public Buildings Assessment of Investment Needs, Implementation Constraints, Financing Options and Delivery Models” [↑](#footnote-ref-9)
10. http://eng.belta.by/economics/view/belarus-gdp-energy-intensity-halved-in-last-13-years-96118-2016/ [↑](#footnote-ref-10)
11. ibid [↑](#footnote-ref-11)
12. The authorities have committed to increase the average cost recovery of all utilities from 48.5 percent in 2015 to 100 percent in 2018. So far in 2016, they have reached 58 percent, and plan to achieve 75 percent cost recovery in 2017. IMF Country Report No. 16/298; to households, cost coverage in 2016 will reach at least 50 percent, and the non-cash household subsidy system will be operational by October 2016. [↑](#footnote-ref-12)
13. WB (ESMAP), 2015: “Belarus: Scaling Up Energy Efficiency Retrofit of Residential and Public Buildings Assessment of Investment Needs, Implementation Constraints, Financing Options and Delivery Models” [↑](#footnote-ref-13)
14. ProDoc [↑](#footnote-ref-14)
15. Both surveys included questions about respondents' level of awareness of energy consumption, ways to save electricity and heat, information needs for energy conservation and the sources of information they use; Renewable energy sources and their use by the respondents themselves, as well as the kinds of information they consider necessary for teaching in educational institutions - kindergartens, schools and colleges. This publication presents the results of a comparative analysis of two surveys for each of the regions, as well as a comparative analysis for all 23 educational institutions. It is important to note that the second survey involved the same educational institutions as in the first, but the respondents themselves were not necessarily the same as those who participated in the first survey in 2014. [↑](#footnote-ref-15)
16. The reasons may be the following: due to relatively low tariff for heat energy, respondents are “detached” from the actual accounting of their expenses for this type of energy, compounded in some cases by the inability to influence the heat consumption (except for the consumption of hot water) [↑](#footnote-ref-16)
17. www.elard.eu/en\_GB/the-area-based-approach [↑](#footnote-ref-17)
18. ibid [↑](#footnote-ref-18)
19. including 20 representatives of the local authorities, 41 – education entities (secondary schools, colleges, kindergartens), 9 – NGO, 8 – business (municipal enterprises, the chemical and light industries, scientific and technical park and library etc.) [↑](#footnote-ref-19)
20. <http://energybel.by/category/seminary/> [↑](#footnote-ref-20)
21. ТВ 3, Саммит ТВ, Лидское телевидение, Слоним ТВ, СКИФ Бобруйск, СКИФ Витебск, СКИФ Полоцк, СКИФ Борисов, Гродно Плюс, Наше ТВ, 8 канал, ТРК Гродно [↑](#footnote-ref-21)
22. Views on You Tube- 2074 in total; 1007 <https://www.youtube.com/watch?v=X84-A260bM4>; 211 <https://www.youtube.com/watch?v=DiUfVP_dlaw>; 270 <https://www.youtube.com/watch?v=U84C9uReTug>; 586 <https://www.youtube.com/watch?v=9xixz6BwDuw> [↑](#footnote-ref-22)
23. press-clipping of 2 press tours can be found here: <https://drive.google.com/drive/folders/0B8SC92ZeOyeaOGV3emMtY0RMa2s?usp=sharing> [↑](#footnote-ref-23)
24. There is mandatory educational programme for kindergartens and schools in Belarus. All mandatory and additional materials that should be used in frame of this mandatory educational programme have to be revised and approved by Ministry of Education. It is strict requirement. [↑](#footnote-ref-24)
25. for example, at the exhibition stand of EED in frame of the Energy-Expo Forum in 2015 and 2016), during actions and events with participation of the project (UN Train 70, Inclusive Belarus, festivals of the projects financed by EU) or organized by the project (press tours dedicated to the International Energy Saving Day on November 11, seminars etc.). [↑](#footnote-ref-25)
26. after consultations with Regional Education Departments it became it was agreed with them that they could use these materials during their own exhibitions for teachers and seminars as demonstration and illustrative materials. [↑](#footnote-ref-26)
27. <http://energybel.by/seminar-praktikum-n1-po-voprosam-energoeffektivnosti-dlia-gruppy-uchitelei/>. [↑](#footnote-ref-27)
28. 27 – selected teachers, 10 – representatives of EED, 2 – representatives of other education entities, 1 – representative of NGO took part in the seminar No. 1). 37 participants) <http://energybel.by/seminar-praktikum-n1-po-voprosam-energoeffektivnosti-dlia-gruppy-uchitelei/> [↑](#footnote-ref-28)
29. 27 – selected teachers, 2 – representatives of the Education Department of the Hrodna Regional Executive Committee and Hrodna Regional Department of Supervision of the rational use of energy resources) [http://energybel.by/obuchayushhij-seminar-praktikum-2-po-voprosam-energoeffektivnosti-dlya-gruppy-uchitelej-27-noyabrya-2014-g-g-Hrodna/](http://energybel.by/obuchayushhij-seminar-praktikum-2-po-voprosam-energoeffektivnosti-dlya-gruppy-uchitelej-27-noyabrya-2014-g-g-grodno/) [↑](#footnote-ref-29)
30. 27 – selected teachers, 2 – representatives of Education Department of the Viciebsk Regional Executive Committee and Viciebsk Regional Department of Supervision of the rational use of energy resources took part in the seminar No. 3) [http://energybel.by/10-12-14-Viciebsk-seminar-praktikum-3/](http://energybel.by/10-12-14-vitebsk-seminar-praktikum-3/). [↑](#footnote-ref-30)
31. <http://energybel.by/otchioty-proekta/> [↑](#footnote-ref-31)
32. <http://energybel.by/konkurs-proektnyx-iniciativ-po-realizacii-energoeffektivnyx-meropriyatij/> [↑](#footnote-ref-32)
33. <http://energybel.by/otchioty-proekta/> [↑](#footnote-ref-33)
34. Two Belarusian organizations were selected via an open and competitive process to prepare design documentation for the pilots. Institute “BorisovProject” will prepared design documentation for the Hrodna kindergarten No. 45 and Ashmiany kindergarten No. 6 sites and Institute “ViciebskGrazhdanProject” will prepare design documentation for the Viciebsk M.F.Shmyryev State Vocational Engineering College site. For the pilot, School No.4 (Dziarzhynsk district), the Dziarzhynsk Regional Executive Committee will finance the development of the design documentation. [↑](#footnote-ref-34)
35. There are other reasons too. **Viciebsk College: Final heat annual saving will be about 400 Gcal-** one of the college heat consumers is the old small building which is not well insulated. **Kindergarten 45 in Hrodna: final annual heat saving will be near 170-180 Gcal a year – the** newly constructed 2 story additional building for heat substation and solar collector equipment is an additional heat consumer which was not taken into account during energy audit assumptions and assessments. **Kindergarten 6 in Ashmiany: final annual heat saving will be near 200 Gcal a year**  [↑](#footnote-ref-35)
36. In Ashmiany from 2.1 days on average per child per year to 1.8 [↑](#footnote-ref-36)
37. 172 people participated in four public meetings with presentation of the Project activities in the target districts of Viciebsk (31 participants), Hrodna (45 participants), Ashmiany (30 participants) and Dziarzhynsk (66 participants) [↑](#footnote-ref-37)
38. 4 were planned [↑](#footnote-ref-38)
39. Viciebsk (80 participants), Hrodna (103 participants), Ashmiany (64 participants) and Dziarzhynsk (126 participants). [↑](#footnote-ref-39)
40. From the reward funds [↑](#footnote-ref-40)