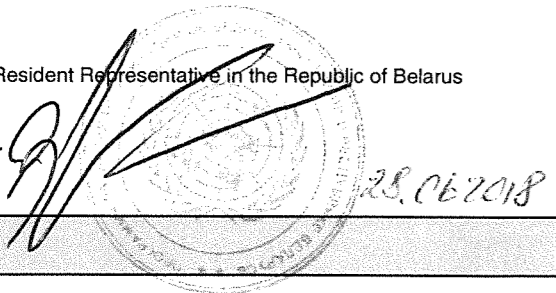


AGREED
UNDP Deputy Resident Representative in the Republic of Belarus

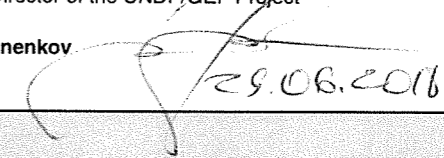
Zachary Taylor
Date



28.06.2018

AGREED
Department for Energy Efficiency of Gosstandard of the Republic of Belarus
National Director of the UNDP/GEF Project

Andrei Minenkov
Date



29.06.2018

ANNUAL PROJECT REVIEW 2018

Project Title: Improving Energy Efficiency in Residential Buildings in the Republic of Belarus
Project ID: 77154
Year: 2013-2018
Annual Targets: N/A

Activity	Description	Implementing Partner	Fund	Donor	Budget account	Budget account description	Funds planned, USD	Funds utilized, USD(*)	Delivery rate achieved, %	Deviation, USD	Annual target as per ADWP-2018	Overall project assessment of implemented activities (brief description)
Outcome 1: Strengthened legal and regulatory framework and mechanisms to enforce the legislation for improving the energy efficiency of the building sector with the focus on new residential buildings												
Output 1.1	A formally adopted and endorsed methodology for buildings' energy performance monitoring and calculation in line with contemporary European norms or other applicable international standards										Completed (within the scope of the project) in 2015.	
Output 1.2	At least 50 completed energy audits providing information on factual energy consumption and energy balance of different type of existing residential buildings of different age and using different construction techniques										Completed (within the scope of the project) in 2017.	
Output 1.3	A completed review and cost-efficiency analysis of different technical options to improve buildings' energy efficiency and the use of renewable energy sources, including an analysis of the cost-efficiency of different heat supply and distribution methods to serve low or close to zero energy buildings.										Completed (within the scope of the project) in 2017.	
Output 1.4	A completed analysis of the impact of the new low energy buildings on the feasibility of different heat supply systems typically used in Belarus and the buildings' central water heating + radiator scheme connected to district heating, in particular, with related recommendations for future development										Recommendations submitted to decision makers concerning the optimal heat supply and distribution options to serve low or close to zero energy buildings based on the analysis of cost-efficiency of technical options introduced into the energy efficient engineering systems of the pilot buildings and on the analysis of the impact these systems have on different kind of district heat supply.	Recommendations were developed for heat supply and heat distribution options in buildings with low or close to zero energy losses. These recommendations were based on the cost-effectiveness analysis of the technical solutions used for producing energy-efficient utility systems for the pilot buildings and the analysis of the impact of these systems on various district heating systems. Based on these recommendations, a decision of the Government is being prepared, including modalities for economic support of the said technical solutions.
1.4.1	Complete a cost-efficiency analysis of different technical options for the space heating and DHW supply systems, based on the actual outcomes of the first heating season including operation and maintenance costs related to functioning of engineering equipment installed in the pilot buildings, including such analysis and respective long-term recommendations for various district heating patterns for further designing low to zero energy buildings.	000473	62000	10003		71300 - local consultants	3000.00	3000.00	100%	0	Based, inter alia, on the economic and financial results of actual operation and maintenance of the pilot buildings, the cost efficiency analysis has been performed as to the technical options introduced into the energy efficient engineering systems of these buildings including such analysis with due regard of the impact these systems have on different kind of district heat supply. The report containing the above analysis and respective recommendations has been sent to the Energy Efficiency Department and the Ministry of Housing and Utilities.	Fully implemented. All the three pilot buildings went through the first heating season. During this period, the project used dispatching systems and carried out detailed monitoring of energy consumption and performance characteristics of energy-efficient equipment installed in these buildings. It is necessary to take into account that the buildings, although they are fully operational, are not populated enough (only about 45% of the apartments have residents). This prevents from obtaining objective data on energy consumption of the buildings as a whole and its distribution among various sources of heat supply. Nevertheless, since monitoring data and methods for estimating energy consumption allowed extrapolation to the estimated conditions and the results obtained confirmed the conclusion about near coincidence of the design and actual indicators. The project confirmed the conclusions about the minimum impact of energy-efficient buildings on various schemes of district heating. Based, inter alia, on the economic and financial results of actual operation and maintenance of the pilot buildings, the cost-efficiency analysis was performed to assess the technical options introduced into the energy efficient engineering systems of these buildings including such analysis with due regard to the impact that these systems have on district heat supply. The report containing the above analysis and respective recommendations was published ("Analysis of the Impact of Tariffs on the Economic Efficiency of the Systems that Improve Energy Efficiency of Residential Buildings" / Minsk, March 2018, 24 pages,) and forwarded to interested stakeholders.
1.4.2	Organize and conduct, using the materials prepared under activity 1.4.1 above, at least one ad-hoc meeting to discuss long-term recommendations for various district heating	000473	62000	10003		71300 - local consultants	200.00	256.65	128%	-56.65	At least 50 representatives of key stakeholders (Ministry of Energy, Energy Efficiency Department, Ministry of Housing & Communal Services, Object	Fully implemented. About 50 representatives of the key stakeholders (Ministry of Energy, Energy Efficiency Department, Ministry of Housing and Utility Services, regional authorities, condominium associations) took part in the round table "Economics of Energy Efficient Residential Buildings. Motivating the Investors. Tariff Policy" (25.05.2018). During the event, the participants discussed the optimal heat supply schemes for energy

	recommendations for various district heating patterns for energy efficient housing and related tariff policy to motivate all involved stakeholders to invest in energy efficient housing.	000473	62000	10003	72100 - contract. serv. companies	2500.00	2548.44	102%	-48.44	housing & communal services, district authorities, Household Associations) have participated in discussions on optimal district heating patterns for energy efficient housing and balanced tariff policy that would raise motivation of the said stakeholders in extending energy efficient housing construction. The respective report containing recommendations on optimal heat supply options for "nearly zero energy consumption" buildings and on economically justified tariffs has been elaborated, then it has been presented to the stakeholders and published on the Internet and has been taken into account in the course of the design of residential construction programmes and building projects for residential buildings until 2020.	(20.05.2016). During the event, the participants discussed the optimal heat supply schemes for energy efficient housing, taking into account balanced tariff policies, which will help to increase the motivation of these stakeholders in order to expand the scale of energy efficient housing construction. The proposals for optimal heat supply for buildings with "nearly zero energy consumption" and economically feasible schemes for supporting the introduction of energy efficient utility systems in the housing sector were presented to the interested participants and became the framework to support a number of proposals and recommendations in relevant decisions of the Ministry of Architecture and Ministry of Energy. The necessary decision of the Government is currently being prepared (in particular, on special additional quotas or tariffs for subsidized energy consumed by energy-saving utility systems).	
Output 1.5	A finalized draft with related stakeholder consultations for revised national energy performance based norms and standards for newly constructed buildings and, as applicable, those going through a major renovation with the initial focus on residential buildings										Completed (within the scope of the project) in 2016.	
Output 1.6	Elaborated and by the Government of Belarus adopted practical procedures for the establishment of a mandatory system of EE certification of buildings, including issuing of EE passports and a system of monitoring and compliance checking with related on-site spot-checks.										Completed (within the scope of the project) in 2016.	
Output 1.7	Further developed and adopted quality standards and a system of EE certification for the construction materials, accessories and appliances used in the construction sector.										Based on the Technical Code "Energy Efficiency of Buildings" that indicates basic provisions for the certification system, the quality standards and a system of energy efficiency certification for the materials, equipment and component parts used in residential construction have been formally submitted for adoption.	The key provisions on the certification system, quality standards and energy efficiency of the materials, equipment and components used in residential housing construction were included into the list of recommended national standards associated with the Technical Code "Energy Efficiency of Buildings".
1.7.1	Revise, taking into account basic provisions presented in the Technical Code "Energy Efficiency of Buildings", the elaborated draft practical procedures along with methodologies and relevant monitoring and compliance checking tools for energy efficiency certification and validation systems for materials, constituent parts and equipment used in the construction of residential buildings and submit them for approval and adoption.	000473	62000	10003	71300 - local consultants	0	0		0	Practical procedures along with methodologies and relevant monitoring and compliance checking tools for energy efficiency certification and validation systems for materials, constituent parts and equipment used in the construction of residential buildings have been submitted to RUE "StroiTechNorm" (with a copy to the Energy Efficiency Department) for approval and adoption.	Fully implemented. A revised draft of practical procedures, developed in 2017 for the system of certification of the materials, components and equipment used in housing construction, was prepared for approval and acceptance by RUE "StroyTechNorm" along with the methods and respective tools for monitoring and monitoring for compliance (see "Practical Procedures within the Framework of the System of Certification of the Materials, Components and Equipment for Energy Efficiency. Methodology for Monitoring and Compliance with Energy Efficiency Standards" / Minsk, June 2018, 24 pages; "Draft provisions for the procedure and methodology of the system for annual monitoring of energy-efficient housing / Minsk, April 2018, 16 pages).	
1.7.2	Prepare a package of other national standards and modifications of existing standards that introduce tools for the monitoring and assessment of the conformity of residential buildings with the energy efficiency standards and associated with the Technical Code "Energy Efficiency of Buildings".	000473	62000	10003	771300 - local consultants	0	0		0	Other national standards and modifications of existing standards that introduce tools for the monitoring and assessment of the conformity of residential buildings with the energy efficiency standards and associated with the Technical Code "Energy Efficiency of Buildings" have been submitted to RUE "StroiTechNorm" (with a copy to the Energy Efficiency Department) for approval and adoption.	Fully implemented. The final version of the Technical Code "Energy Efficiency of Buildings" passed all the coordination and approval procedures according with the legislation, received the respective registration number (No. 28) and is awaiting approval from the Government. The list and recommendations were prepared and submitted to RUE "StroyTechNorm" for the development of the national standards associated with the Technical Code and proposals for the key points, as well as necessary changes and additions to the existing standards that introduce the tools for monitoring and assessing conformity of residential buildings to energy efficiency standards (see "Technical Code on Energy Efficiency of Buildings and Proposals for Associated National Standards" / Minsk, May 2018, 22 pages).	
	Bank Fee	000473	62000	10003	74510 - bank charges	30	30	100%	0			
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003					0			
Outcome 1 - total:						5730	5835.09	102%	-105			
Outcome 2: Enhanced capacity of the Belarusian specialists to implement and effectively enforce the new energy efficiency building standards and construction norms												
Output 2.1	Developed, published and disseminated stakeholder group specific technical guides, handbooks, guidelines and other related training materials on energy efficiency design and construction of new buildings to support the implementation of the envisaged new construction norms, including dissemination of this information through the internet based energy platform and the project's own Internet site										Completed (within the scope of the project) in 2017.	

Output 2.2	New courses on integrated building design and building energy efficiency included into the curricula of all key Belarusian universities educating architects and building engineers and at least 200 students have passed these new courses by the end of the project									At least 20 training and educational materials, tutorials and reference books published by the project in 2014-2017 have been accommodated in educational process and in curricula of at least two universities. At least 200 students have completed these new courses.	Over 100 various training materials, information and teaching aids, reference books published by the project in 2014-2018 were used in education process and training programs of the Belarusian National Technical University, Belarusian State Technological University, Brest Technical University, Minsk State Architecture and Construction College, Mahilioŭ Architecture and Construction College and Inter-branch Advanced Training and Personnel Retraining Institute. At least 900 students attended these new courses.
2.2.1	Complete integration of all key project reports, other information and training materials developed in 2014-2017 into curricular of relevant courses at the selected universities.	000473 04000 00012		71300 - local consultants	1500,00	1758,37	117%	-258		Based on the instructional materials and other training materials developed by project in 2014-2017 at least two selected universities (Belarusian National Technical University and Brest State Technical University) and some colleges have amended their curricula for the relevant courses. At least 200 students have completed these new courses.	Fully implemented. The project prepared training materials based on manuals, reference books and technical reports of the project, published in print and distributed on the Internet (over 100 items in total). The materials were transferred to the Belarusian National Technical University, Belarusian State Technological University and Brest Technical University, Minsk State Architecture and Construction College, Mahilioŭ Architecture and Construction College and Inter-branch Advanced Training and Personnel Retraining Institute. 13 training courses with a total of 928 pages were created and presented in the form of lectures and presentations. These materials were prepared in electronic versions and submitted to the line faculties of the selected educational institutions. The institutions approved and adjusted/integrated these materials into the lecture and teaching processes of the mentioned educational institutions. At least 900 students attended these new training courses. Special lecture materials, manuals and instructions with a total of 366 pages were also prepared and handed over to the regional training centers for specialists in housing and utility services.
		000473 62000 10003		74200 - audio & video prod.	600,00	0,00	0%	600			
Output 2.3	At least 50 experts from different state and municipal entities dealing with construction policies, norms and standards are trained on the most recent international developments, experiences and lessons learnt on building energy efficiency and environmentally sustainable construction.									Completed in 2014	
Output 2.4	At least 50 architects and other buildings designers from the leading design institutes and professional associations are trained on the: i) most recent international developments in the area of energy efficient buildings from the technical and policy perspective; ii) integrated, energy efficient building design principles and techniques; iii) implications in the practical design work when moving from prescriptive norms to buildings' overall energy performance based construction norms; iv) available technical options and cost-effective design principles for optimizing buildings' energy performance; and v) presentation of the available, state of the art software to support integrated, energy efficient building design and training for its use.									Completed in 2014	
Output 2.5	At least 50 construction inspectors from the main regional and district centres trained on methodologies for assessing buildings' energy performance and the correct installation of the materials and equipment used.									Completed in 2014	
Output 2.6	At least 50 supervisors of the leading construction companies trained on the correct installation of the materials and equipment used and provision of other advise for private construction companies on how to integrate elements of energy efficient design in their investment projects throughout the project cycle from the design to construction and building management.									At least 50 managers of the leading construction companies have been trained in the ways of integrating elements of energy efficient design in their investment projects.	At least 50 managers of the leading construction companies were trained in the ways of integrating elements of energy efficient design into investment projects.
2.6.1	As a follow-up of the introductory course delivered in 2015 and practical visits to the pilot sites in 2016 with trainings on the correct installation of the materials and equipment, and being based on the detailed cost-benefit analysis carried out under activities 1.3 and 1.4 above, prepare materials for practical courses on investment projects in the field of energy efficient housing development for construction companies.	000473 62000 10003		71200 - local consultants	1000,00	1000,00	100%	0		Instructional materials for construction companies on integrating energy efficiency improvement measures into investment and project cycles were prepared and submitted to the Energy Efficiency Department and Ministry of Architecture and Construction and were published online (see "Notes on Implementing Energy Efficient Systems for Heating and Hot Water Supply in Residential Sector" / Minsk, April 2018, 11 pages; "Analysis of the Impact of Tariffs on Economic Efficiency of the Systems Ensuring Energy Efficiency in Residential Buildings" / Minsk, March 2018, 24 pages; "Recommendations for a Balanced Cost-effective Tariff Policy Motivating Construction of Energy-efficient Housing" / Minsk, May 2018, 28 pages; "Conditions for Achieving Payability of Investments in Energy-efficient Housing, Taking into Account the Results of Construction of the Pilot Buildings" / Minsk, May 2018, 24 pages; "Economic Indicators for Engineering Systems of Pilot Buildings" / Minsk, May 2018, 37 pages).	Fully implemented. Training materials for construction companies on integrating energy efficiency improvement measures into investment and project cycles were prepared and submitted to the Energy Efficiency Department and Ministry of Architecture and Construction and were published online (see "Notes on Implementing Energy Efficient Systems for Heating and Hot Water Supply in Residential Sector" / Minsk, April 2018, 11 pages; "Analysis of the Impact of Tariffs on Economic Efficiency of the Systems Ensuring Energy Efficiency in Residential Buildings" / Minsk, March 2018, 24 pages; "Recommendations for a Balanced Cost-effective Tariff Policy Motivating Construction of Energy-efficient Housing" / Minsk, May 2018, 28 pages; "Conditions for Achieving Payability of Investments in Energy-efficient Housing, Taking into Account the Results of Construction of the Pilot Buildings" / Minsk, May 2018, 24 pages; "Economic Indicators for Engineering Systems of Pilot Buildings" / Minsk, May 2018, 37 pages).
		000473 62000 10003		74200 - audio & video prod.	600,00	0	0	600			
2.6.2	Organize and conduct, using the materials prepared under activity 2.6.1 above, at least one practical course on investment projects in the field of residential construction for at least 50 representatives of private construction companies.	000473 62000 10003		71300 - local consultants	300,00	389,10	130%	-89		At least 50 supervisors and principal staff members of construction companies have been trained (during a two-day training workshop with site visits) in the best practices, methodologies and tools used in business models for the construction of energy efficient buildings. Instructional materials have been published (printed) and disseminated among the participants.	Fully implemented. At least 50 representatives of middle management and principal staff members of construction companies were trained during a two-day training workshop with site visits "Design, Construction and Operation of Future Energy Efficient Buildings" held on 7 June, 2018 on best practices, methodologies and tools used in business models for construction of energy efficient buildings. The training materials were published (printed) and disseminated among the participants. The seminar resulted in an open and useful discussion of the interested stakeholders on the key barrier that impedes the spread of the introduction of energy efficient utility systems - the current imbalanced tariff policy.
		62000 10003		72100 - contract. serv. companies	3000,00	4183,13	139%	-1183			
		000473 04000 00012		72100 - contract. serv. companies	0,00	86,64		-87			
Output 2.7	A two-week training seminar for professional designers, representatives of the state expertise and building supervision in order to familiarize the group with the experiences of energy-efficient building design, construction and governance (including the role of municipal authorities) in EU countries and visiting the facilities (25 people).									Completed in 2014	

Output 2.8	Other required training, networking and exchange of knowledge and lessons learnt by building on co-operation with other international initiatives promoting energy efficient and environmentally sustainable building construction									All instructional materials developed by the project in 2013-2017 have been transferred to a specialized training institutions. At least 2 Belarusian specialists and decision-makers participated in at least one international event dedicated to use of renewable energy, energy efficient installation and environmentally sustainable policies and practices in the field of construction and operation of buildings.	All information and technical materials developed by the project in 2013-2017 have been transferred to relevant high education institutes and specialized training institutions. Two Belarusian decision-makers participated in the UNECE Regional Forum on Sustainable Development dedicated to the use of renewable energy, energy efficient power generation, energy saving and environmentally sustainable policies and practices.
2.8.1	Provide necessary recommendations and support for the transfer and adaptation of all instructional materials (handbooks, tutorials, presentations) and curricula prepared and tested as part of the project in 2013-2017 to the Inter-branch Advanced Training and Personnel Retraining Institute of the Ministry of Education - one of the leading advanced training institutions in the field of construction. In addition, these materials along with special simulators, replicas, models, stands and visual aids developed under activity 3.5 below are transferred to Oblast Training Centres for Personnel of Housing & Communal Services in Minsk, Mahilioŭ and Hrodna.	000473	62000	10003	71300 - local consultants	1500,00	2180,00	145%	-680	All instructional materials, tutorials, handbooks and presentations developed by the project and tested during 2013-2017 trainings, including the materials under outputs 2.3-2.7 above, have been updated, adapted to the specific needs of target audiences and transferred to the Inter-branch Advanced Training and Personnel Retraining Institute of the Ministry of Education and to the Oblast Training Centres for Personnel of Housing & Communal Services in Minsk, Mahilioŭ and Hrodna along with necessary recommendations for further training.	Fully implemented. All the training materials, tutorials, handbooks and presentations developed by the project and tested during trainings held in 2013-2017, including the materials under outputs 2.3-2.7 above, were updated, adjusted to the specific needs of the target audience and transferred to the Inter-branch Advanced Training and Personnel Retraining Institute of the Ministry of Education and to the Oblast Training Centres for Personnel of Housing & Communal Services in Minsk, Mahilioŭ and Hrodna along with the necessary recommendations for further training.
		000473	04000	00012	71600 - travel	0,00	386,43		-386		
		000473	62000	10003	74200 - audio & video prod.	600,00	0,00	0%	600		
2.8.2	Provide information and financial support to the Belarusian specialists and decision makers during their participation in at least one international event (e.g., the Passive House Conference, Germany).	000473	62000	10003	771600 - travel	4000,00	4997,73	125%	-998	In total at least 2 Belarusian specialists and decision makers participated in at least one international event related to the topic of the project (for example, the Passive House Conference, Germany), improved their knowledge and gained experience, shared relevant information, and discussed the main provisions of the national strategy regarding energy efficient residential buildings. The number of business travellers and the number of events to be visited will be determined later with due regard for the savings of the project.	Fully implemented. The project provided information and financial support to two representatives of the Energy Efficiency Department for their participation in the work of the regional forum (1-2 March 2018) on sustainable development for the UNECE region. They presented at the round tables "Improving Energy System Efficiency" and "Transformation of Energy in Support of the Agenda on Sustainable Development until 2030". The project also supported another representative of the Department in his participation in the workshop on validation of the results of mapping of energy efficiency standards in buildings in the UNECE region (14-16 May 2018). The participants of the said events increased their knowledge and gained experience, as well as shared relevant information, described strategic approaches and national strategies for energy-efficient housing.
	Bank Fee	000473	62000	10003	74510 - bank charges	50,00	50,00	100%	0		
	Bank Fee	000473	04000	00012	74510 - bank charges	30,00	30,00	100%	0		
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003	76125/76135		39,96		-40		
Outcome 2 - total:						13180	15101,36	115%	-1921		
Outcome 3: Demonstrated energy and cost-saving potential of new energy efficiency measures in at least three new residential buildings in three Belarusian cities											
Output 3.1	Finalized background studies for and design of the selected demo buildings by applying integrated building design principles and taking into account new technologies and approaches for meeting the HVAC needs of those buildings in a most energy and cost efficient way									Completed in 2015	
Output 3.2	Finalized construction of the demo buildings by ensuring that the construction and all installation are made in accordance with the proposed or adopted quality standards and guidelines.									Completed in 2017	
Output 3.3	A monitoring report on the construction of the demonstration buildings documenting the experiences and lessons learnt from procuring, installing and testing the new energy efficient materials, construction techniques and appliances.									Completed in 2017	
Output 3.4	A monitoring report on the energy performance of the demonstration buildings documenting the actual energy and financial savings and GHG emission reduction from each building as a whole and from each specific energy efficiency measure and appliance tested.									Energy efficiency performance of the buildings along with actual energy and cost saving data, and the emissions of greenhouse gases have been assessed and recorded in the monitoring reports.	The project carried out detailed monitoring of all the three pilot buildings during the first heating season using the dispatching system for the measured parameters and the system of automatic monitoring of the status of the installed energy efficient engineering systems. The data on energy efficiency in buildings and actual data on energy savings and cost reduction, as well as on greenhouse gas emissions, were assessed and recorded in the monitoring reports.

3.4.1	Determine the actual characteristics of air permeability of envelopes of the pilot buildings and propose recommendations and measures to improve the tightness of the buildings if necessary.	000473 62000 10003	71300 - local consultants (budget 2017)	0,00 0,00	0 With due account of the methodology and best practices exercised in Belarus the required tightness of envelopes of the pilot buildings and the resulting heat losses have been assessed using air permeability tests and thermal imagings and respective reports have been prepared and submitted to the designers and developers as well as to the Energy Efficiency Department.	Fully implemented. The required tightness of the envelopes for the pilot buildings and respective heat losses were evaluated taking into account the methodology and best practices applied in Belarus, using the special tools for airtightness tests and thermal imaging tests. The respective reports were prepared and presented to the designers, developers, and Energy Efficiency Department (see "Thermal Imaging Examination of the External Building Envelope in Hrodna" / Minsk, January 2018, 106 pages, "Thermal Imaging Examination of the External Building Envelope in Minsk" / Minsk, January 2018, 83 pages; "Thermal Imaging Examination of the External Building Envelope in Mahilioŭ" / Minsk, January 2018, 85 pages.). It was demonstrated that the building envelopes in Hrodna and Minsk surpass thermal insulation characteristics of other buildings of the same series. These parameters for the building in Mahilioŭ are in line with the current standards.
		000473 62000 10003	71300 - local consultants	600,00 1111,92 185%	-512	
		000473 62000 10003	71600 - travel	1000,00 741,56 74%	258	
		000473 62000 10003	72100 - contract. serv. companies	12500,00 10000,00 80%	2500	
3.4.2	Ensure energy efficiency performance monitoring of the three pilot buildings constructed as part of the project, through dispatch systems of the utility installations in each of the pilot buildings and a remote access data channel enabling data acquisition for the monitoring.	000473 62000 10003	71300 - local consultants (budget 2017)	0,00 0,00	0 Quarterly reports with the findings of energy efficiency monitoring of the three pilot buildings in Hrodna, Minsk, and Mahilioŭ have been prepared and submitted to the designers, developers and to the Energy Efficiency Department. The reports should contain documents confirming the actual energy saving for the operation of the building as a whole and for each individual measure of improving energy efficiency and each individual installed unit of utility equipment.	Fully implemented. Quarterly reports with the findings of energy efficiency monitoring of the three pilot buildings in Hrodna, Minsk, and Mahilioŭ were prepared and submitted to the designers, developers and Energy Efficiency Department. (see "Monitoring Methodology for the Pilot Buildings" / Minsk, January 2018, 44 pages, "Monitoring of Energy Efficient Buildings, Stage 1" / Minsk, January 2018, 81 pages, "Monitoring of Energy Efficient Buildings, Stage 2" / Minsk, March 2018, 138 pages, "Monitoring of Energy Efficient Buildings, Stage 3" / Minsk, May 2018, 81 pages, "Results of Monitoring of the Energy Efficient Building in Mahilioŭ" / Minsk, May 2018, 14 pages; "Results of Monitoring of the Energy Efficient Building in Hrodna" / Minsk, May 2018, 22 pages). The reports contain documents confirming the actual energy saving for the operation of the building as a whole and for each individual measure of improving energy efficiency and each individual installed unit of utility equipment. Although the buildings are fully operational, they are not fully occupied (only about 47% of the apartments have residents). This prevents from obtaining final objective data on energy consumption of the buildings in general and its distribution between different sources of heat supply system. Nevertheless, using the developed methodology and based on the data obtained, estimates of energy saving indicators were made, which are coherent with the specific energy consumption for heating, ventilation and hot water supply declared in project documentation.
		000473 62000 10003	71300 - local consultants	1000,00 1313,30 131%	-313	
		000473 62000 10003	71600 - travel	1500,00 882,34 59%	618	
		000473 62000 10003	72100 - contract. serv. companies (NIPTIS, budget 2017)	0,00 0,00	0	
3.4.3	Provide documentation with the actual figures on the energy efficiency, economic efficiency and reduction of greenhouse gas emissions for each building as a whole and for each individual energy efficiency measure and utilized technology.	000473 62000 10003	71300 - local consultants	2500,00 1868,73 75%	631 Quarterly reports with the findings of energy and economic efficiency monitoring and monitoring of the reduction of greenhouse gas emissions for the three pilot buildings in Hrodna, Minsk, and Mahilioŭ have been prepared and submitted to the designers, developers and to the Energy Efficiency Department. The reports should contain documents confirming the actual saving of funds and the actual reduction of greenhouse gas emissions from the operation of the building as a whole and for each individual measure of improving energy efficiency and each individual installed unit of utility equipment.	Fully implemented. The reports with the findings of the energy and economic efficiency monitoring and monitoring of the reduction of greenhouse gas emissions for the three pilot buildings in Hrodna, Minsk, and Mahilioŭ were prepared and submitted to the designers, developers and to the Energy Efficiency Department (see "Annual Energy Generation through Introduction of Energy Efficient Equipment and Technologies" / Minsk, June 2018, 16 pages, "Annual Balance of Consumption /generation of Heat and Electricity in Energy-efficient Buildings" / Minsk, May 2018, 7 pages, "The Volume of Reduction in Greenhouse Gas Emissions during Operation of Pilot Buildings" / Minsk, June 2018, 28 pages). The reports contain the documents confirming the actual saving and the actual reduction in greenhouse gas emissions from operation of the building as a whole and for each individual measure of improving energy efficiency and each individual installed unit of utility equipment.
		000473 62000 10003	72100 - contract. serv. companies (NIPTIS, budget 2017)	0,00 7,79	-8	
3.4.4	Provide documentation with the actual figures on the energy efficiency, economic efficiency and reduction of greenhouse gas emissions for each building as a whole and for each individual energy efficiency measure and utilized technology.	000473 62000 10003	72100 - contract. serv. companies (NIPTIS, budget 2017)	0,00 0,00	0 The report with the recommendations for improving engineering and design solutions utilized in the buildings and for the dissemination of the experience has been prepared, agreed with the designers, developers and operating entities, submitted to the Energy Efficiency Department and published on the Internet.	Fully implemented. The report with the recommendations on improving engineering and design solutions utilized in the buildings and to disseminate the experience was prepared and submitted to the project partners and Energy Efficiency Department (see "Methodological Recommendations for Engineering Training for General Contracting Organizations" / Minsk, April 2018, 13 pages, "Monitoring the Construction of the Three Pilot Residential Buildings and Analysis of the Data" / Minsk, May 2018, 21 pages).
Output 3.5	At least 30 private showings of the new buildings organized for local architects, designers, builders and other decision makers, including half-day training sessions with an objective to promote the solutions adopted for the demonstration projects in additional buildings.				Set of different training materials has been developed and handed over to project stakeholders and target groups. In total (taking into account also year 2017) at least 30 visits to the pilot sites conjointly with trainings of half-day long have been organized and conducted in Minsk, Hrodna, Mahilioŭ for the local architects, designers, builders, building operators and decision makers.	A set of training materials was developed and handed over to project stakeholders and target groups. In total (taking into account also year 2017), at least 30 visits to the pilot sites along with half-day trainings were organized and conducted in Minsk, Hrodna, Mahilioŭ for the local architects, designers, builders, building operators and decision makers.

3.5.1	Using the materials delivered by local and international experts in 2016-2017, prepare, publish and disseminate a 95-minute training video film with an additional electronic tutorial function for demonstrating to specialists of operating companies the contents, operating principles, maintenance and repair of the components of each of the energy efficiency utility systems installed in the pilot buildings.	000473	62000	10003	71300 - local consultants (budget 2017)	0,00	0,00		-	The training video film of 95-minute long presenting design, construction, operating principle, operation and maintenance services of energy-efficient engineering systems using the pilot buildings as an example has been developed and issued for specialists of utility companies and replicated in 100 copies to be used by the Oblast Training Centres for Personnel of Housing & Communal Services.	Fully implemented. In 2018, the project organized and conducted 13 training seminars combined with training at the pilot sites (in addition to 17 such events in 2017). For proper and effective implementation of this activity, the project recruited a company to organize the events. To ensure sustainable promotion of the solutions used in the design and construction of the pilot buildings, the project video recorded installation, adjustment and operation of engineering equipment installed in the pilot buildings. Based on these and subsequent additional video materials, three parts of the information and educational (training) film were produced using 3-D format and an electronic self-instruction manual with interactive test functions for each of the engineering systems. These materials on the issues of design, construction, operation and maintenance of energy-efficient utility systems on the example of pilot buildings, became the main ones for the project training programme and for training seminars at the regional training centers of housing and utility services.
		000473	62000	10003	71400 - contract. serv. individ.	13550,00	15743,08	116%	-2193		
		000473	62000	10003	71600 - travel	500,00	610,63	122%	-111		
		000473	62000	10003	72130 - transportation services	0,00	0,00		0		
		000473	62000	10003	74200 - audio & video prod. (budget 2017)	0,00	0,00		0		
3.5.2	Develop, purchase, assemble and install in the Oblast Training Centers for Utilities (in Minsk, Mahilioŭ and Hrodna) and in training classes of organizations subordinated to the Energy Efficiency Department of Gosstandart information systems, visual aids and models of the energy efficient engineering systems (solar collector, PV-panel), which have been put into operation in the pilot buildings, to provide demonstration of contents, principles of operation, maintenance and repair of the components of these systems during the current trainings (see activity 3.5.4 below) and future training, informational and promotional campaigns.	000473	62000	10003	71300 - local consultants	2676,00	3556,65	133%	-881	The Oblast Training Centers for Utilities and training classes of the Energy Efficiency Department have been equipped with a set of information systems, stands, models, other training visual aids including working models of a HWAC system with heat recuperation, a solar collector system and PV-panels to help conduct efficient training campaigns for the specialists of housing and communal services (main target audience) and for other relevant professionals. That will ensure further transfer and dissemination of experience and knowledge about the energy efficient utility systems installed in the pilot buildings after the project is terminated.	Fully implemented. To build the capacity of the Oblast Training Centers for Utilities and training classes of the Energy Efficiency Department, the project procured a set of information systems, stands, models, other training visual aids including working models of HWAC system with heat recuperation, solar collector system and PV-panels to facilitate conducting efficient training campaigns for the specialists of housing and utility services (main target audience) and other relevant professionals. This will ensure further transfer and dissemination of the experience and knowledge after the project closure about energy efficient utility systems installed in the pilot buildings.
		000473	62000	10003	72100 - contract. serv. companies	44000,00	34918,12	79%	9082		
		000473	62000	10003	72405 - conference-system	4328,00	4237,32	98%	91		
		000473	62000	10003	71600 - travel	500,00	431,46	86%	69		
3.5.3	Using the materials delivered by local and international experts in 2016-2017, develop an electronic simulator (web application) "Improve Energy Efficiency of Your Apartment" and disseminate it among residents of the pilot buildings and experts as well as via the project's website.	000473	62000	10003	71300 - local consultants (budget 2017)	0,00	0,00		0	Electronic web-based simulator "Improve Energy Efficiency of Your Apartment" has been developed that helps raising awareness of local population about energy efficient housing, allows developing own measures aimed at reduction of energy consumption of their flats and provides advices for decision makers as to preliminary estimations of the best of energy and resource efficient and cost-effective options while planning the developments in housing. The tool has been disseminated among residents and experts via the project's website and using other means of communication.	Fully implemented. An electronic web-based simulator "Improve Energy Efficiency of Your Apartment" was developed. It helps raising awareness in local population about energy efficient housing, allows developing own measures aimed at reducing energy consumption in their apartments and providing advice to decision makers on preliminary assessment of the best energy and resource efficient, and cost-effective options for planning new housing. The interactive calculator will be posted on the project website and subsequently transferred to the website of the Energy Efficiency Department.
		000473	62000	10003	72100 - contract. serv. companies	10400,00	9206,47	89%	1194		
		000473	62000	10003	71600 - travel	500,00	0,00	0%	500		
3.5.4	Using the instructional, information and video materials prepared as part of activities 2.1 and 3.5.1 above as well as the visual aids and models described in activity 3.5.2 above, organize in each of the three cities where the pilot buildings were built at least 6 special demonstration events with trainings (half-day long) for the designers and specialists in residential construction, and for the specialists of utility companies responsible for the operation and maintenance of the energy efficient residential buildings.	000473	62000	10003	71600 - travel	2500,00	148,13	6%	2352	In addition to 11 visits organized in 2017, at least 6 half-day training sessions that include demonstrations of the training video film and coupled with site visits have been conducted in each of the cities (Hrodna, Mahilioŭ and Minsk) for architects, designers, builders, management (operating) companies and decision makers (total number of trainees should be at least 100).	In addition to the 11 visits organized in 2017, 19 half-day training sessions that include demonstration of the training video materials listed in p.3.5.1 and coupled with site visits were conducted in Hrodna, Mahilioŭ and Minsk for architects, designers, builders, management (operating) companies and decision makers. A total of about 50 participants took part in the training sessions. At the end of the sessions, a random sample survey was conducted among the students to learn the level of understanding of the training material. Over 76% of the respondents rated these trainings as necessary and useful for their subsequent careers.
		000473	62000	10003	72100 - contract. serv. companies (budget 2017)	0,00	0,00		0		
	Bank Fee	000473	62000	10003	74510 - bank charges	100,00	100,00	100%	0		
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003	76125/76135		0,02		0		
Outcome 3 - total:						98 154	84 877,52	86%	13 276		
Outcome 4: Documented, disseminated and institutionalized project results providing a basis for further replication											

Output 4.1	Developed and published public awareness raising materials and completed nation-wide awareness and information campaign advocating the benefits of energy efficiency measures in new buildings, including economic, social, health, environmental and aesthetical aspect and also addressing the GEF/UNDP visibility requirements	At least 15 thematic publications have been provided for different key stakeholders and target groups. At least one informational campaign on promoting the entire experience of the project during its implementation concerning energy efficient housing has been launched and successfully completed.	44 thematic publications were made (interviews, press releases, articles, other information and advertising materials) to inform target groups and general public about the most important achievements of the project, progress of work and activities. For the general public the project actively used its mass media network while giving 3 interviews and participating in a Q&A radio-session. The project prepared and issued 4 video-rills for the project's training campaigns and about the pilot buildings and other project's activities. An information campaign was launched to change the understanding and behavior in people with regards to measures aimed at improving energy efficiency. This campaign is based on the life stories' videos about two families with many children who accommodated in comfortable apartments in an energy efficient building in Mahilioŭ. The project made the script and directed creation of the film "Energy Efficiency. Step into the Future", it was broadcast on the Central Television and gained the attention of the public and the leadership of the country. For its training campaign for utility companies the project produced a 3D video tutorial. The Project site is constantly updated - http://effbuild.by . The Project has successfully used Twitter, Facebook and Issuu.com as social media tools for dissemination of the project results and relevant information.																									
4.1.1	Organize and conduct an ongoing information campaign (interviews, press releases, etc.) regarding project activities.	<table border="1"> <tr> <td data-bbox="626 514 706 541">000473</td> <td data-bbox="706 514 786 541">62000</td> <td data-bbox="786 514 866 541">10003</td> <td data-bbox="973 514 1113 541">71400 - service contr. individ.</td> <td data-bbox="1181 514 1219 541">8630</td> <td data-bbox="1299 514 1439 541">8630,00</td> <td data-bbox="1418 514 1457 541">100%</td> <td data-bbox="1567 514 1576 541">0</td> </tr> <tr> <td data-bbox="626 598 706 625">000473</td> <td data-bbox="706 598 786 625">62000</td> <td data-bbox="786 598 866 625">10003</td> <td data-bbox="973 598 1113 625">71600 - travel</td> <td data-bbox="1181 598 1219 625">2000</td> <td data-bbox="1299 598 1439 625">235,04</td> <td data-bbox="1418 598 1457 625">12%</td> <td data-bbox="1567 598 1576 625">1765</td> </tr> <tr> <td data-bbox="626 640 706 667">000473</td> <td data-bbox="706 640 786 667">62000</td> <td data-bbox="786 640 866 667">10003</td> <td data-bbox="973 640 1113 667">74200 - audio & video prod.</td> <td data-bbox="1181 640 1219 667">6500</td> <td data-bbox="1299 640 1439 667">6616,28</td> <td data-bbox="1418 640 1457 667">102%</td> <td data-bbox="1567 640 1576 667">-116</td> </tr> </table>	000473	62000	10003	71400 - service contr. individ.	8630	8630,00	100%	0	000473	62000	10003	71600 - travel	2000	235,04	12%	1765	000473	62000	10003	74200 - audio & video prod.	6500	6616,28	102%	-116	At least 15 publications (e.g., interviews, press releases, articles, other information and promotional materials) have been provided in order to inform target groups and a wider audience about the project's key achievements, progress and activities, as well one informational campaign has been launched to change, to extent possible, people's perception and behaviour with regard to energy efficiency improvement measures.	Fully implemented. The project has prepared and published on-line and in hard copies and disseminated 18 technical reports, 14 manuals and 8 press-releases / articles. The project has printed and disseminated about 400 copies of 4 briefs and infographic leaflets about the demo buildings and the applied energy efficiency improvement technologies. For the general public the project actively used its mass media network while giving 3 interviews and participating in a Q&A radio-session. An information campaign was launched to change the understanding and behavior in people with regards to measures aimed at improving energy efficiency. This campaign is based on the life stories' videos about two families with many children who had lived for a long time in uncomfortable cramped Soviet time housing, and are now accommodated in comfortable apartments in an energy efficient building in Mahilioŭ. The project made the script and directed creation of the film "Energy Efficiency. Step into the Future", it was broadcast on the Central Television and gained the attention of the public and the leadership of the country. For its training campaign for utility companies the project produced a 45-minute (full length) 3D video tutorial.
000473	62000	10003	71400 - service contr. individ.	8630	8630,00	100%	0																					
000473	62000	10003	71600 - travel	2000	235,04	12%	1765																					
000473	62000	10003	74200 - audio & video prod.	6500	6616,28	102%	-116																					
4.1.2	In cooperation with the Department for Energy Efficiency provide information and expert support to the national Energy Efficiency Leader competition.	<table border="1"> <tr> <td data-bbox="626 871 706 898">000473</td> <td data-bbox="706 871 786 898">62000</td> <td data-bbox="786 871 866 898">10003</td> <td data-bbox="973 871 1113 898">71300 - local consultants (budget 2017)</td> <td data-bbox="1181 871 1219 898">0</td> <td data-bbox="1299 871 1439 898">0,00</td> <td data-bbox="1418 871 1457 898"></td> <td data-bbox="1567 871 1576 898">0</td> </tr> <tr> <td data-bbox="626 955 706 982">000473</td> <td data-bbox="706 955 786 982">62000</td> <td data-bbox="786 955 866 982">10003</td> <td data-bbox="973 955 1113 982">74200 - audio & video prod.</td> <td data-bbox="1181 955 1219 982">0</td> <td data-bbox="1299 955 1439 982">0,00</td> <td data-bbox="1418 955 1457 982"></td> <td data-bbox="1567 955 1576 982">0</td> </tr> </table>	000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00		0	000473	62000	10003	74200 - audio & video prod.	0	0,00		0	Support has been provided (expert and information support) to the conduct of the competition, and the national Energy Efficiency Leader competition has been conducted.	Fully implemented. Support was provided (expert and information support) to organizing the national Energy Efficiency Leader competition, as well as to the process of developing the conditions and selection of winners. The competition shall take place in September, 2018 under the aegis of the Energy Efficiency Department.								
000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00		0																					
000473	62000	10003	74200 - audio & video prod.	0	0,00		0																					
Output 4.2	Agreed methodology and sustainable institutional arrangements for annual market monitoring keeping track on buildings constructed each year as well as the sale of key building materials, accessories and appliances together with their energy performance characteristics.	The methodology and provisions for organizational arrangements for the system of annual monitoring of construction of energy efficient residential buildings and the system for monitoring of production and sales of basic construction materials, equipment and appliances with the indication of energy efficiency performance values have been finalized, submitted into a conciliation procedure and adopted.	The methodology and provisions for organizational arrangements for the system of annual monitoring of construction of energy efficient residential buildings and the system for monitoring production and sales of basic construction materials, equipment and appliances with indication of energy efficiency performance values were finalized, submitted for approval.																									
4.2.1	Based on the results of the studies carried out and the discussions held during two roundtables in 2017, revise a draft procedure (methodology) along with provisions for institutional mechanisms for the annual monitoring of the state of energy efficient residential buildings in Belarus along with production of basic building materials, auxiliary equipment and accessories along with their energy efficiency performance.	<table border="1"> <tr> <td data-bbox="626 1354 706 1381">000473</td> <td data-bbox="706 1354 786 1381">62000</td> <td data-bbox="786 1354 866 1381">10003</td> <td data-bbox="973 1354 1113 1381">71300 - local consultants (budget 2017)</td> <td data-bbox="1181 1354 1219 1381">0</td> <td data-bbox="1299 1354 1439 1381">0,00</td> <td data-bbox="1418 1354 1457 1381"></td> <td data-bbox="1567 1354 1576 1381">0</td> </tr> </table>	000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00		0	The draft of the methodology has been revised and organizational arrangements have been proposed for the system of the annual monitoring of construction of energy efficient residential buildings along with tracking the annual volumes of production and sales of basic construction materials, equipment and appliances with the indication of energy efficiency performance. The above draft has been submitted to the Ministry of Architecture and Construction and the Energy Efficiency Department for their consideration and further consultations (see activity 4.2.2 below).	Fully implemented. Drafts of the methodology and organizational arrangements were proposed for the system of the annual monitoring of construction of energy efficient residential buildings along with tracking the annual volumes of production and sales of basic construction materials, equipment and appliances with indication of energy efficiency performance (see "Analysis of Practical Procedures (methodologies) and Relevant Provisions for the System of Annual Monitoring of Energy-efficient Housing" / Minsk, March 2018, 23 pages, "Institutional Mechanisms for Annual Monitoring of the Status of Energy Efficient Housing in the Republic of Belarus" / Minsk, March 2018, 16 pages). The above drafts were used for monitoring the pilot buildings, and its results have become the basis for the main provisions of this methodology (see activity 4.2.2 below).																
000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00		0																					

4.2.2	Conduct consultation with relevant agencies and, on the basis of its outcomes and the results of monitoring of the pilot buildings provided by NIPTIS under activity 3.4 above, finalize the draft methodology and respective provisions elaborated under activity 4.2.1 above and submit the methodology and other related documents for further review according to the prescribed procedure.	000473 62000 10003	71300 - local consultants (budget 2017)	0	0,00	0	The methodology and provisions for organizational arrangements for the system of annual monitoring of construction of energy efficient residential buildings and the system for monitoring of production and sales of basic construction materials, equipment and appliances with the indication of energy efficiency performance values have been finalized and submitted to the Ministry of Architecture and Construction and the Energy Efficiency Department for subsequent conciliation procedure.	Fully implemented. The methodology and provisions for organizational arrangements for the system of annual monitoring of construction of energy efficient residential buildings were finalized and submitted to the Ministry of Architecture and Construction and Energy Efficiency Department (see "Draft Procedure, Regulations and Methodology of the System for Annual Monitoring of Energy-Efficient Housing" / Minsk, April 2018, 16 pages).	
4.2.3	Provide necessary support to the stakeholders during the conciliation and approval procedures until the documents mentioned above are adopted in accordance with the prescribed procedure.	000473 62000 10003	71300 - local consultants (budget 2017)	0	0,00	0	The methodology and organizational arrangements for the system of the annual monitoring of energy efficient residential buildings along with the sales of basic construction materials, equipment and appliances with the indication of energy efficiency performance have been approved by the Ministry of Architecture and Construction and adopted by the State Standardization Committee in accordance with the prescribed procedure.	Fully implemented. The project provided consulting services throughout the process of review of the methodology and provisions on organizational arrangements for the system of annual monitoring of energy-efficient housing by the State Standardization Committee. It was agreed with RUE "Institute of Housing - NIPTIS named after Ataev S.S." to continue these consultations on their side until the latter methodology is adopted. This is to form the basis of technical regulatory legal acts included into the list of acts associated with the Technical Regulation "Energy Efficiency of Buildings".	
Output 4.3	Fully mandated and capacitated state agency with a responsibility to monitor the energy savings and CO2 emission reductions in residential and other buildings, together with the agreed procedures and interagency agreements for compiling the required primary data.						The state agency that is responsible for National GHG Cadastre, has become fully capacitated in monitoring of energy saving and respective GHG emissions in the residential sector, and the procedure for the collection of necessary raw data, reporting and recording of these parameters has come under the responsibility of this company.	The state agency that is responsible for National GHG Inventory, i.e., RUE Belarusian Research Centre "Ecology", has become fully capacitated in monitoring energy saving and respective GHG emissions in residential sector, and the procedure for collecting the necessary baseline data, reporting and registration of these parameters has become the responsibility of this company.	
4.3.1	Consultations on proper use of the system for monitoring energy saving and GHG emissions in the housing sector are provided to RUE Belarusian Research Centre "Ecology", National Agency authorized to lead and coordinate activities the Republic of Belarus should implement in line with commitments under the UNFCCC, Kyoto Protocol and Paris Agreement. The Agency is provided with a respective report and is helped establish the procedures for the collection of the required primary data.	000473 62000 10003	71300 - local consultants	2000	2080,83	104%	-81	The report that contains recommendations concerning monitoring of energy saving and GHG emissions in the residential sector and detailed procedures for collection of necessary raw data, reporting and recording of respective parameters was presented to the Belarusian Research Centre "Ecology". As a result, UNFCCC major national reporting documents (e.g., the 7th National Communication, the Biannual Report, and the Report on GHG Cadastre) have been drafted by the said agency with due account of the above recommendations and procedures.	Fully implemented. The report that contains recommendations concerning monitoring of energy saving and GHG emissions in residential sector and detailed procedures for collection of necessary baseline data, reporting and registration of the respective parameters was presented to the Belarusian Research Centre "Ecology" (see "Methodology for Calculating Greenhouse Gas Emissions in Residential Sector" / Minsk, May 2018, 6 pages; "Provisions and requirements for the procedure for collecting primary data, reporting and registration. Proposals for introducing changes in the methodology for calculating greenhouse gas emissions in the housing sector" / Minsk, ay 2018, 18 pages), on the basis of which the aforementioned agency shall develop the main national reporting documents of the UNFCCC (for example, the 7th National Communication, the Biannual Report and the GHG Inventory Report).
Output 4.4	An approved national energy audit program (including the required funding for its implementation) for promoting larger number of energy audits of residential and other buildings and including a mechanism for using the audit results for elaboration of the energy efficiency strategies for the building sector at the national level.						Provisions of mechanisms for use of energy audit findings while developing the energy efficiency improvement strategies in housing and construction sectors have been proposed by the project and agreed by the interested parties.	Provisions on the mechanisms for using the energy audit findings in developing the energy efficiency improvement strategies in housing and construction sectors were proposed by the project and agreed upon by key stakeholders.	

4.4.1	Finalize the development of appropriate mechanism for implementation of the provisions and principles of the Technical Code "Energy Efficiency of Buildings" in the area of energy audit with regard to using the energy audit findings for the development of further strategies to improve energy efficiency in the residential sector.	000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00	0	The basic provisions of a mechanism for applying the Technical Code "Energy Efficiency of Buildings" and its Article 6 (Energy Audit of Buildings) to using the results of energy audit of buildings for further elaboration of strategies for energy efficiency improvement of housing and construction sectors has been developed and submitted for consideration by the Energy Efficiency Department.	Fully implemented. The basic provisions of the mechanism for applying the Technical Code "Energy Efficiency of Buildings" and its Article 6 (Energy Audit of Buildings) with regards to using the results of energy audit of buildings for further elaboration of strategies for energy efficiency improvement in housing and construction sectors were included into the document developed by the project "Methodological Recommendations for Energy Examination in Multi-storey Residential Buildings in the Republic of Belarus", which was submitted to the Energy Efficiency Department.	
Output 4.5	Energy-efficiency aspects integrated into the regional and local plans for territorial development being developed by the Institute of Urban and Regional Planning (IRUP).									The energy efficiency housing development aspects elaborated by the Project suggested to be integrated by the Institute of Urban and Regional Planning into the regional and local plans for territorial development.	The Project provided a report on how the energy efficiency improvement policy in the housing sector can positively impact the policy for integrated territorial development. Basic principles were discussed with the Institute of Urban and Regional Planning and relevant Technical Committees for Standardization, and the Institute plans to adopt these principals.
4.5.1	Prepare proposals on typology and schemes of the integrated territorial organization of the standard multi-storey housing development, including indicators of energy consumption for heating and DHWS which have been achieved in the pilot buildings.	000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00	0	Proposals and respective recommendations have been elaborated by the project as to how to include energy consumption indicators achieved by the project in its pilot buildings into the development of integrated territorial organization of multi-storey housing. The respective report has been forwarded to IRUP for consideration.	Fully implemented. The proposals and respective recommendations were elaborated by the project on the way to include energy consumption indicators achieved by the project in its pilot buildings into the development of the integrated spatial planning of multi-storey housing (see "The Role of Urban Planning in Improving Energy Efficiency in an Area" / Minsk, March 2018, 10 pages. "Development of Urban Planning Concepts, Regional and Local Spatial Development Plans, Based on Recommendations on Integration of Energy Efficient Approaches into these Plans" / Minsk, April 2018, 22 pages).	
4.5.2	Hold an ad-hoc meetings with the IRUP to discuss recommendations elaborated under activity 4.5.1 above.	000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00	0	At least 50 specialists and decision makers in the area of urban planning have discussed the recommendations prepared by the project on spatial urban development with due regard for the integration of the principles of improving energy efficiency into the strategies and plans of the organization of large scale multi-storey residential development.	Fully implemented. Negotiations were held with the management of the Institute of Regional and Urban Planning and a meeting was held with the specialists and responsible officials within the framework of the meetings of the relevant technical committees for standardization of the RUE "StroyTechNorm". The results of these discussions demonstrated that the proposals of the project in the field of spatial development of the city with integration of energy efficiency principles and their incorporation into strategies and plans for organizing mass construction of multi-storey housing, do not find understanding yet.	
		000473	62000	10003	72100 - contract. serv. companies	2000	673,48	34%	1327		
4.5.3	Based on the outputs of activities 4.5.1 and 4.5.2 above provide necessary informational support and consultancy services for the IRUP in the process of formulating urban development concepts, regional and local territory development plans based on recommendations regarding the integration of energy-efficient approaches into these plans.	000473	62000	10003	71300 - local consultants (budget 2017)	0	0,00	0	The Institute for Regional and Urban Planning has adopted a concept for regional and local spatial development plans with due regard for the recommendations elaborated by the project on spatial urban development plans with integration of energy-efficient measures into these plans.	Fully implemented. The Institute of Regional and Urban Planning plans to adopt a concept for regional and local spatial development plans with due regard for the recommendations elaborated by the project on spatial urban development plans with integration of energy-efficient measures into these plans. However, regulatory documents, as well as architecture and urban planning plans/designs do not include these activities.	
Output 4.6	An International conference on energy efficiency in residential sector held in Belarus, including a field visit to the pilot demonstration sites and coordination with other UNDP/GEF building energy-efficiency projects									International Conference on the best practices in the energy efficiency improvement in residential Buildings is organized and held annually, and a larger International Conference will be conducted by the end of the Project.	On June 7-8, 2018, within the framework of the project, the IX International Scientific and Technical Conference "Energy Efficient Buildings of the 21st Century" was organized and held, which was attended by about 160 specialists and officials, as well as representatives of other similar UNDP projects from 11 countries. The conference ended with a visit to the demonstration site in Grodno. The project also supported organization of two other conferences.
4.6.1	Organize and conduct International Conference (or separate conference sessions) on the best practices in the energy efficiency improvement in residential buildings under the auspices of the Project and in cooperation with the Department for Energy Efficiency, UNDP and other similar projects.	000473	62000	10003	71300 - local consultants (budget 2017)	0	0	0	At least 100 professionals and decision makers have improved their knowledge and skills in implementing energy efficiency improvement projects, and shared experience, strategy and technical solutions while taking part in the International Conference on the best practices in the energy efficiency improvement in residential buildings (during the conference, site visits are organized to pilot buildings) under the auspices of the project.	Fully implemented. At least 160 specialists and decision makers from Belarus and 10 other countries discussed the status of development of housing construction, shared their experience in implementing projects on creating policies, regulatory frameworks and technical solutions for improving energy efficiency in residential sector during their participation in the international conference "Energy Efficient Buildings of the 21st Century" organized annually under the aegis of the project. During the conference, the participants visited the pilot site in Hrodna.	
		000473	62000	10003	71600 - travel	0	3913,67		-3914		
		000473	04000	00012	71600 - travel	1200	1836,72	153%	-637		
		000473	04000	00012	72100 - contract. serv. companies, 71300 - local consultants	10850	703,70	6%	10146		
		000473	04000	00012	75700 - learning cost	0	10647,34		-10647		

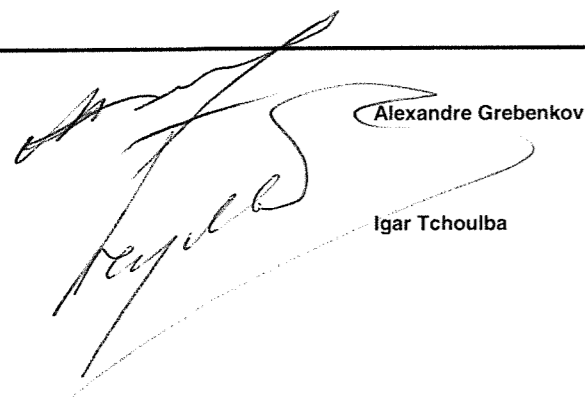
		000473 62000 10003	75700 - learning cost	0	6030,12				-6030		
		000473 04000 00012	74200 - audio & video prod.	500	22,14	4%			478		
Output 4.7	Regularly updated project website with a link to an Expanded Energy Platform									At the end of the project, the project's website has been transferred to the UNDP website (http://www.by.undp.org/content/belarus/ru/home/library/environment_energy/) according to the decision of the UNDP Office. Some information from the project's website has been also transferred to the Energy Efficiency Department's website (http://energoeffekt.gov.by/).	By the end of the project, the project website was transferred to the UNDP website (http://www.by.undp.org/content/belarus/ru/home/library/environment_energy/) according to the decision of the UNDP Office. Some information from the project website was also transferred to the Energy Efficiency Department's website (http://energoeffekt.gov.by/) in line with the decision of the Energy Efficiency Department and the Project Board.
4.7.1	Transfer the project website to the Internet page http://www.by.undp.org/ and regularly update the following sections of the website: Reports (project outcomes and achievements, reports, articles, etc.), Special Materials (methodologies, standards, recommendations, etc. produced by the project) and News (announcements, news and press releases, reposted relevant mass-media publications, etc.) along with technically adapted and photo (video) content. Ensure website promotion via Internet search engines and social networks.	000473 62000 10003	71400 - service contr. individ.	1682	2 247,82	134%			-566	The content of the project's website has been fully transferred to the UNDP Office site, including all project's technical reports with methodologies, recommendations prepared by the project personnel, published reference books, main publications and articles of the project's experts, materials and presentations from the conferences, trainings and workshops organized and conducted by the project, and all important press releases and news. The information (key reports, materials and presentations from major project's events) has been also transferred to the Energy Efficiency Department's website.	Fully implemented. The website is fully operational with its content. The Project posted on its website and made available for free download almost all press-releases and media announcements, handbooks issued, technical reports and key publications published. In 2018, the website will be transferred to the website of the UNDP Representative Office (http://www.by.undp.org/) to provide access to the materials of the project after its closure. It was also agreed with the EE Department (National Implementing Agency) that some key materials will be reallocated to their website (http://energoeffekt.gov.by/).
		000473 62000 10003	71300 - local consultants	500	800	160%			-300		
Output 4.8	Annual market monitoring reports for new building construction with the emphasis on energy efficiency aspects.									The report on the monitoring of the market of energy efficient buildings for 2013-2018 has been prepared and published on-line.	The report containing the data on the monitoring of the market of energy efficient construction for 2013-2018 was prepared along with the findings of the analysis and respective recommendations on further possibilities for energy efficiency improvement and GHG emission reduction.
4.8.1	Based on the available statistics, direct survey and data obtained from the project's partners (Ministry of Architecture and Construction, Department for Energy Efficiency) conduct a study of the energy performance and respective GHG emissions of different residential buildings introduced to the housing construction market in 2013-2018, and based on this data, draft reports containing the data on market monitoring for new residential building construction, analysis results and respective recommendations with the emphasis on energy efficiency improvement and GHG emission reduction.	000473 62000 10003	71300 - local consultants (budget 2017)	0	0,00				0	The report containing the data on the monitoring of the market of energy efficient buildings for 2013-2018 has been prepared along with the findings of the analysis and respective recommendations as to further possibilities for energy efficiency improvement and GHG emission reduction.	Fully implemented. The statistical data were collected and subsequent analysis was conducted on energy performance of different residential buildings constructed in 2013-2018. The report containing the data on the monitoring of the market of energy efficient construction for 2013-2018 was prepared along with the findings of the analysis and respective recommendations on further possibilities for energy efficiency improvement and GHG emission reduction (see "Analysis of the Housing Construction Market" / Minsk, May 2018, 26 pages). The report has been presented to the stakeholders and published on the Internet.
Output 4.9	Final project report consolidating the results and lesson learnt from the implementation of the proposed project components and recommendations for the required next steps									Final reports containing the main technical results of the project as per each of its components along with lessons learned and recommendations for further replication of project's outcomes prepared and issued. The Terminal Evaluation Report on the final evaluation of the project prepared and published online.	Two final technical reports containing the main technical results of the project as per its major components along with lessons learned and recommendations for further replication of project's outcomes prepared and issued. The Terminal Evaluation Report on the final evaluation of the project prepared and published online.

4.9.1	Prepare, organize and hold a tender procedure for procurement of services of a local consultant for performing the project's final evaluation.	000473 62000 10003	71300 - local consultants	5000	4400,00	88%	600	The ToR and other relevant documents have been prepared to conduct a tender for selection of a local consultant to perform the project's terminal evaluation. The local consultant on the final evaluation of the project has been selected and respective contract has been prepared and duly signed.	The ToR and other relevant documents were prepared to conduct a selection process based on the modality of a contract of less than 5 KUSD to hire a local consultant to perform the project's terminal evaluation. The project selected an appropriate candidate and invited to perform the assignment. As a result, the local consultant for the project final evaluation was selected and respective contract was prepared and duly signed.
4.9.2	Conduct a study on the final evaluation of the project by collecting and analyzing actual data about its results and by comparing them with the objectives, targets, baseline and the requirements stipulated in the project document.	000473 62000 10003 000473 62000 10003 000473 62000 10003 000473 04000 000012	71200 - international consultants (budget 2017) 71600 - travel 71300 - local consultants 71300 - local consultants (translation)	0 0 0 200	109,79 789,80 0,00 0,00		-110 -790 0 200	Brief report on the results of the study prepared and submitted to the Energy Efficiency Department.	Brief report on the results of the study "Final Evaluation of the UNDP/GEF Project: "Improving Energy Efficiency in Residential Buildings in Belarus" (March 2018, 24 pages) was prepared and submitted to the Energy Efficiency Department.
4.9.3	In accordance with the policies and guidance on monitoring and evaluation of GEF's projects, compile the Terminal Evaluation Report that includes, inter alia, overview and description of the project's implementation process, assessment of the results achieved in its implementation and the lessons learned, as well as its rating.	000473 62000 10003 000473 62000 10003 000473 04000 00012	71200 - international consultants (budget 2017) 71300 - local consultants (translation) 71300 - local consultants (translation)	0 0 200	0,00 1455,77 0,00		0 -1456 200	Final report on the results of the terminal evaluation of the project prepared, presented to the Energy Efficiency Department and other stakeholders, approved by UNDP and the Energy Efficiency Department and published online.	The final report "Final Evaluation of the UNDP/GEF Project: Belarus: "Improving Energy Efficiency in Residential Buildings" (June 2018, 101 pages) on the results of the final evaluation of the project was prepared, presented to the Energy Efficiency Department and other stakeholders, approved by the UNDP and Energy Efficiency Department and published online. According to the report, the overall project implementation and its results are rated as "Satisfactory", while the objective level achievements and the results of Outcome 2 are rated as "Highly Satisfactory".
4.9.4	Compile, present and publish the technical report "New energy efficient residential buildings: technical standards, regulatory and legal framework" summarizing the results obtained under Outcome No.1.	000473 62000 10003 000473 62000 10003	71300 - local consultants 74200 - audio & video prod.	2000 500	2350,00 0,00	118% 0%	-350 500	Report summarizing the results obtained under Outcome No.1 prepared, presented to the Energy Efficiency Department, printed in 100 copies and published online.	The report summarizing the results obtained under Outcome No.1 was prepared, presented to the Energy Efficiency Department, published on the Internet (see "Analysis of the Results of the Development of Legal and Regulatory Framework for Improving Energy Efficiency in Construction and Housing Sector" / Minsk, June 2018, 34 pages), and also distributed at the final international conference of the Project.
4.9.5	Compile, present and publish the technical report "New energy efficient residential buildings: design, construction and operation" summarizing the results obtained under Outcome No.3.	000473 04000 00012 000473 04000 00012	71300 - local consultants 74200 - audio & video prod.	2000 500	2000,00 0,00	100% 0%	0 500	Report summarizing the results obtained under Outcome No.3 prepared, presented to the Energy Efficiency Department, printed in 100 copies and published online.	Report summarizing the results obtained under Outcome No.3 was prepared, presented to the Energy Efficiency Department and was published on the Internet (see "Experience in Designing, Constructing and Operating Energy-efficient Buildings Minimizing Energy Costs for Heating and Hot Water Supply" / Minsk, June 2018, 37 pages), and also distributed at the final international conference of the Project.
	Bank Fee	000473 62000 10003	74510 - bank charges	70	70,00	100%	0		
	Bank Fee	000473 04000 00012	74510 - bank charges	39	39,00	100%	0		
	REALIZED GAIN/REALIZED LOSS	000473 04000/6 00012/1 2000 0003	76125/76135				0		
Outcome 4 - total:				46371	55651,50	120%	-9 281		
Effective project management and monitoring ensured									
PM1	Project monitoring and reporting.	000473 04000 00012	71600 - travel	0	0,00		0	At least one Project Steering Committee meeting has been held. Deadline - May 31, 2018. All project reports have been submitted and adopted in due time. Deadline - July 15, 2018 (for the semiannual report to the GEF and for Logs) and Jan 15, 2018 (for the annual report to the Ministry of Economy, APR and Logs)	Draft of ADWP-2018 was first presented and discussed in the meeting of stakeholders and experts in Dec 2017. The final version of ADWP-2018 was approved in Dec 29, 2017 during the 8th Meeting of the PSC and dully adopted on Jan 22, 2018. Budget revisions were prepared and submitted in due time. The annual report for 2017 was prepared and submitted to the Ministry of Economy as required, until January 15 2018. One meeting of Project Steering Committee was conducted in 2018 (the 9th Meeting, June 8, 2018). Technical reports were generally submitted in line with the ADWP-2018. Semi-annual and annual reports for UNDP and GEF as well as Logs were submitted in time. Other operational tasks were performed as required.
PM2	Project management and project office functioning.	000473 62000 10003 000473 62000 10003 000473 04000 00012	71300 - local consultants 71300 - local consultants (translation) 71300 - local consultants (translation)	690 0 0	563,67 878,28 201,61	82%	126 -878 -202	Project office successfully operated. Project plan successfully fulfilled. Throughout the Project	The project's office is fully equipped and PIU is successfully functioning. In 2018, the project's staff has been composed of three SC holders (project manager, administrative and financial assistant, and PR & communication specialist). In addition, in 2018, 11 national and one international consultants were operating under individual contracts.

	000473	62000	10003	72100 - contract. serv. companies	0	71,07		-71
	000473	62000	10003	71600 - travel	0	0,00		0
	000473	04000	00012	71400 - contract. serv. individ.	9 665	9 101,72	94%	563
	000473	04000	00012	72100 - contract. serv. companies	790	362,31	46%	428
	000473	62000	10003	72300 - materials and goods	0	0,00		0
	000473	62000	10003	72400 - communicat	750	404,55	54%	345
	000473	62000	10003	72500 - office supplies	390	68,25	18%	322
	000473	04000	00012	72800 - information technology equipment	0	39,16		-39
	000473	04000	00012	73100 - utilities	800	825,43	103%	-25
	000473	04000	00012	73400 - equipment services	0	0,00		0
	000473	62000	10003	73400 - equipment services	300	0,00	0%	300
	000473	62000	10003	74200 - printing and publication	0	0,00		0
	000473	62000	10003	75700 - learning cost	0	0,00		0
	000473	04000	00012	74500 - miscellan.	50	50,00	100%	0
	000473	62000	10003	74500 - miscellan.	51	51,00	100%	0
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003	76125/76135	0	-0,04	0
	REALIZED GAIN/REALIZED LOSS	000473	04000	00012	76125/76135	0	-0,21	0
				PM - total:	13486	12616,80	94%	869
				Grand total:	176921	174082,27	98%	2839

(*) - this accurate forecast of expenses is made before FY-2018 CDR closure

Prepared by

 Alexandre Grebenkov

Cleared by

 Igar Tchoulba