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UNDP Deputy Resident Representative a.i.

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Date

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

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Date

ANNUAL PROJECT REVIEW 2016

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-2016	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**										**Formally adopted technical code(s) containing methodological guidelines for energy performance monitoring and calculation of residential buildings.**	**Fully implemented. Completed 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**										**Energy audit of the second set of at least 25 residential buildings organized and conducted during the second part of heating season of 2015-2016. Energy audit methodology adopted in accordance with the established procedure.**	**Fully implemented. Using the results of the second series of energy auditing of 25 multi-storey residential buildings recently completed (in May 2016) and the results of energy audit of other 30 buildings conducted in 2013-2015, the project specified the methodological guidelines for energy audit and energy performance monitoring and calculation applicable to residential buildings. Thus the methodology incorporates the analysis of results received after actual energy audits of 55 residential buildings of different type and years of construction located in four Oblasts, i.e. Minsk, Gomel, Mogilev and Vitebsk. The methodology has been submitted for corresponding approval procedure.**
1.2.1	Complete the energy audits of the second set of 25 multi-storey buildings started in 2015 with necessary analysis of the entire heating season data in line with the IPMVP and modern "eeMeasure"-software.	000473	62000	10003	71200 - international consultants (budget 2015)		0	0	0	0	Energy audits of the second set of 25 residential buildings completed and a respective report submitted to stakeholders and published online.	**Fully implemented.** The energy audits of 25 multi-storey residential buildings, which were carried out in the 2015-2016 heating season, completed. The selected set of buildings was to cover most of popular designs, different construction types and different ages of buildings. The respective reports containing data analysis, which was conducted in line with the IPMVP, results for the entire heating season of 2015-2016, which were tested using modern "eeMeasure"-software, and recommendations to improve the energy efficiency of the monitored buildings prepared, distributed among stakeholders and the corresponding final report was submitted to the Energy Efficiency Department for comments.
					71300 - local consultants (budget 2015)		0	0	0	0		
		000473	62000	10003	72100 - contract. serv. companies (IE BNAS, budget 2015)		0	0	0	0		
		000473	62000	10003	71300 - local consultants (translation)		563	0	0	563		
1.2.2	Based on the results of activity 1.2.1 above and relevant activities conducted in 2013-2014, revise and amend the energy audit methodological guidelines developed in 2014.	000473	62000	10003	71200 - international consultants (budget 2015)		0	0	0	0	Revised methodological guidelines for energy audits in residential buildings duly adopted and published online.	**Partly implemented.** Based on the results of energy audits of the 55 buildings, which were undergone these examinations in 2013-2016, the methodological guidelines for conducting energy audits in residential buildings, drafted by the Project (Методические рекомендации по проведению энергетического обследования многоэтажных жилых зданий / Минск, 2016. 138 стр.), were revised by international and local project consultants, disseminated on-line and submitted to the Energy Efficiency Department for consideration and further approval that is expected in 2017. The project is currently providing necessary consultations during the conciliation procedure and will continue this activity in 2017.
		000473	62000	10003	71300 - local consultants (budget 2015)		0	0	0	0		
		000473	62000	10003	71300 - local consultants (translation)		420	0	0	420		

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.**									**No activity was stipulated for 2016**	**Will be completed and presented to stakeholders for further use in 2017, after construction of the three pilot buildings.** Preliminary cost-effectiveness analysis of different variants of technical solutions to improve the energy efficiency of buildings was conducted and reported (Анализ экономической эффективности различных технических решений и практик, широко применяемых в настоящее время в секторе жилищного строительства с акцентом на различные типы жилых зданий // Минск, 2016. 40 стр.; Экономическая эффективность применения тепловых насосов в структуре источника отопления и горячего водоснабжения / Минск, 2016. 16 стр.), disseminated on-line and handed over to major stakeholders. The analysis demonstrates that under the existing tariff policy in the sphere of payments for energy consumed by the population there is lack of incentives both for developers and households to build and operate energy efficient houses. Continuation of work in order to clarify a number of economic indicators is scheduled for 2017, after the completion of construction and commencement of operation of the pilot buildings and with due account of changes in the tariff policy.
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**									**No activity was stipulated for 2016**	**Will be completed and presented to stakeholders for further use in 2017, after construction of the three pilot buildings.**
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**									**Technical Regulations "Energy Efficiency of Buildings" along with a set of necessary national addenda for design, construction and operation of energy efficient buildings adopted in accordance with the established procedure.**	**Fully implemented (within the competence of the project).** **The draft of Technical Code "Energy Efficiency Performance of Buildings" based on Directive 2010/31/EU was finalized and then was endorsed by relevant authorities for further conciliation procedure. Project's suggestions concerning minimal energy performance standards both for newly constructed residential buildings and those going through a major renovation were taken into account along with the national addenda to the said regulations. The Code entered the conciliation process and has already passed three hearings pending currently adoption by the Government.**
1.5.1	Provide on-going consulting services to relevant authorities in the course of conciliation and adoption procedures with regard to the Technical Regulations "Energy Efficiency in Buildings", harmonized with Directive 2010/31/EU, along with a set of national addenda to the Technical Regulations elaborated and suggested by the Project in 2014-2015.	000473	62000	10003	71300 - local consultants (budget 2015)	0	0	0	0	Technical Regulations "Energy Efficiency of Buildings" along with a set of necessary national addenda for design, construction and operation of energy efficient buildings duly adopted.	**Fully implemented (within the competence of the project).** The Project provided on-going consultations to RUE "StroyTechNorm" and TCS-14 to help prepare the Technical Code of the Republic of Belarus "Energy Efficiency of Buildings" and its national addenda for adoption. In the beginning of 2016, the documents entered a national conciliation procedure. The said Code has already successfully passed three hearing and is currently pending adoption by the Government. It is expected that the Technical Code will be duly adopted in 2017, and the project is continuing its efforts in consulting the authorities (Обсуждение и консультирование разработки проекта Технического регламента «Энергоэффективность зданий», новых технических нормативных правовых актов, изменений и дополнений к существующим нормам и стандартам // Минск, 2016. 45 стр.), using in particular such instrument as TCS-14, the technical committee of the Ministry of Architecture & Construction established under the initiative of the Project and headed by one of the Project's expert. The Project continued elaboration of other standards to be an integral part of national appendices to the Code. In addition to the standards drafted by the Project and duly adopted during the previous reporting periods, the Project, based on the results of design and construction of the pilot buildings, proposed and drafted some other standards, e.g. amendment No.3 to TCH 45-2.04-196-2010 "Thermal protection of buildings. Energy performance characteristics. Rules of definition" approved to specify classification of buildings in terms of specific consumption of thermal energy for HVAC system, and STB EN 15450 "Heating systems of buildings. Design of heating systems with heat pumps" harmonized with EN 15450:2007.
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.**									**The practical procedures for the establishment of an energy efficiency certification system and a system of monitoring and compliance checking applicable to residential buildings elaborated and submitted for consideration in accordance with the established procedure.**	**Fully implemented (within the competence of the project).** **After two years of discussions (four round tables were held in 2014-2015) with specialists and authorities, the principal provisions and practical procedures for the energy efficiency certification system were finally formalized by RUE "StroiTechNorm" in cooperation with the Project, and got approval from key ministries. The Technical Committee TCS-14 under the Ministry of Architecture & Construction considered and approved the model suggested by the Project and RUE "StroyTechNorm". The resulting document became an integral part of the Technical Code of the Republic of Belarus "Energy Efficiency of Buildings" and its national addenda. The said Technical Code that includes provisions for the energy efficiency certification system is currently pending adoption by the Government.**
1.6.1	Based on the results of activities performed in 2014-2015, complete analysis of conditions and legal provisions for introduction of the building energy efficiency certification system in Belarus and formulate recommendations as to a feasible approach to the development of this system that includes pilot stages (e.g., a voluntary system first), scale (e.g., oblast capitals first) and a timeline.	000473	62000	10003	71300 - local consultants	2800	3200	114	-400	Report with results of an assessment and justification of provisions for introduction of residential building energy efficiency certification system within the current Belarusian legal framework and housing market prepared and submitted to the Energy Efficiency Department. The recommendations as to stages, a scale and a timeline for the development of this system submitted to the Energy Efficiency Department and the Ministry of Architecture & Construction for consideration and published online.	**Fully implemented.** Recommendations as to different options for introduction of the energy efficiency certification system in the field of housing construction were prepared by the Project (Обоснование, рекомендации и проекты регламентирующих актов для поэтапного внедрения системы сертификации энергоэффективности зданий // Минск, 2016. 34 стр.). The recommendations were shared with stakeholders and helped the RUE "StroiTechNorm" to develop a draft of provisions for energy efficiency certification system that is composed with provisions for newly built houses and for existing housing stock.
1.6.2	Organize a round table (ad-hoc meeting) to discuss recommendations elaborated under activity 1.6.1 above and to outline the	000473	62000	10003	71300 - local consultants	400	400	100	0	Recommendations as to conditions of introduction of energy efficiency certification system for residential	**Fully implemented.** A round-table was organized and held in the framework of separate section of the VII International Scientific and Technical Conference "Energy Efficient Buildings of the 21st Century. European and Domestic Experience of the Design, Construction and Upkeep of Buildings and Structures with

	activity 1.6.1 above and to outline the regulatory documents (normative legal acts or technical codes) necessary for incorporation of the certification system into corresponding regulations.	000473	62000	10003	72100 - contract. serv. companies	2500	429	17	2070,9	certification system for residential buildings and corresponding regulatory documents are presented and discussed during a round table held among at least 25 representatives of stakeholders attended the round-table, and a corresponding workshop minute prepared and handed over to stakeholders.	and Domestic Experience of the Design, Construction and Upkeep of Buildings and Structures with Minimum Energy Consumption. Engineering Equipment. Alternative Energy Sources". The section attracted more that 50 stakeholders and specialists. The attendees discussed the provisions for the energy certification system that were elaborated by RUE "StroyTechNorm" in cooperation with the Project and included in a draft version of the Technical Code of the Republic of Belarus "Energy Efficiency of Buildings" and its national addenda. The common agreement was to endorse most of provisions being based on suggestions of the developers of this document with due account of notes and proposals from the Energy Efficiency Department.
1.6.3	Based on the results of activity 1.6.2, draft the regulatory documents for introduction of energy efficiency certification and validation systems and submit this draft for further consideration by competent authorities. Provide necessary consultations during conciliation process.	000473	62000	10003	71300 - local consultants	2400	2400	100	0	The technical codes for energy efficiency certification and validation systems formally submitted for consideration in accordance with the established procedure.	**Fully implemented (within the competence of the project).** As a result of efforts applied by RUE "StroyTechNorm" in cooperation with the Project under activities 1.6.1-1.6.2 above, the Technical Code of the Republic of Belarus "Energy Efficiency of Buildings" contains a set of respective articles that introduce necessary provisions for the energy efficiency certification system applicable to new buildings (mandatory) as well as to old housing (voluntary). These articles are as follows: Article 5 - Confirmation of compliance with the energy efficiency of buildings; Article 6 - Energy audit of buildings; Article 7 - The certificate of energy efficiency of buildings; Article 8 - Conformity labeling. The said Code has already successfully passed three hearing and is currently pending adoption by the Government.
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.**									**The quality standards and a system of energy efficiency certification for the materials, accessories and appliances used in the construction sector for residential buildings formally submitted for adoption.**	**The Output is to be implemented in 2017.**
1.7.1	Based on the results of relevant activities of 2015, revise the elaborated draft of practical procedures along with methodologies and relevant monitoring and compliance checking tools for energy efficiency certification and validation systems for materials, accessories and appliances used in residential buildings and submit it for approval and adoption. Provide necessary consultations during conciliation and adoption process.	000473	62000	10003	71300 - local consultants	2400	2855	119	-455,45	The revised version of practical procedures and institutional arrangements for energy efficiency certification and validation systems for materials, accessories and appliances used in residential buildings formally submitted for adoption in accordance with the established procedure.	**Partly implemented.** Revision of practical procedures and institutional arrangements for energy efficiency certification and validation systems for materials, accessories and appliances used in residential buildings was assigned to the local consultant recently hired. In line with respective ToR, this output will be implemented in 2017.
	Bank Fee	000473	62000	10003		150	48	32	102,29		
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003		0	-11	0	10,85		
					Outcome 1 - total:	11 633	9321	80%	2 312		
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**									**At least two handbooks prepared and published offline (300 copies) and online.**	**The Project prepared 19 technical reports, published 3 handbooks, brochures and reference materials. Along with training materials disseminated for different groups of stakeholders in a CD format all information produced by the Project was disseminated also through the Project's website. The activities under this Output will be continued in 2017.**
2.1.1	Using materials, prepared by local and international experts in 2015, prepare, publish and disseminate offline and online a set of specific technical information materials for different target groups, as follows: (i) Handbook "Best Practice in Operation of Energy Efficient Buildings"; (ii) Handbook "Development of Energy Efficient Centralized Heat Supply with Due Account of Housing with Reduced Heat Energy Consumption".	000473	04000	00012	71300 - local consultants	50	2302	4603	-2252	At least two handbooks concerning energy efficient housing prepared, approved by stakeholders, disseminated through Internet and published (300 copies each)	**Fully implemented.** Two handbooks, in addition to similar materials published in 2015, were prepared and disseminated online pending publishing offline for different target groups: Передовая практика в области эксплуатации энергоэффективных зданий (краткое пособие) // Минск, 2016. 45 стр.; Проектирование жилых зданий с пониженным потреблением тепловой энергии из централизованных источников с учетом энергоэффективных инженерных систем / Минск, 2016. 44 стр.
		000473	04000	00012	74200 - audio & video prod.	2235	2223	99	12		
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**									**Three syllabi on energy efficient construction materials, energy efficient building design principles and energy efficient architectural engineering introduced in curricular of at least two core universities.**	**Three new educational courses related to the best international and national practice in the field of design and construction of energy efficient residential buildings were suggested and presented by the project for corresponding disciplines in universities. Two national universities agreed to include these courses in their syllabi, and relevant faculties started incorporating them into their lectures. The activities under this Output will be continued in 2017.**
2.2.1	Based on the syllabi and other curricular materials drafted in 2014-2015, introduce into corresponding disciplines in the selected universities the following three educational sections to be taught: (i)	000473	62000	10003	71200 - international consultants (budget 2015)	0		0	0	At least two selected universities (e.g., Belarusian National Technical University and Brest State Technical University) adjusted their curricular with the syllabi and other curricular materials	**Partly implemented.** In addition to training courses, prepared by experts of the project in 2014-2015, teaching materials (Энергообеспечение инженерных систем и мест общего пользования энергоэффективных зданий солнечными фотоэлектрическими панелями (краткое учебное пособие) / Минск, 2016. 78 стр.; Учебная программа по подготовке и переподготовке специалистов в области солнечной энергетики / Минск, 2016. 45 стр.; Проектирование тепловых установок для

	educational sections to be taught: (i) Designing of Energy Efficient Buildings; (ii) Architectural Engineering Based on Energy Efficient Technologies of Building Installations; (iii) Energy Efficient Building Materials, Wares and Technologies.	000473	62000	10003	71300 - local consultants	600	276	46	324	and other curricular materials elaborated by the project in 2014-2015 on three subjects: (i) Designing of Energy Efficient Buildings; (ii) Architectural Engineering Based on Energy Efficient Technologies of Building Installations; (iii) Energy Efficient Building Materials, Wares and Technologies. At least 200 students are attended these new courses.	солнечной энергетики / Минск, 2016. 45 стр.; Проектирование теплонасосных установок для отопления и горячего водоснабжения энергоэффективных многоэтажных жилых зданий (краткое учебное пособие) / Минск, 2016. 78 стр.; Консультации, оказанные основным вузам при включении в их учебные программы новых учебных курсов, включающих "Основные принципы проектирования энергоэффективных зданий", "Снижение теплопотерь через ограждающие конструкции энергоэффективных зданий" и "Пути снижения теплопотерь через оконные конструкции" / Минск, 2016. 85 стр.) were submitted and used in lecture courses at specialized faculties and departments of the Belarusian National Technical University (PES, AF and SF) and BSTU (FTTLP). Lecture covers 15 groups of the second course (350 students). The materials are also used as part of undergraduate and graduate courses in engineering. Work was continued on the transfer and adaptation of training materials (manuals, instructions, presentations) and training programs prepared by the project in 2013-2016 in the Interdisciplinary Institute for Advanced Studies and Retraining - one of the leading educational institutions in the field of construction. It was decided to continue the development of teaching aids in these areas in 2017 in order to incorporate the results of construction and operation of the three pilot buildings.
		000473	04000	00012	74200 - audio & video prod.	1200		0	1200		
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 centers 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 supervisors of the leading construction companies trained on how to integrate elements of energy efficient design in their investment projects.**	**More than 50 representatives of construction companies have passed practical familiarization (in addition to the introductory courses conducted in 2015) with energy efficient engineering systems that are being installed in three pilot buildings in Mogilev, Minsk and Grodno. The visitors were also given with training materials and information (although preliminary) about the cost of construction that will help them further in investment planning. This activity will be continued in 2017-2018.**
2.6.1	Prepare training materials (handbooks, tutorials, presentations) concerning the correct installation of the materials and equipment for energy efficiency improvement as well as other recommendations 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.	000473	62000	10003	71200 - international consultants (budget 2015)	0		0	0	Training materials for construction companies with practical recommendations on integrating energy efficiency improvement measures into investment and project cycles prepared and submitted to the Energy Efficiency Department and the Ministry of Architecture & Construction and published online.	**Fully implemented.** Handbooks, tutorials, presentations containing practical recommendations to designers and construction companies as to correct installation and operation of materials and equipment for energy efficiency improvement in multi-storey residential buildings were prepared along with guidance on integrating these recommendations into investment practices. These materials (Краткая методика определения теплоэнергетических характеристик жилых эксплуатируемых зданий / Минск, 2016. 13 стр.; Передовая практика в области эксплуатации энергоэффективных зданий / Минск, 2016. 45 стр.) were further used during trainings conducted by the Project for construction companies.
		000473	62000	10003	71300 - local consultants	735	400	54	335		
2.6.2	Organize and conduct, using materials prepared under activity 2.6.1 above, at least one 2-day training workshop for construction companies.	000473	04000	00012	71200 - international consultants (budget 2015)	0		0	0	At least 50 supervisors and principal staff members of construction companies were trained via a two-day training workshop in best practice, methodologies and tools used in business models for construction of energy efficient buildings. Training materials published offline and disseminated among participants.	**Fully implemented.** More than 50 representatives of construction companies have passed practical courses coupled with actual visits during which they have become familiar with the energy efficient engineering systems being installed in three pilot buildings in Mogilev, Minsk and Grodno. In order to increase the effectiveness of such practical courses, two visits were organized during the period of installation and commissioning of these systems. The visitors were also provided with training materials and information, although preliminary, about the cost of construction that will help them further in investment planning. These trainings will be continued in 2017 when all energy efficient equipment is installed and put in operation and when real costs of entire construction and operation are clarified.
		000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0		
		000473	62000	10003	72100 - contract. serv. companies	500	388	78	112		
		000473	04000	00012	72100 - contract. serv. companies	5200	362	7	4839		
		000473	62000	10003	74200 - audio & video prod.	0		0	0		
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 training materials elaborated by the project in 2013-2015 handed over to a specialized advanced training institution. At least 3 Belarusian specialists and decision-makers participated in at least one international event dedicated to energy efficient and environmentally sustainable building construction and operation.**	**The Project supported the participation of specialists and decision makers in international conferences in Germany (Passive House), Russian Federation (V Forum ENES-2016 on energy efficiency) as well as in the Conference of the Parties to the UNFCCC in Marrakech. In addition, assistance was provided to establish cooperation with the UNDP projects dedicated to improvement of energy efficiency of residential buildings in Turkmenistan and Kazakhstan when hosting 12 representatives from these countries in Belarus. This activity will be continued in 2017-2018.**
2.8.1	Provide necessary recommendations and support in transfer and adjustment of all training materials (handbooks, tutorials, presentations) and curricular prepared and tested under the scope of the project in 2013-2014 to the Inter-branch Advanced Training and Personnel Retraining Institute, one of the leading advanced training institutions in the field of construction.	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	All training materials, tutorials, handbooks and presentations elaborated by the project and tested during 2013-2015 trainings, including those under outputs 2.3-2.7 above, updated, adjusted to specific needs and audiences and handed over to the Inter-branch Advanced Training and Personnel Retraining Institute of the Ministry of Education along with necessary recommendations for further continued trainings.	**Fully implemented.** In addition to brochures, handbooks and presentations elaborated by the Project, a number of video materials reflecting actual construction of the three pilot buildings were produced to enhance trainings. In 2017, the assembling and mounting of energy efficient equipment at the pilot sites as well as pre-commissioning works will be completed, and the Project will continue video recording until May-June 2017. Then all materials will be handed-over to the Inter-branch Advanced Training and Personnel Retraining Institute along with necessary recommendations for further continued trainings. In the second part of 2017, the Project agreed to provide short courses to the Institute in order to demonstrate actuality and effectiveness of lectures and materials prepared.
		000473	62000	10003	74200 - audio & video prod.	5000	4977	100	23		
2.8.2	Monitor and cooperate with other international initiatives to prepare quarterly plans for forthcoming international and regional events dedicated to energy efficient and environmentally sustainable building construction and operation.	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	Quarterly plans with description of selected events and sites for taking part in forthcoming international and regional conferences, dedicated to energy efficient and environmentally sustainable building construction and operation, along with corresponding ToRs for travels and financial support documents prepared by the PIU and approved by the UNDP CO.	**Fully implemented.** The monitoring of different international initiatives dedicated to energy efficient and environmentally sustainable building construction and operation was conducted and the most relevant events were selected. Quarterly reports with description of the selected events, specifications for business trips and the accompanying financial documents were prepared by the Project, and on this basis requests for business travels were compiled.
2.8.3	Provide informational and financial support for Belarusian specialists and decision-makers in their participation in at least one international event, selected as per activity 2.8.2.	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	In total at least 3 Belarusian specialists and decision-makers took part in at least one relevant international events and raised their knowledge and experience, as well as shared related information, specified policy approaches and domestic strategies in the field of energy efficient housing.	**Fully implemented.** The Project supported the participation of specialists and decision makers in the Passive House International Conferences in Germany (1 person) and in the V Forum ENES-2016 in Russian Federation (3 persons) dedicated to energy efficiency and environmentally sound construction and operation of buildings. As a result of these missions the project experts and stakeholders received information about the best practices in the field of design and construction of energy efficient buildings as well as shared and discussed local experience and achievements with their foreign colleagues. Upon the requests from Ministry of Environment and Ministry of Foreign Affairs, the Project also provided support for one expert in participation at the Conference of the Parties to the UNFCCC in Marrakech. As a result, expertise along with necessary background substantiations and details were provided for official delegation before and during the Conference that helped formulate and specify the country position. In addition, assistance was provided to establish cooperation with the UNDP projects dedicated to improvement of energy efficiency of residential buildings in Turkmenistan and Kazakhstan. The Project organized a series of activities that included visits to the pilot project sites, as well as to house-building factories in the cities of Minsk, Mogilev and Grodno. In total, 12 experts from these projects and representatives of governmental agencies of these countries took part in the said activities and received additional and detailed information about energy efficiency improvement measures, practices and regulation exercized in Belarus.
		000473	04000	00012	71600 - travel	0	4091	0	-4091		
		000473	62000	10003	71600 - travel	1780	388	22	1392		
	Bank Fee	000473	62000	10003	74510 - bank charges	170	87	51	83		
	Bank Fee	000473	04000	00012	74510 - bank charges	25	18	70	7		
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003	76125/76135	0	-3	0	3		
					Outcome 2 - total:	17 495	15508	89%	1 987		
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.**									**Construction of the demo buildings is underway in accordance with the elaborated design & construction documentations, the proposed energy efficiency performance standards and other adopted quality standards and guidelines. To be continued in 2017**	**All materials, hardware and equipment were delivered to construction sites in Mahiliou and Minsk and properly installed. Construction of two demo buildings in Mahiliou and Minsk has been completed in accordance with the elaborated design & construction documentations, the proposed energy efficiency performance standards and other adopted quality standards and guidelines. The ceremony dedicated to the commissioning of the building in Mogilev was held on Dec 14, 2016. The ceremony dedicated to the commissioning of the building in Minsk will be held early in Jan 2017. Due to the delayed start of construction of the pilot building in Hrodna, its commissioning was postponed until March-April 2017. For the time being, the construction of envelope of this building is fully completed and most of equipment procured by the Project delivered to the construction site.**
3.2.1	Conduct the tender procedures and finalize all necessary procurements of the hardware, tools, installations and equipment prescribed in the design & construction documents for energy efficiency improvement of the three pilot buildings.	000473	62000	10003	71300 - local consultants	8300	7151	86	1149	The prescribed hardware, tools, installations and equipment, remaining for procurement after 2015 for energy efficiency improvement of the three pilot buildings, procured and properly deposited.	**Partly implemented.** All energy efficient equipment, devices, tools and hardware for all three pilot buildings were procured after required tender procedures and in line with construction documentations. The said equipment, devices, tools and hardware were shipped to the construction sites and properly deposited. Some materials and appliances for the energy consumption data dispatching system and the city sewage heat recovery system are still pending delivery to the construction site in Hrodna in line with their specifications and with due account of provisions of respective supply contracts. The said systems for pilot building in Hrodna will be supplied on or before 30 Feb, 2017.
		000473	62000	10003	72200 - equipment; 72300 - materials and goods	86094	120879	140	-34785		
					72130 - contract. serv. companies	2655	2103	79	552		
		000473	62000	10003	74520 - storage	1750	1773	101	-23		
3.2.2	Conduct the tender procedures for civil and assembling works in the pilot residential building in Hrodna.	000473	62000	10003	73216 - construction svc (non-UN)	536188	536188	100	0	The tender for civil and assembling works in the residential building in Hrodna conducted and properly deposited. The contract with a contractor (the developer) duly signed.	**Fully implemented.** All necessary procedures were completed and the contract with the contractor (JSC "GrodnoZhylStroi", the developer) for civil and assembling works in the pilot building in Hrodna was duly signed.
3.2.3	Conduct assembling and mounting of the hardware, tools, installations and equipment prescribed in the design & construction documents for energy efficiency improvement of the three pilot buildings.	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	The purchased hardware, tools, installations and equipment assembled and mounted in line with the design & construction documents for energy efficiency improvement of the three pilot buildings.	**Partly implemented.** All energy efficient equipment, devices, tools and hardware procured by the Project for the construction sites in Minsk and Mahiliou were assembled and mounted as prescribed in the respective design & construction documentations. The equipment, devices, tools and hardware procured and shipped by the Project to the construction site in Hrodna are currently being assembled and mounted with expected completion in Feb 2017, the latest.
		000473	62000	10003	72100 - contract. serv. companies; 73216 - construction svc (non-UN)	156076	93151	60	62925		
		000473	62000	10003	72100 - contract. serv. companies (budget 2016)	0		0	0		
3.2.3.1	Civil and assembling works in the pilot residential building in Mogilev.	000473	62000	10003	73216 - construction svc (non-UN)	432236	432236	100	0	The tender for civil and assembling works in the residential building in Mogilev conducted and the contract with a contractor (the developer) duly signed in 2015. The addendum to the contract signed in 2016 due to the BYR denomination in the Republic of Belarus.	**Fully implemented**. The addendum to the contract with RUE "UKS-Mogilev", the developer of the pilot house in Mahiliou, was prepared and signed on July 7, 2016. The civil and assembling works assigned to the developer as per the contract was finalized in Dec 2016, so the equipment, devices, tools and hardware procured and shipped by the Project to the construction site in Mahiliou were assembled and mounted as prescribed in the respective design & construction documentations.
3.2.4	Provide technical supervision of construction and assembling works to be implemented in the three pilot buildings in order to ensure that all constructions and installations are set in accordance with the elaborated design & construction documentations. Provide recommendations and take timely measures, as needed.	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	Reports containing results of technical supervision of construction works and equipment installation works in the three pilot buildings in Grodno, Minsk and Mogilev along with recommendations prepared, on monthly basis, and submitted to prime-developers and the Energy Efficiency Department.	**Partly implemented.** The Project prepared and conducted necessary tender procedures and signed direct contracts with "StroyKurs" JSC and RUE "Institute GrodnoGrazhdanProekt". The said contractors provided services concerning all required technical supervision over construction and assembling works performed by the developers and their subcontractors. All required reports on the results of technical supervision were handed over to builders and their counterparts along with reclamations when needed as well as with recommendations as to necessary corrections to adjust some improper assembling to the adopted quality standards and guidelines prescribed in the design documentations. For the time being, the construction and assembling works has already been completed in Minsk and Mogilev. In Mahiliou, the pilot building was commissioned on Dec 14, 2016. The commissioning of the pilot building in Minsk is expected early in Jan 2017. The commissioning of the pilot building in Hrodna is expected in March-April 2017, so the technical supervision of construction and assembling works at that pilot site will be continued until spring of 2017. Also by the spring of 2017, the starting-up, testing, balancing and adjustment works will be implemented for the data dispatching systems at all three pilot sites and for solar collector system at Mahiliou pilot site.
		000473	62000	10003	71400 - service contr. individ.	36918	37732	102	-814		
		000473	62000	10003	71600 - travel	1500	1500	100	0		
					72805 - computer equipment	1575	2483	158	-908		
		000473	62000	10003	72100 - contract. serv. companies	11562	26477	229	-14915		
		000473	62000	10003	75700 - Trainings	100	91	91	9		
3.2.5	Based on the results received under activities 3.2.1-3.2.4 above, prepare, discuss and approve action plans for	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	An action plan as well as respective schedules and activities for 2017 approved by stakeholders and the	**Fully implemented.** The Project has prepared and preliminary discussed with stakeholders and project partners a draft of the action plans for construction and assembling works that remain to finalize entirely different related measures, activities and events in 2017. While compiling the plan, the Project and its

	construction of the demonstration sites along with schedules for different measures, activities and events in 2017.	000473	62000	10003	71600 - travel	2500	2500	100	0	Energy Efficiency Department.	stakeholders took into account the resolution of the Belarus Government duly adopted on Nov 10, 2016 to extend the Project's implementation until June 30, 2018. Based on these plans the ADWP-2017 was drafted and submitted to UNDP PA and UNDP RTA for comments. The draft was preliminary approved during the PSC meeting held on Dec 23, 2016.
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.**									**No activity was stipulated for 2016**	**The Output is to be implemented in 2017 pursuant to the action plans approved (see activity 3.2.5)**
3.3.1	Provide supervision and monitoring of construction of the three pilot buildings and document the experiences and lessons learnt from procuring, installing and testing the new energy efficient materials, construction techniques and appliances. Provide recommendations and take timely measures, as needed.	000473	62000	10003	71300 - local consultants (budget 2015)	0		0	0	Reports containing results of supervision and monitoring of construction work for three pilot buildings in Grodno, Minsk and Mogilev being accomplished during 2016 along with documents addressing the experiences and lessons learnt from procuring, installing and testing the new energy efficient materials, construction techniques and appliances, as well as recommendations prepared, on monthly basis, and submitted to prime-developers and the Energy Efficiency Department.	**Partly implemented.** All data of the results of construction-and-assembling operations that were conducted at all three pilot sites and included procurement, shipment, warehousing, mounting, installation and testing of energy efficient equipment, devices, tools and hardware were monitored and documented and were reported to the stakeholders on a constant basis. The reports contained notes and recommendations addressing shortcomings, defects and drawbacks. Since the construction has not been completed yet, the documents that address the experiences and lessons learnt from the said activities will be finalized in 2017.
		000473	62000	10003	71600 - travel	16000	18630	116	-2630		
		000473	62000	10003	72100 - contract. serv. companies	765	765	100	0		
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.**									**No activity was stipulated for 2016**	**The Output is to be implemented in 2017-2018 pursuant to the action plans approved (see activity 3.2.5)**
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.**									**No activity was stipulated for 2016**	**The Output is to be implemented in 2017-2018 pursuant to the action plans approved (see activity 3.2.5).** Nevertheless, two visits have been already organized and held during the period of installation and commissioning of the energy efficient systems in Minsk and Mahiliou.
	Bank Fee	000473	62000	10003	74510 - bank charges	250	360	144	-110		
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003	76125/76135	0	-2712	0	2712		
					Outcome 3 - total:	1 294 469	1281308	99%	13 161		
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 interviews with the project's personnel, experts and partners conducted and not less than 20 press-releases along with at least six printed information and promotion materials provided for specialists and tenants. At least two PR-campaigns on promoting energy efficient housing are launched and successfully completed.**	**The Project has prepared and published on-line and on 450 CD-ROMs 19 technical reports, 3 handbooks, brochures and reference materials. The Project has printed and disseminated about 800 copies of 3 briefs and 4 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 publishing 16 articles, giving 8 interviews and participating in a Q&A TV-session. The Project helped releasing a social video in the Terra Incognita TV programme, prepared and issued three video-films about the pilot buildings. Two major PR-actions were held under the UNDP Inclusive Belarus campaign (in Hrodna and Mahiliou) and during the ceremony of commissioning of the pilot building in Mahiliou. 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. The activities under this Output will be continued in 2017.**
4.1.1	Organize and carry out an ongoing information campaign (interviews, press-releases, etc.) about the Project activities.	000473	62000	10003	71400 - service contr. individ.	16600	16600	100	0	At least 15 interviews and not less than 20 press-releases provided in order to inform a wider audience about the project's key achievements, progress and activities, as well 2 PR-campaigns are launched to change, to extent possible, people perception and behavior with regard to energy efficiency improvement measures. In Minsk, Hrodna and Mahiliou, other PR activities initiated and conducted to support official completion of construction and putting in operation of the three pilot houses. Various visibility products and promo texts designed and produced to support the said PR-campaigns and ceremonies.	**Fully implemented.** Information campaign about the project activities has being successfully carried out including, *inter alia* , two UNDP press events during the dedicated ceremony on commissioning of the pilot building in Mogilev and during the UNDP Inclusive Belarus Campaign in Hrodna and Mahiliou. Two press events were held also during the visits of UNDP colleagues and specialists from Turkmenistan and Kazakhstan. The Project's information campaign was accompanied with a number of interviews (8 interviews to the press) and press releases (about 30 in total). Other visibility products and stands were designed and produced to support the said PR-campaigns and ceremonies.
		000473	62000	10003	75700 - Trainings	160	132	82	28		
4.1.2	Prepare and publish articles, leaflets, brochures, etc. for professionals about the best practices and concerning peculiarities of construction of and equipment installation in energy efficient residential buildings.	000473	62000	10003	71300 - local consultants	280	500	179	-220	At least one printed material for professionals about the best practices related to construction of and equipment installation in energy efficient residential buildings prepared and issued.	**Fully implemented.** The handbook "Энергоэффективные строительные материалы, изделия и технологии" (Минск, 2016. 49 стр.) was issued (150 copies) for professionals focusing on the best practices on construction of and engineering equipment installation in energy efficient residential buildings. The said brochure along with other 7 handbooks, reference books, guidance and leaflets was also published online, and distributed (more than 200 CDs) among the project stakeholders and participants of different events organized by the project.
		000473	62000	10003	74200 - audio & video prod.	600	1026	171	-426		

4.1.3	In cooperation with the Ministry of Education and the EE Department, provide informational and expert supports to the “Energy Marathon” Republican Contests.	000473	62000	10003	71300 - local consultants	20		0	20	The "Energy Marathon" Republican Contest supported through the expert and informational backing and conducted.	**Fully implemented.** As per a request from Energy Efficiency Department, another UNDP project provides support of "Energy Marathon" Republican Contests. The UNDP-GEF "Energy Efficiency in Residential Buildings" Project was asked to patronize another important Republican Contests, namely "Energy Efficiency Leader", held since May1 till August 15, 2016 (http://energokonkurs.by/indexG.html). The Contest was established as an annual competition on three nominations: "Energy Efficient Product of the Year", "Energy Efficient Technology of the Year", and "Energy Efficient Building of the Year". Five experts of the Project became members of the Competition Commission and the Steering Committee. For "Energy Efficiency Leader 2016" the Project supported necessary organizational and logistic efforts, and dedicated one of its publications to the results of the Contests in 2016 (e.g.: http://www.effbuild.by/news/396.html).
					74200 - audio & video prod.	1000		0	1000		
		000473	62000	10003	71600 - travel	0		0	0		
4.1.4	Project information materials	000473	62000	10003	74200 - audio & video prod.	5900	6978	118	-1078	Project information materials prepared and published off-line and on-line as per activities 4.1.1-4.1.3 above.	**Fully implemented.** Several video films and other information materials were developed and broadcasted on-line (approx. more than 10000 visits), e.g.: http://www.belta.by/regions/view/eksperimentalnye-energoeffektivnye-doma-postrojat-v-2016-godu-v-minske-mogileve-i-grodno-185508-2016/ http://www.ctv.by/novosti-minska-i-minskoy-oblasti/v-minskom-mikrorayone-loshica-nachali-stroitelstvo-pervogo http://www.belta.by/society/view/pervyj-v-belarusi-etalonnyj-energoeffektivnyj-dom-vvedut-v-ekspluatatsiju-v-dekabre-218361-2016/ http://www.by.undp.org/content/belarus/en/home/presscenter/pressreleases/2016/10/17/the-first-energy-efficient-house-in-mahiliou-among-energy-efficiency-leaders-in-2016/ http://ont.by/news/our_news/pervij-v-belarysi-ymnij-dom-ocenili-bydyschie-novosyoli-v-mogilyove http://stroimedia.by/energoeffektivnost/ http://www.ctv.by/novosti-mogileva-i-mogilevskoy-oblasti/bolshe-tepla-i-menshe-summy-v-zhirovkah-v-mogileve-postroili http://stroimedia.by/pilotnii-proekt-v-mogileve-realizovan/ http://www.interfax.by/news/belarus/1217473 http://www.belta.by/regions/view/pervyj-v-belarusi-mnogoetazhnyj-energoeffektivnyj-dom-torzhestvenno-otkryli-v-mogileve-223601-2016/ http://naviny.by/new/20161214/1481718893-v-mogileve-sdan-pervyy-v-belarusi-energoeffektivnyy-dom-novogo-pokoleniya https://www.facebook.com/UNDPinBelarus/videos/1839585872997358/ https://realt.onliner.by/2016/10/28/dom-109 http://www.tv.tvrmogilev.by/ru/news/latest/34_16469_arhive_0-10-01_0-01-01.html http://arcp.by/ru/article/energoeffektivnost-goryachiy-trend-stroyindustrii http://www.bntu.by/news/53-press-news/4410 http://www.vestnikmogileva.by/ekonomika/energoeffektivnii-dom.html http://www.press-release.by/turkmenskie-specialisty-po-energoeffektivnosti-spasibo-belarus/ http://arcp.by/ru/article/energoeffektivnye-zhilye-zdaniya-vtorogo-pokoleniya-v-proekte-proongef-v-belarusi http://arcp.by/ru/article/v-perspektive-tolko-dvizhenie-vpered
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 institutional arrangements elaborated in draft concerning a system for annual monitoring of the energy efficient buildings constructed as well as the sale of key building materials, accessories and appliances together with their energy performance characteristics.**	**The guidelines and principles for a monitoring system dealing with energy-saving and greenhouse gas emissions in the residential sector was elaborated in draft. To be continued in 2017.**
4.2.1	Prepare and discuss a draft of the 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.	000473	62000	10003	71300 - local consultants	50		0	50	The methodology and institutional arrangements elaborated in draft and discussed with Ministry of Architecture & Construction and EE Department concerning a system for annual monitoring of the energy efficient buildings constructed as well as the sale of key building materials, accessories and appliances together with their energy performance characteristics.	**Partly implemented.** The methodology was drafted that concerned provisions for annual monitoring of newly constructed housing (Основные положения ежегодного мониторинга удельного потребления тепловой энергии в жилищном секторе / Минск, 2016. 23 стр.) and includes overall energy efficiency performance of buildings as well as key building materials, accessories and appliances together with their energy performance characteristics. The methodology was presented and preliminary discussed with Ministry of Architecture & Construction and EE Department. It was decided to organize and conduct a round table in 2017 to discuss the draft of the methodology and relevant provisions of institutional arrangements for annual monitoring of energy-efficient housing.
		000473	04000	00012	71300 - local consultants	2500		0	2500		
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.**									**State agency, which may assume responsibility to monitor the energy savings and GHG emissions in residential sector along with procedures for collecting the required primary data, reporting and accounting these parameters suggested.**	**Basic provisions and principles for a system that provides monitoring and analysis of data on energy savings and GHG emissions in the housing sector were drafted. To be continued in 2017.**

4.3.1	Elaborate criteria for a state agency, which may assume responsibility to monitor the energy savings and GHG emissions in residential sector. Draft a procedures for collecting the required primary data, reporting and accounting these parameters.	000473	62000	10003	71300 - local consultants	50	0	50	Analysis conducted and resulting report prepared along with necessary recommendations containing a set of criteria elaborated to select a state agency, which may assume coordination and responsibility for collection and filing of initial data and monitoring of energy savings and GHG emissions in residential sector. The recommendations discussed with stakeholders. A draft of procedures for collecting the required primary data, reporting and accounting these parameters elaborated and agreed upon by relevant state agencies.	**Partly implemented.** The Project conducted research and analysis of existing international and local practices in monitoring of energy savings and GHG emissions in housing sector (Анализ зарубежного и отечественного опыта по мониторингу выбросов парниковых газов, включая перечень необходимых сведений для разработки такой системы мониторинга / Минск, 2016. 27 стр.). The principal data were also collected on the current state of housing in Belarus (Сбор и анализ данных о состоянии жилого фонда / Минск, 2016. 12 стр.). On this basis a draft of methodology was elaborated that contained some basic provisions and principles of data collection, reporting and accounting for the system to be established to monitor energy savings and GHG emissions in housing sector (Основные положения методики и информационной системы по учету и мониторингу выбросов парниковых газов. Оценка выбросов парниковых газов для эксплуатируемых зданий / Минск, 2016. 20 стр.). The draft was recommended for further consideration by all relevant stakeholders with consequent discussions at a round table in 2017.
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.**								**A national energy audit program for promoting energy audits of residential buildings along with appropriate budget and mechanism for using the audit results for elaboration of further energy efficiency strategies drafted.**	**Basic provisions and principles for energy audits of buildings in residential sector are stipulated in the Technical Code "Energy Efficiency of Buildings" that presupposes both scope and timeframe for the energy audit and further use of the energy audit for elaboration of energy efficiency improvement strategy. In 2017, the project will continue the development of appropriate instruments for implementation of the said provisions and principles of the Technical Code in this area.**
4.4.1	Suggest a national energy audit program (including a draft of its required budget) for promoting larger number of energy audits of residential buildings along with a mechanism for using the audit results for elaboration of energy efficiency improvement strategies for the building sector.	000473	62000	10003	71300 - local consultants	50	0	50	A national energy audit program for residential buildings along with appropriate budget and mechanism for using the audit results for elaboration of further energy efficiency improvement strategies drafted and presented to relevant state agencies for further consideration.	**Partly implemented.** In view of the methodological guidelines for conducting energy audits in residential buildings drafted by the Project (see activity 1.2.2 above) and in line of the Energy Conservation Law adopted in Jan 11, 2015, the Project elaborated necessary recommendations for the Technical Code "Energy Efficiency of Buildings" and, in particular, for its Article 6 - Energy Audit of Buildings. The recommendations are based on the following relevant provisions of the Law: (i) the procedure for organizing and conducting energy audits is established by the Council of Ministers, and (ii) services for energy audit are funded at the expense of the client or any other interested party. The project has provided expert support and advice in the preparation of rationale to help incorporate some key points in the Technical Code "Energy Efficiency of Buildings" as follows: (i) energy audits must be carried out for newly constructed and renovated buildings within 5 years after the commissioning of the building, but not earlier than 3 years; (ii) energy audits must be carried out during the year prior to the development of project documentation for reconstruction of a building; and (iii) energy audits may be carried out on a voluntary basis by the decision of an owner. In 2017, the project will continue the development of appropriate instruments for implementation of the said provisions and principles of the Technical Code in this area.
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 drafted 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, and it was suggested first to receive the valid data from the results of operation of the three pilot buildings, which will be inhabited in 2017.**
4.5.1	Based on the project's experience and results received during architectural design of the three pilot buildings, elaborate recommendations as to the integration of energy efficiency aspects into regional and local plans for territorial developments.	000473	62000	10003	71300 - local consultants	50	0	50	Report with recommendations prepared and submitted to the Institute of Urban and Regional Planning concerning approaches and architectural solutions, which address integration of energy efficiency improvement measures into regional and local plans for territorial development.	**Partly implemented.** The analysis of the best practices and experience in the construction and operation of energy-efficient multi-storey buildings and the issues of their integration in the urban development plans (Передовая практика в области эксплуатации энергоэффективных зданий / Минск, 2016. 45 стр.) was reported and discussed with stakeholders during a round-table organized and held in the framework of separate section of the VII International Scientific and Technical Conference "Energy Efficient Buildings of the 21st Century". The results of discussion allows to focus on problem areas and formulate key recommendations for planning and urban development concepts. It was proposed to include in these recommendations the valid data of energy efficiency performance based on the results of operation of the three pilot buildings that will become available in 2017.
		000473	04000	00012	71300 - local consultants	1500	0	1500		
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 seminars on "Best Practice in Energy Efficiency Improvement in Residential Buildings" are organized and held annually with a lager International Conference by the end of the Project.**	**In Dec 7-8, 2016, the Project organized and held the VII International Scientific and Technical Conference "Energy Efficient Buildings of the 21st Century. European and Domestic Experience of the Design, Construction and Upkeep of Buildings and Structures with Minimum Energy Consumption. Engineering Equipment. Alternative Energy Sources". During the second day of the conference about 30 conference participants visited the pilot building in Minsk. The Project also provided support in organization of two other international conferences. The activities under this Output will be continued in 2017.**
4.6.1	Organize and hold International seminars (or separate conference sessions) on "Best Practice in Energy Efficiency Improvement in Residential Buildings" under the auspices of the Project and in cooperation with the EE Department, UNDP and other similar projects.	000473	62000	10003	71200 - international consultants (budget 2015)	0	0	0	At least 100 professionals and decision makers raised their knowledge and skills in conducting and implementing energy efficiency improvement projects, and shared experience, strategy and technical solutions while taking part in at least one International seminar on "Best	**Partly implemented.** More than 130 participants from Belarus and abroad have received knowledge and information and have had opportunity to discuss about the best practices and policies in the field of design, construction and operation of the energy efficient buildings during the VII International Scientific and Technical Conference "Energy Efficient Buildings of the 21st Century. European and Domestic Experience of the Design, Construction and Upkeep of Buildings and Structures with Minimum Energy Consumption. Engineering Equipment. Alternative Energy Sources". The conference was organized and held by the Project in Dec 7-8, 2016, the second day being dedicated to the issues of practical integration of energy
		000473	62000	10003	71300 - local consultants	400	500	125	-100	

	projects.	000473	62000	10003	71300 - local consultants (translation)	820	820	100	0	Practice in Energy Efficiency Improvement in Residential Buildings" organized and held under auspices of the project. During the year.	saving engineering systems in the construction of energy efficient buildings; thus a trip of about 30 conference participants from other countries and cities to the pilot building in Minsk was organized. The project and its experts also took part in two other international conferences, namely the VII International Conference "Energy Conservation and Improving Energy Efficiency" in the framework of the XXI Energy & Environment Forum (Oct 12, 2016) and the International Conference "Energy efficient technologies for space heating, ventilation and conditioning, heat supply and thermal insulation of industrial and civil buildings. Practical aspects of designing and operation" (Oct 6, 2016) that attracted about 150 specialists and decision-makers. In 2016, the Project continued strengthening cooperation with the similar UNDP projects in Turkmenistan and Kazakhstan. For 12 experts from these projects and representatives of governmental agencies of these countries the Project organized a series of activities that included visits to the pilot project sites, as well as to house-building factories in the cities of Minsk, Mogilev and Grodno.
		000473	04000	00012	71300 - local consultants	1000	972	97	28		
		000473	62000	10003	71600 - travel	285	617	217	-332		
		000473	04000	00012	71600 - travel	3500	6888	197	-3388		
		000473	62000	10003	72100 - contract. serv. companies	2000	177	9	1823		
		000473	04000	00012	72100 - contract. serv. companies	7000	8149	116	-1149		
		000473	62000	10003	74200 - audio & video prod.	100	226	226	-126		
Output 4.7	**Regularly updated project website with a link to an Expanded Energy Platform**									**The Project's website regularly updated both in structure and information**	**The project website (http://effbuild.by) in the beginning of 2017 will be closed by the decision of the UNDP Representative Office. The site 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. Today, the traffic index proves that the project website is quite popular yet among users from Belarus, Russia, Austria and Ukraine. The project website has been linked to other networks, e.g., ISSUU Platform, dealing with energy efficiency, and to social networks like Facebook, Twitter and YouTube.**
4.7.1	Further update and improve the Russian content of the website with posting the project reports and key publications in the corresponding sections and provide translation of the website current content and information materials into English language.	000473	62000	10003	71400 - service contr. individ.	600	600	100	0	All Project reports and key publications of 2015-2016 posted.	**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 2016, the website address was http://effbuild.by. In 2017, 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.
4.7.2	Regularly update the project reporting website content (project outcomes and achievements, reports, articles, etc.), specific content (methodologies, standards, recommendations, etc. produced by the project) and news content (announcements, news and press releases, reposted relevant mass-media publications, etc.) along with technically adapted and posted photo (video) content and assure promotion of the website through Internet search engines and social networks.	000473	62000	10003	71400 - service contr. individ.	1500	1639	109	-138,55	The Project Website content regularly updated along with project content in other networks (Facebook, Twitter).	**Fully implemented.** The website content includes Project's outcomes and achievements, all technical reports with methodologies, standards, recommendations produced by the project team, articles published by project experts and proceedings and presentations of the conferences, trainings and seminars organized and held by the project. In odder to promote its activities and results the project effectively uses social networks (Facebook, Twitter, YouTube and ISSUU platform for digital publications dissemination). Popularity of the site is quite high. Number of visits - 4863 with new visits almost 58%. The site was visited from several countries. The top 5 countries are: Belarus - 4060 visits (83,49%), Russia - 198 (4,07%), Ukraine - 145 (2,98%), United States - 79 (1,62%), Kazakhstan - 30 (0,62%), Germany - 28 (0,58%). Number of downloads from the project website - 3 898 Additionally, at the ISSUU publishing account (https://issuu.com/energyefficiencyby) the report «Методическое руководство» by Alfio Galata was the most popular. The average time spent reading this brochure is around 68 hours.
Output 4.8	**Annual market monitoring reports for new building construction with the emphasis on energy efficiency aspects.**									**The energy efficiency building construction market monitoring report for 2013-2016 prepared.**	**The activities under this Output will be continued in 2017**
4.8.1	Conduct a study on energy performances and respective GHG emissions of different residential buildings introduced in the housing construction market in 2013, 2014, 2015 and 2016, and, on this basis, draft reports containing the data on market monitoring for new residential building construction, results of analysis and respective recommendations with the emphasis on energy efficiency improvement and GHG emission reduction aspects.	000473	04000	00012	71300 - local consultants (budget 2015)	0		0	0	Report containing the data on the energy efficiency building construction market monitoring for 2013-2016 prepared along with results of analysis and respective recommendations as to further possibilities for energy efficiency improvement and GHG emission reduction, submitted stakeholders and published on-line.	**Partly implemented.** The statistical data are collected and subsequent analysis is conducted on energy performance of different residential buildings constructed in 2013-2016. To be completed in the first quarter of 2017, after receiving necessary statistical data about residential buildings constructed in 2016.
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**									**No activity was stipulated for 2016**	**The Output is to be implemented in 2018**
	Bank Fee	000473	62000	10003	74510 - bank charges	150	128	85	22,05		
	Bank Fee	000473	04000	00012	74510 - bank charges	50	59	117	-8,67		

	REALIZED GAIN/REALIZED LOSS	000473	04000/ 62000	00012/ 10003	76125/76135	0	-16	0	15,88		
					Outcome 4 - total:	46 165	45994	100%	171		
										Effective project management and monitoring ensured	
PM1	Project monitoring and reporting.	000473	04000	00012	71600 - travel	0		0	0	At least one Project Steering Committee meetings held. Deadline - Dec 31, 2016. All project reports submitted and approved in due time. Deadline - July 15, 2016 (for GEF's annual PIR and Logs) and Dec 31, 2016 (for the annual report to the Ministry of Economy, APR and Logs)	A draft of ADWP-2016 was first presented and discussed in the meeting of stakeholders and experts in Nov, 2015. The final version of ADWP-2016 was approved in Nov 24, 2015 during the Sixth Meeting of the PSC and dully adopted in Feb 11, 2016. Budget revisions were prepared and submitted in due time. The annual report was prepared and submitted to the Ministry of Economy as required, until January 15 2016. The PIR for the GEF was submitted to the UNDP RTA before June 15, 2016. One meeting of Project Steering Committee was conducted in 2016 (the Seventh Meeting, Dec 27, 2016). Technical reports were generally submitted in line with the ADWP-2016. Semi-annual and annual reports for UNDP and GEF, Logs and budget revisions were submitted in time. Other operational tasks were performed as required.
PM2	Project management and project office functioning.	000473	62000	10003	71300 - local consultants	700	625	89	75	Project office successfully operated. Project plan successfully fulfilled. Throughout the Project	The project's office is fully equipped and PIU is successfully functioning. The project's stuff has been composed of five SC holders (project manager, administrative and financial assistant, procurement specialist, construction engineer, and PR & communication specialist). In addition, in 2016, twelve national and one international consultants were operating under individual contracts. The Project also supported some local and international missions of PIU staff and its experts.
		000473	04000	00012	71300 - local consultants (translation)	870	869	100	1		
		000473	62000	10003	71400 - contract. serv. individ.	32 673	32683	100	-10		
		000473	62000	10003	71600 - travel	251	251	100	0		
		000473	04000	00012	71400 - contract. serv. individ.	17 120	16862	98	258		
		000473	04000	00012	72100 - contract. serv. companies	2 200	2388	109	-188		
		000473	62000	10003	72400 - communicat	1 500	2214	148	-714		
		000473	62000	10003	72500 - office supplies	694	750	108	-56		
		000473	04000	00012	73100 - utilities	6 000	4506	75	1 494		
		000473	62000	10003	72800 - inform. technol. cost	150	183	122	-33		
		000473	62000	10003	73400 - equipment services	250	334	133	-84		
		000473	62000	10003	74200 - printing and public	50	34	68	16		
		000473	04000	00012	75700 - learning cost	300	267	89	33		
		000473	04000	00012	74500 - miscellan.	50	107	214	-57		
		000473	62000	10003	74500 - miscellan.	150	150	100	0		
	REALIZED GAIN/REALIZED LOSS	000473	62000	10003	76125/76135	0	-17	0	17,43		
	REALIZED GAIN/REALIZED LOSS	000473	04000	00012	76125/76135	0	-46	0	45,69		
					PM - total:	62 958	62161	99%	797		
					Grand total:	**1 432 720**	**1 414 293**	**99%**	**18 427**		

(*) - this accurate forecast of expenses is made before FY-2016 CDR closure

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