

APPROVED BY:
Deputy Resident Representative
UNDP Belarus

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Date "18 02" 2014

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Project №00677154
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Date "28 02" 2014

Annual Detailed Work Plan 2014
Improving Energy Efficiency in Residential Buildings in the Republic of Belarus
No. 00077154

Activity description	Output costs as per budget accounts, US\$				Total US\$	Donor	Budget Account	Responsible	Annual Target
	I - 2014	II - 2014	III - 2014	IV - 2014					
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									
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.								
1.1.1	Taking into account stakeholders' comments after round-table discussions of 2013, draft a relevant technical code or a revised version of GOST EN 15217 "Energy Efficiency of Buildings. Methods of Characterization of Energy Performance" with inclusion of the methodological guidelines for energy performance monitoring and calculation applicable to different types of residential buildings.								
	800				800	GEF	71200 - international consultants	Project Manager	Formally adopted technical code(s) containing methodological guidelines for energy performance monitoring and calculation of residential buildings. The draft technical code formally submitted to the EE Department and Ministry of Architecture and Construction, and published online. Deadline - March 15, 2014
	1 200				1 200	GEF	71300 - local consultants		
	420				420	GEF	71300 - local consultants (translation)		
1.1.2	Provide on-going consulting services with regard to the submitted technical codes directly to the EE Department, Ministry of Architecture and Construction and other relevant authorities in the course of conciliation and adoption procedures.								
					600	GEF	71300 - local consultants		The technical code or the revised version of GOST EN 15217 formally adopted by competent authority(ies). Deadline - Apr 30, 2014
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.								
1.2.1	Complete the energy audits of five multi-storey buildings started in 2013 with necessary analysis of the entire heating season data in line with the IPMPV and modern "eekMeasure"-software.								
	1 600				1 600	GEF	71200 - international consultants	Project Manager	Energy audits of at least 25 residential buildings organized and conducted during the 2014 preheating season and the first part of heating season.
	1 200				1 200	GEF	71300 - local consultants		Energy audits of the 5 residential buildings completed and respective report submitted to stakeholders and published online. Deadline - Feb 28, 2014
	420				420	GEF	71300 - local consultants (translation)		
1.2.2	Based on the results of activity 1.2.1 above, revise and amend the energy audit methodological guidelines and training curricular developed in 2013.								
	800				800	GEF	71200 - international consultants		Revised methodological guidelines for energy audits in residential buildings submitted to and approved by the EE Department and the Ministry of Architecture and Construction. Training course containing materials (curriculum, lectures, presentations) and a tutorial on energy audit of residential buildings prepared and published online. Deadline - March 31, 2014
	800				800	GEF	71300 - local consultants		
	420				420	GEF	71300 - local consultants (translation)		
1.2.3	Based on the results of activity 1.2.2, develop and approve selection criteria and conduct a study in order to select at least 25 residential buildings subjected to energy audits.								
					1 600	GEF	71200 - international consultants		The selection criteria and a list of buildings proposed for energy auditing (at least 25 buildings) developed, reported to and approved by the EE Department and the Ministry of Architecture and Construction, and published online. Deadline - May 31, 2014
					2 000	GEF	71300 - local consultants		

1.2.4	Based on the results of activities 1.2.2 and 1.2.3 above, prepare and approve action plans for energy auditing the selected residential buildings of different age and construction techniques.	800 600 420	800 600 420	GEF GEF GEF	71200 - international consultants 71300 - local consultants 71300 - local consultants (translation)	The action plans prepared for energy auditing of the selected buildings approved by the EE Department and the Ministry of Architecture and Construction. Deadline - June 30, 2014
1.2.5	Conduct energy audits of at least 25 residential buildings in line of the plans approved under activity 1.2.4 during the preheating season and the first part of heating season.	800 2 600 25 000 3 000	800 2 600 25 000 3 000	GEF GEF GEF GEF	71200 - international consultants 71300 - local consultants 72100 - contract. serv. companies 71600 - travel	Energy audits of at least 25 residential buildings during the 2014 pre-heating season and the first part of heating season conducted and respective reports submitted to stakeholders. Deadline - Dec 31, 2014
1.2.6	Organize and conduct at least three 2-day training workshops for national experts and local energy auditing firms to improve their capacity in energy audit of residential buildings.	1 520 700 1 320 4 800 100 420	1 500 700 1 320 4 800 100 420	GEF GEF GEF GEF GEF GEF	71200 - international consultants 71300 - local consultants 71600 - travel 72100 - contract. serv. companies 74200 - audio & video prod. 71300 - local consultants (translation)	At least 50 energy auditors attended the three two-day training workshops. Training materials prepared and published offline. Deadline - Dec 31, 2014
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.				PIU PR Expert	Pre-operation review and analysis accomplished in 2013. To be continued in 2015, after design and construction of at least one of the pilot buildings.
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				Project Manager	Recommendations for future development of district heat and power supply systems approved by stakeholders and accounted in related state/municipal development programmes.
1.4.1	Based on the results of review and analysis of different technical options for heating and hot water supply elaborated by the project in 2013, complete a cost-efficiency analysis of typical district heat supply systems and heating schemes with resulting impact of low energy housing.	2 400		GEF	71300 - local consultants	A report on the cost-efficiency analysis of district heat and power supply systems with a view to evaluate a potential impact of low energy housing prepared, submitted to stakeholders and published online. Deadline - March 31, 2014
1.4.2	Organize a round table (ad-hoc meeting) with an attendance of relevant stakeholders (BelEnergie, Communal and Municipal Services, District CHPs) to discuss, in view of the results of activity 1.4.1 above, the feasibility of district heat and power supply systems under the conditions of low energy housing, and formulate related recommendations for future development of the said systems.	400 600	400 600	GEF GEF	71300 - local consultants 72100 - contract. serv. companies	At least 25 representatives of stakeholders attended the round table, and a corresponding minute with recommendations as to feasibility of district heating and power supply systems prepared and submitted to stakeholders for approval and accounting in relevant development programmes. Deadline - May 30, 2014
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.				Project Manager	A set of necessary standards for design, construction and operation of energy efficient buildings identified, drafted, revised after ad-hoc discussions and submitted to competent authorities for adoption.

1.5.1	Provide on-going consulting services to relevant authorities in the course of conciliation and adoption procedures with regard to the technical codes drafted by the project in 2013.		600	600	GEF consultants	71300 - local consultants		The technical codes drafted by the project in 2013 formally adopted by competent authority(ies). Deadline - July 31, 2014
1.5.2	On the basis of the roadmap suggested by the project in 2013, recommend a list of standards and a concept (general provisions) of the Technical Regulations along with supporting information to be included into the 2014 Annual Standardization Plan and/or the Complex Programme of Measures for Development of Energy Efficient Construction, Reconstruction and Modernization of Residential Buildings of the Ministry of Architecture and Construction.	1 600 3 000 420		1 600 3 000 420	GEF international consultants GEF 71300 - local consultants GEF 71300 - local consultants (translation)		List of standards for energy efficient residential buildings submitted to and endorsed by the Ministry of Architecture and Construction with its inclusion into the 2014 Annual Standardization Plan and/or the Complex Programme of Measures for Development of Energy Efficient Construction, Reconstruction and Modernization of Residential Buildings. Deadline - March 31, 2014	
1.5.3	On the basis of the roadmap suggested by the project in 2013 and in line with the proposals submitted and endorsed under activity 1.5.2 above, draft a set of standards (the Technical Regulations) harmonized with EU standards to cover missing energy performance requirements, indicators and regulations to be applied in building sector with a view to facilitating developments of energy efficient buildings.		2 400 10 000 420	2 400 10 000 420	GEF international consultants GEF 71300 - local consultants GEF 71300 - local consultants (translation)	71200 - international consultants 71300 - local consultants	Draft of the standards for energy efficient residential buildings submitted to the EE Department and the Ministry of Architecture and Construction and published online. Deadline - Sep 30, 2014	
1.5.4	Organize a round table (ad-hoc meeting) to discuss the standards drafted under activity 1.5.3 above.		400 600	400 600	GEF 71300 - local consultants GEF contract. serv. companies	71300 - local consultants 72100 - contract. serv. companies	PIU PR Expert	At least 25 representatives of stakeholders attended the round table, and a corresponding minute with recommendations as to acceptability and applicability of the drafted standards prepared and handed over to stakeholders. Deadline - Oct 31, 2014
1.5.5	Based on the results of activity 1.5.4 above, revise and submit the draft standards to the competent authority(ies).		800 600	800 600	GEF international consultants GEF 71300 - local consultants	71200 - international consultants 71300 - local consultants		The revised draft standards formally submitted to the competent authority(ies) for adoption. Deadline - Nov 30, 2014
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.						Project Manager	The practical procedures for the establishment of an energy efficiency certification system and a system of monitoring and compliance checking applicable to residential buildings formally submitted for adoption.
1.6.1	Conduct a critical analysis of the best European and other internationally recognized approaches, methodologies, regulations and practices for the energy efficiency certification system applicable to residential buildings.	1 600 600 420		1 600 600 420	GEF international consultants GEF 71300 - local consultants GEF 71300 - local consultants (translation)	71200 - international consultants 71300 - local consultants 71300 - local consultants (translation)		A report on the results of critical analysis of best practices of energy certification of residential buildings with relevant recommendations submitted to and approved by the EE Department and published online. Deadline - Apr 30, 2014
1.6.2	Based on the results of activity 1.6.1 above and with due account of the Belarusian norms for energy efficiency passportization, formulate basic requirements and specifications for the said energy efficiency certification system including its institutional and legal arrangement.	3 200 1 000 420		3 200 1 000 420	GEF international consultants GEF 71300 - local consultants GEF 71300 - local consultants (translation)	71200 - international consultants 71300 - local consultants 71300 - local consultants (translation)		A report containing basic requirements, specifications, institutional and legal arrangements for the energy efficiency certification system submitted to and approved by the EE Department and published online. Deadline - July 31, 2014

1.6.3	Organize a round table (ad-hoc meeting) to discuss the provisions drafted under activity 1.6.2 above.	400	400	GEF	71300 - local consultants	PIU PR Expert	At least 25 representatives of stakeholders attended the round table and a corresponding minute with recommendations as to technical, institutional and legal arrangement of the certification system prepared and handed over to stakeholders. Deadline - August 15, 2014
1.6.4	Conduct a critical analysis of the best European and other internationally recognized methodologies and relevant tools for energy efficiency monitoring and compliance checking applicable to residential buildings.	2 400	2 400	GEF	71200 - international consultants		A report on the results of critical analysis of methodologies and tools for validation of compliance with energy efficiency norms and requirements for residential buildings with relevant recommendations submitted to and approved by the EE Department and published online. Deadline - July 31, 2014
1.6.5	Elaborate, on the basis of the results of activities 1.6.3 and 1.6.4 above, a draft of practical procedures for the establishment of a mandatory system of energy efficiency certification of residential buildings along with a system of monitoring and compliance checking.	4 000	4 000	GEF	71200 - international consultants		A report containing the draft of practical procedures for a mandatory system of energy efficiency certification of residential buildings along with a system of monitoring and compliance checking submitted to and approved by the EE Department and published online. Deadline - August 31, 2014
1.6.6	Conduct on-site spot-checks of energy performance of at least five multistorey buildings with a view to demonstrate and verify the suggested methodology and issue of demo energy certificates of the proposed template.	2 400	2 400	GEF	71300 - local consultants		A report containing the results of demonstration on-site spot-checks of energy performance of at least five multistorey buildings with a view to verify the suggested methodology, along with the annexed demo energy certificates of the proposed template prepared and published on-line. Deadline - Sep 15, 2014
1.6.7	Organize a round table (ad-hoc meeting) to discuss the procedures and tools for energy efficiency certification and validation systems elaborated as a result of activities 1.6.5 and 1.6.6 above.	400	400	GEF	71300 - local consultants	PIU PR Expert	At least 25 representatives of stakeholders attended the round table and a corresponding minute with recommendations as to the elaborated procedures and tools for energy efficiency certification and validation systems prepared and handed over to stakeholders. Deadline - Sep 30, 2014
1.6.8	Based on the results of activity 1.6.7, revise the elaborated draft of practical procedures and tools for energy efficiency certification and validation systems and submit it for approval and adoption.	2 400	2 400	GEF	71200 - international consultants		The revised draft of practical procedures and tools for energy efficiency certification and validation systems formally submitted to competent authorities for approval and adoption. Deadline - Dec 31, 2014
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.	60	60	GEF	74510 - bank charges	Project Manager	Bank charges. During the year
Outcome 1 total:		15 140	18 560	77 780	46 330	157 810	The Output is to be implemented in 2015-2016
Outcome 2: Enhanced capacity of the Belarusian specialists to implement and effectively enforce the new energy efficiency building standards and construction norms							
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.					Project Manager	At least six handbooks on design and construction of new energy efficient buildings prepared, approved by stakeholders, disseminated through Internet and published (300 copies each).

2.1.1	Based on the capacity building action plan elaborated by the project in 2013 and endorsed by stakeholders, prepare, publish and disseminate offline and online a set of specific technical information materials for different target groups, as follows:							
2.1.1.1	Handbook "Design of Energy Efficient Building Envelope"	1 200	1 200	1 200	GEF	71300 - local consultants	PIU PR Expert	The handbook prepared, approved by the EE Department and the Ministry of Architecture and Construction and published offline (300 copies) and online. Deadline - May 31, 2014
2.1.1.2	Handbook "Design of HVAC Systems for Energy Efficient Multistorey Residential Buildings"	1 200	700	1 200	GEF	71300 - local consultants	PIU PR Expert	The handbook prepared, approved by the EE Department and the Ministry of Architecture and Construction and published offline (300 copies) and online. Deadline - June 30, 2014
2.1.1.3	Handbook "Design of Heating and Hot Water Supply Systems Based on Heat Pumps for Energy Efficient Multistorey Residential Buildings"	700	1 200	700	GEF	74200 - audio & video prod.	PIU PR Expert	The handbook prepared, approved by the EE Department and the Ministry of Architecture and Construction and published offline (300 copies) and online. Deadline - July 31, 2014
2.1.1.4	Handbook "Design of Hot Water Supply System Based on Solar Collectors for Energy Efficient Multistorey Residential Buildings"	1 200	700	1 200	GEF	71300 - local consultants	PIU PR Expert	The handbook prepared, approved by the EE Department and the Ministry of Architecture and Construction and published offline (300 copies) and online. Deadline - Aug 31, 2014
2.1.1.5	Handbook "Design of Power Supply System Based on Solar PV-panels for Energy Efficient Multistorey Residential Buildings"	1 200	700	1 200	GEF	74200 - audio & video prod.	PIU PR Expert	The handbook prepared, approved by the EE Department and the Ministry of Architecture and Construction and published offline (300 copies) and online. Deadline - Sep 30, 2014
2.1.2	Based on the experience gained during the design of energy efficient multistorey residential buildings in Belarus, prepare, publish and disseminate offline and online a handbook "Design Implementation of Energy Efficiency Performance in Residential Buildings in Belarus".	1 200	700	1 200	GEF	71300 - local consultants	PIU PR Expert	The handbook prepared, approved by the EE Department and the Ministry of Architecture and Construction and published offline (300 copies) and online. Deadline - Dec 31, 2014
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:						Project Manager	Two tutorials, in draft, on energy efficient construction materials and energy efficient building design principles presented and endorsed by at least one of the selected relevant universities.
2.2.1	Based on recommendations and ToRs for updating and adjusting curricular of selected relevant universities elaborated by the project in 2013 and endorsed by stakeholders, draft university syllabi and other curricular materials for at least two subjects: (i) Materials, Wares and Technologies for Energy Efficient Buildings and (ii) Design of Energy Efficient Buildings.	6 200	6 200	6 200	GEF	71300 - local consultants		At least two university syllabi and other curricular materials drafted, based on the recommendations and ToRs for updating and adjusting curricular of selected relevant universities elaborated by the project in 2013, and submitted to the EE Department and published online. Deadline - Oct 31, 2014
2.2.2	Organize and hold presentations of the prepared university syllabi and other curricular materials for Scientific Council in at least one of the selected universities.	400	400	400	GEF	71300 - local consultants	PIU PR Expert	Elaborated university syllabi and other curricular materials presented to and endorsed by Scientific Council of at least one of the relevant universities for incorporation of these materials into educational process. Deadline - Dec 31, 2014

2.3	At least 50 experts from different state and municipal entities dealing on the most recent international developments, experiences and lessons learnt in the field of sustainable construction.	At least 50 experts trained on the most recent international developments, experiences and lessons learnt in the field of construction policies, norms and standards for energy efficient buildings and environmentally sustainable construction.	Project Manager
2.3.1	Prepare training materials (handbooks, tutorials, presentations) concerning the most recent international developments, experiences and lessons learnt in the field of construction policies, norms and standards for energy efficient buildings and environmentally sustainable construction.	<p>4 800</p> <p>3 200</p> <p>420</p> <p>71200 - international consultants</p> <p>71300 - local consultants</p> <p>71300 - local consultants (translation)</p> <p>4 800 GEF</p> <p>3 200 GEF</p> <p>420 UNDP</p>	Training materials for specialists, who deal with construction policies, norms and standards, concerning the most recent international developments, experiences and lessons learnt in the field of construction policies, norms and standards for energy efficient buildings and environmentally sustainable construction prepared and submitted to the EE Department and the Ministry of Architecture and Construction and published online. Deadline - March 31, 2014.
2.3.2	Organize and conduct, using materials prepared under activity 2.3.1 above, at least one 2-day training workshop for specialists from relevant state and municipal agencies dealing with construction policies, norms and standards.	<p>4 000</p> <p>700</p> <p>1 320</p> <p>4 800</p> <p>100</p> <p>420</p> <p>71200 - international consultants</p> <p>71300 - local consultants</p> <p>71600 - travel consultants</p> <p>72100 - contract. serv. companies</p> <p>74200 - audio & video prod.</p> <p>71300 - local consultants (translation)</p> <p>4 000 GEF</p> <p>700 GEF</p> <p>1 320 GEF</p> <p>4 800 GEF</p> <p>100 GEF</p> <p>420 UNDP</p>	At least 50 specialists from relevant state and municipal agencies dealing with construction policies, norms and standards were trained via a two-day training workshop in the most recent international developments, experiences and lessons learnt in the field of construction policies, norms and standards for energy efficient buildings and environmentally sustainable construction. Training materials published offline and disseminated among participants. Deadline - May 31, 2014.
2.4	At least 50 architects and other buildings designers from the leading design institutes and professional associations are trained on: 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.	<p>5 600</p> <p>3 200</p> <p>420</p> <p>71200 - international consultants</p> <p>71300 - local consultants</p> <p>71300 - local consultants (translation)</p> <p>5 600 GEF</p> <p>3 200 GEF</p> <p>420 UNDP</p>	At least 50 architects and other buildings designers trained on the most recent international developments in the area of energy efficient buildings, including policy, construction norms and standards, design principles and techniques, and available cost-effective technical options to achieve optimal energy performance of buildings.
2.4.1	Prepare training materials (handbooks, tutorials, presentations) concerning 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; and iv) available technical options and cost-effective design principles for optimizing buildings' energy performance.	<p>5 600</p> <p>3 200</p> <p>420</p> <p>71200 - international consultants</p> <p>71300 - local consultants</p> <p>71300 - local consultants (translation)</p> <p>5 600 GEF</p> <p>3 200 GEF</p> <p>420 UNDP</p>	Training materials for architects and buildings designers from the leading design institutes and professional associations concerning the most recent developments, design principles and techniques, implications of new construction norms in the practical design work, and available cost-effective technical options for optimizing buildings' energy performance prepared and submitted to the EE Department and the Ministry of Architecture and Construction and published online. Deadline - May 31, 2014.
2.4.2	Organize and conduct, using materials prepared under activity 2.4.1 above, at least one 2-day training workshop for architects and other buildings designers from the leading design institutes and professional associations.	<p>4 250</p> <p>700</p> <p>1 320</p> <p>4 800</p> <p>100</p> <p>71200 - international consultants</p> <p>71300 - local consultants</p> <p>71600 - travel consultants</p> <p>72100 - contract. serv. companies</p> <p>74200 - audio & video prod.</p> <p>4 250 GEF</p> <p>700 GEF</p> <p>1 320 GEF</p> <p>4 800 GEF</p> <p>100 GEF</p>	At least 50 architects and other buildings designers from the leading design institutes and professional associations were trained via a two-day training workshop in the most recent developments, design principles and techniques, implications of new construction norms in the practical design work, and available cost-effective technical options for optimizing buildings' energy performance. Training materials published offline and disseminated among participants. Deadline - July 31, 2014.

	420	420 UNDP consultants (translation)																									
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.	Project Manager	At least 50 construction inspectors trained on the best practice, methodologies and tools for assessing quality of design and construction.																								
2.5.1	Prepare training materials (handbooks, tutorials, presentations) concerning the best practice, methodologies and tools for assessing quality of design and construction in terms of integrated energy performance, proper installation of equipment and correct use of materials.	<table border="1"> <tr> <td>4 800</td> <td>4 800</td> <td>GEF</td> <td>71200 - international consultants</td> </tr> <tr> <td>3 200</td> <td>3 200</td> <td>GEF</td> <td>71300 - local consultants</td> </tr> <tr> <td>420</td> <td>420</td> <td>UNDP</td> <td>71300 - local consultants (translation)</td> </tr> </table>	4 800	4 800	GEF	71200 - international consultants	3 200	3 200	GEF	71300 - local consultants	420	420	UNDP	71300 - local consultants (translation)	Training materials for construction inspectors from the main regional and district centers concerning the best practice, methodologies and tools for assessing quality of design and construction in terms of integrated energy performance, proper installation of equipment and correct use of materials prepared and submitted to the EE Department and the Ministry of Architecture and Construction and published online. Deadline - Aug 31, 2014												
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2.5.2	Organize and conduct, using materials prepared under activity 2.5.1 above, at least one 2-day training workshop for construction inspectors from the main regional and district centers.	<table border="1"> <tr> <td>4 000</td> <td>4 000</td> <td>GEF</td> <td>71200 - international consultants</td> </tr> <tr> <td>700</td> <td>700</td> <td>GEF</td> <td>71300 - local consultants</td> </tr> <tr> <td>1 320</td> <td>1 320</td> <td>GEF</td> <td>71600 - travel</td> </tr> <tr> <td>4 800</td> <td>4 800</td> <td>GEF</td> <td>72100 - contract serv. companies</td> </tr> <tr> <td>100</td> <td>100</td> <td>GEF</td> <td>74200 - audio & video prod.</td> </tr> <tr> <td>420</td> <td>420</td> <td>UNDP</td> <td>71300 - local consultants (translation)</td> </tr> </table>	4 000	4 000	GEF	71200 - international consultants	700	700	GEF	71300 - local consultants	1 320	1 320	GEF	71600 - travel	4 800	4 800	GEF	72100 - contract serv. companies	100	100	GEF	74200 - audio & video prod.	420	420	UNDP	71300 - local consultants (translation)	At least 50 construction inspectors from the main regional and district centers were trained via a two-day training workshop in the best practice, methodologies and tools for assessing quality of design and construction in terms of integrated energy performance, proper installation of equipment and correct use of materials. Training materials published offline and disseminated among participants. Deadline - Oct 31, 2014
4 000	4 000	GEF	71200 - international consultants																								
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420	420	UNDP	71300 - local consultants (translation)																								
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 advice 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.	Project Manager	The Output is to be implemented in 2015-2016 pursuant to the capacity building action plans prepared by the project (see ADWP-2013, activity 2.1.2)																								
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).	Project Manager	At least 20 Belarusian specialists raised their knowledge and skill while taking part in a one-week training seminar along with visits of related exhibitions and facilities.																								
2.7.1	Organize and conduct a one-week study visit in Germany, coupled with training workshops for professional designers, representatives of the state expertise and building supervision organizations devoted to the best existing practice in design, construction, operation and governance of energy efficient residential buildings.	<table border="1"> <tr> <td>4 800</td> <td>4 800</td> <td>GEF</td> <td>71200 - international consultants</td> </tr> <tr> <td>480</td> <td>480</td> <td>GEF</td> <td>71300 - local consultants</td> </tr> <tr> <td>1 120</td> <td>1 120</td> <td>UNDP</td> <td>71300 - local consultants</td> </tr> <tr> <td>30 000</td> <td>30 000</td> <td>UNDP</td> <td>71600 - travel</td> </tr> <tr> <td>4 380</td> <td>4 380</td> <td>UNDP</td> <td>72100 - contract serv. companies</td> </tr> </table>	4 800	4 800	GEF	71200 - international consultants	480	480	GEF	71300 - local consultants	1 120	1 120	UNDP	71300 - local consultants	30 000	30 000	UNDP	71600 - travel	4 380	4 380	UNDP	72100 - contract serv. companies	At least 20 Belarusian specialists raised their knowledge and skill with regard to the best existing practice in design, construction, operation and governance of energy efficient residential buildings while taking part in a study tour to Germany. Short reports with recommendations prepared, submitted to stakeholders and published online. Deadline - May 31, 2014				
4 800	4 800	GEF	71200 - international consultants																								
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4 380	4 380	UNDP	72100 - contract serv. companies																								
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.	Project Manager	At least 10 Belarusian specialists and decision-makers participated in at least three study visits and three international events dedicated to energy efficient and environmentally sustainable building construction and operation.																								

2.8.1	Monitor and cooperate with other international initiatives to prepare quarterly plans for study visits and forthcoming international and regional events dedicated to energy efficient and environmentally sustainable building construction and operation.	800	71200 - international consultants 800 GEF	240	71300 - local consultants (translation) 240 UNDP	Quarterly plans with description of selected events and sites for taking part in forthcoming international and regional conferences and study visits, 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 and EE Department. During the year
2.8.2	Organize study visits in appropriate EU country(ies), selected as per activity 2.8.1, devoted to the best existing practice in application of the energy performance standards, energy efficiency improvement technologies, construction materials, building operation and maintenance experience to residential buildings.	800	71200 - international consultants 800 GEF	240	71300 - local consultants (translation) 240 GEF	At least 10 Belarusian specialists raised their knowledge and skill in the best existing practice in application of the energy performance standards, energy efficiency improvement technologies, new construction materials, up-to-date building operation and maintenance experience to residential buildings during at least two study tours conducted in EU countries. Short reports with recommendations prepared. During the year
2.8.3	Provide informational and financial support for Belarusian specialists and decision-makers in their participation in at least three international events, including the 18th International Passive House Conference and Exhibition.	800	71200 - international consultants 800 GEF	240	71300 - local consultants (translation) 240 GEF	In total at least 10 Belarusian specialists and decision-makers took part in at least three 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. During the year
2.8.4	Provide support for Belarusian specialists and decision-makers in organizing and implementation of study visits to similar UNDP projects.	1 200	71300 - local consultants 1 200 GEF	4 150	71600 - travel 4 150 GEF	At least 3 project experts 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 study visit and joint workshop with experts of similar UNDP projects. During the year
	Bank fee, GEF	40	74510 - bank charges 40 GEF			Bank charges. During the year
	Bank fee, UNDP	10	74510 - bank charges 10 UNDP			Bank charges. During the year
	Outcome 2 total:	8 470	73 670	45 210	44 510	171 860
Outcome 3: Demonstrated energy and cost-saving potential of new energy efficiency measures in at least three new residential buildings in three Belarusian cities						
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.					A relevant part of design and construction documents for energy efficiency improvement in at least two of the pilot buildings approved by respective prime-developers and submitted for the state expertise along with the overall package of design and construction documents.
3.1.1	Based on the results of this output from 2013, complete preconstruction simulations and exploratory designs of measures, technological methods, installations and equipment for energy efficiency improvement of the three pilot residential buildings (in Grodno, Minsk and Mogilev).	8 800	71200 - international consultants 8 800 GEF	5 600	71300 - local consultants (translation) 5 600 GEF	A report, pre-design drawings and other relevant documents for siting of the energy efficiency installations and equipment prepared, examined and approved by prime-developers. Deadline - Feb 14, 2014
		240	71300 - local consultants (translation) 240 GEF			
		1 200	71600 - travel 1 200 GEF			

3.1.2	Based on the results of activities 3.1.1-3.1.2 above, complete all necessary pre-developments concerning applicable building space-and-planning parameters, other technical and design solutions, conceptual design of tools, hardware, installations and equipment for energy efficiency improvement of at least two (in Grodno and Minsk) of the three pilot residential buildings.	11 200 5 600 1 200	11 200 5 600 1 200	71200 - international consultants 71300 - local consultants 72100 - travel	A preliminary design of building space-and-planning parameters, other technical and design solutions, conceptual design of tools, hardware, installations and equipment for energy efficiency improvement in at least two of the selected buildings completed and submitted to the EE Department and respective prime-developers and duly approved. Deadline - Feb 25, 2014
3.1.3	Based on the preliminary design of measures for energy efficiency improvement as per activities 3.1.1-3.1.2 above, complete preliminary specifications for the equipment and installations needed and determine potential equipment manufacturers and suppliers.	3 200 2 300 420	3 200 2 300 420	71200 - international consultants 71300 - local consultants 71300 - local consultants (translation)	A report containing specifications for the equipment and installations and list of potential equipment manufacturers and suppliers prepared and submitted to prime-developers and the EE Department. Deadline - Feb 28 2014
3.1.4	Based on the results of activities 3.1.1-3.1.3 above and in view of terms of references received from the prime-developers, complete, submit and approve a related design statement for a full-scale design of tools, hardware, installations and equipment for energy efficiency improvement of the two buildings (in Grodno and Minsk).	2 300 1 200 0	2 300 1 200 0	71300 - local consultants 71600 - travel 72100 - contract. serv. companies (NIPPTIS, budget 2013)	A design statement for a full-scale design of technologies, tools, hardware, installations and equipment for energy efficiency improvement in at least two of the pilot buildings completed, submitted to and approved by the respective prime-developers. Deadline - March 31, 2014
3.1.5	Based on the results of activities 3.1.1-3.1.4 above, implement all necessary developments concerning the full-scale design of tools, hardware, installations and equipment for energy efficiency improvement of the residential building in Grodno, coordinate and complete a relevant part of construction documents.	2 300 1 200 0	2 300 1 200 0	71300 - local consultants 71600 - travel 72100 - contract. serv. companies (NIPPTIS, budget 2013)	A relevant part of design and construction documents for energy efficiency improvement of the pilot building in Grodno completed and submitted to respective prime-developers and the EE Department. Deadline - April 30, 2014
3.1.6	Based on the results of activities 3.1.1-3.1.4 above, implement all necessary developments concerning the full-scale design of tools, hardware, installations and equipment for energy efficiency improvement of the residential building in Minsk, coordinate and complete a relevant part of construction documents.	2 300 1 200 0	2 300 1 200 0	71300 - local consultants 71600 - travel 72100 - contract. serv. companies (NIPPTIS, budget 2013)	A relevant part of design and construction documents for energy efficiency improvement of the pilot building in Minsk completed and submitted to respective prime-developers and the EE Department. Deadline - May 31, 2014
3.1.7	Based on the results of activities 3.1.5-3.1.6 above, update specifications and a list of hardware, tools, installations and equipment prescribed in the design and construction documents for two residential buildings (in Grodno and Minsk).	2 300 0	2 300 0	71300 - local consultants 72100 - contract. serv. companies (NIPPTIS, budget 2013)	The updated specifications and the list of hardware, tools, installations and equipment for two residential buildings (in Grodno and Minsk) submitted to and approved by respective prime-developers. Deadline - June 31, 2014

3.1.8	Based on the results of activities 3.1.2 and 3.1.7 above, provide procurement of the hardware, tools, installations and equipment prescribed in the design and construction documents for energy efficiency improvement of two residential buildings (in Grodno and Minsk).	2 300 100 000	2 300 235 134	4 600 335 134	71300 - local consultants 72300 - materials & goods 72100 - contract. serv. companies (NIPTIS, budget 2013)	The prescribed hardware, tools, installations and equipment for energy efficiency improvement in the two pilot buildings (in Grodno and Minsk) procured and properly deposited. Deadline - Dec 31, 2014
3.1.9	Prepare and approve general provisions and instructions for techniques of construction and assembling works, building operation and maintenance works with due account of the developed technical and design solutions, tools, hardware, installations and equipment and in compliance with sanitary and safety requirements and other existing standards.	2 300 0	2 300 0	2 300 0	71300 - local consultants 72100 - contract. serv. companies (NIPTIS, budget 2013)	The general provisions and instructions for techniques of construction and assembling works, operation and maintenance works for energy efficiency improvement in the two pilot buildings (in Grodno and Minsk) developed, submitted to and approved by respective prime-developers. Deadline - July 15, 2014
3.1.10	Upon requests and notes from prime-developers, amend, adjust and correct, as needed, the relevant part of design and construction documents, and provide a follow-on of this part during overall design of the two pilot buildings (in Grodno and Minsk) elaborated by the prime-developers.	2 300 0	2 300 0	2 300 0	71300 - local consultants 72100 - contract. serv. companies (NIPTIS, budget 2013)	The overall design of the two pilot buildings completed under supervision provided by the project consultants and NIPTIS, and the resulting design and construction documents for the two pilot buildings (in Grodno and Minsk) submitted to the relevant state authorities for the state expertise. Deadline - Dec 31, 2014
3.1.11	Carry out respective studies of baseline architecture and engineering characteristics of potential constructions at the pilot site in Mogilev focusing on the number of flats and tenants, energy, heat and hot water consumption, and HVAC system requirements along with customer properties expected.	5 600 2 300 420 1 200 5 000	5 600 2 300 420 1 200 5 000	5 600 2 300 420 1 200 5 000	71200 - international consultants 71300 - local consultants 71300 - local consultants (translation) 71600 - travel 72100 - contract. serv. companies	A report, prepared on architecture and engineering characteristics of potential constructions of the pilot building in Mogilev, examined and approved by its prime-developer. Deadline - Sep 30, 2014
3.1.12	Based on the results of activity 3.1.11 above, suggest and justify applicable building space-and-planning parameters, other technical and design solutions for the pilot building in Mogilev based on integrated energy performance building design principles and taking into account applicable energy efficiency improvement technologies and approaches.	5 600 3 200 420 1 200 5 000	5 600 3 200 420 1 200 5 000	5 600 3 200 420 1 200 5 000	71200 - international consultants 71300 - local consultants 71300 - local consultants (translation) 71600 - travel 72100 - contract. serv. companies	Design and technical solutions for different energy efficient options prepared, examined and approved by the prime-developer for the pilot building in Mogilev. Deadline - Oct 31, 2014

3.1.13	Provide least-cost analysis of the options suggested in activity 3.1.12 above and choose the most feasible and cost-effective building performance for the pilot building in Mogilev with minimal possible energy consumption per unit area along with keeping the same or even improved comfort conditions and customer properties stipulated in the baseline design.	A report on least-cost analysis and respective recommendations for selected options prepared, examined and approved by the prime-developer of the pilot building in Mogilev. Deadline - Nov 30, 2014
3.1.14	Based on the results of activities 3.1.12 and 3.1.13 above, develop preconstruction simulations and exploratory designs of measures, technological methods, installations and equipment for energy efficiency improvement of the pilot building in Mogilev.	A report, design drawings and other relevant documentations for siting of the energy efficiency installations and equipment prepared, examined and approved by developers and adopted by the EE Department. Deadline - Dec 31, 2014 with extension to 2015
3.1.15	Based on the results received under activities 3.1.1-3.1.14 above, prepare, discuss and approve action plans for design and construction of the demonstration sites along with schedules for different measures, activities and events in 2015-2016.	An action plan as well as respective schedules and activities for 2015-2016 adopted by the EE Department. Deadline - Dec 31, 2014
3.2	Bank fee	Bank charges. During the year
3.3	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.	The Output is to be implemented in 2015-2016 pursuant to the action plans approved (see activity 3.1.14)
3.4	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.	The Output is to be implemented in 2015-2016 pursuant to the action plans approved (see activity 3.1.14)
3.5	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.	The Output is to be implemented in 2015-2016 pursuant to the action plans approved (see activity 3.1.14)
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.	The Output is to be implemented in 2015-2016 pursuant to the action plans approved (see activity 3.1.14)
Outcome 3 total:	43 320 9 360 119 180 366 624 538 484	
Outcome 4: Documented, disseminated and institutionalized project results providing a basis for further replication		
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 five interviews and press-releases provided in order to inform a wider audience about the project and its outcomes, as well as to change, to extent possible, people perception and behavior with regard to energy efficiency improvement measures. During the year.
4.1.1	Organize and carry out an ongoing information campaign (interviews, press-releases, etc.) about the Project activities.	
	2 250 2 250 2 250 2 250 9 000	71400 - service contr. individ.

4.1.2	Prepare and publish articles, leaflets, brochures, etc. for professionals about the best practices concerning use of renewable energy technologies for energy efficiency improvement in residential buildings.	1 200 3 150	1 200 3 150	GEF GEF	71300 - local consultants 74200 - audio & video prod.	At least one printed material for professionals about the best practices concerning use of renewable energy technologies for energy efficiency improvement in residential buildings prepared and issued. During the year.
4.1.3	Prepare and publish articles, leaflets, brochures, etc. for professionals about the cost-efficiency of energy conservation measures in housing.	1 200 3 150	1 200 3 150	GEF GEF	71300 - local consultants 74200 - audio & video prod.	At least one printed material for professionals about the best practices concerning the cost-efficiency of energy conservation measures in housing. During the year.
4.1.4	Prepare and publish articles, leaflets, brochures, etc. for general public about the best practices concerning operation and maintenance of energy efficient households.	1 200 3 150	1 200 3 150	GEF GEF	71300 - local consultants 74200 - audio & video prod.	At least five printed material for general public about the best practices concerning operation and maintenance of energy efficient households. During the year.
4.1.5	In cooperation with the Ministry of Education and the EE Department, provide informational supports to the "Energy Marathon" Republican Contests.	360 1 500 330	360 1 500 330	GEF GEF GEF	71300 - local consultants 74200 - audio & video prod. 71600 - travel	At least one "Energy Marathon" Republican Contest supported and conducted. During the year.
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 Output is to be implemented in 2015-2016
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 Output is to be implemented in 2015-2016
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.					The Output is to be implemented in 2015-2016
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 Output is to be implemented in 2015-2016
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 larger International Conference by the end of the Project.
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.	2 000 600 1 200 2 700 210 500	2 000 600 1 200 3 500 210 500	4 000 1 200 2 400 6 200 420 1 000	71200 - international consultants 71300 - local consultants 71600 - travel 72100 - contract. serv. companies 71300 - local consultants (translation) 74200 - audio & video prod.	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 two International seminars on "Best Practice in Energy Efficiency Improvement in Residential Buildings" organized and held under auspices of the project. During the year

4.7	Regularly updated project website with a link to an Expanded Energy Platform.	PIU PR Expert	The Project's website created and linked to the Energy Efficiency Platform
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.		All Project reports and key publications of 2013 posted. Deadline March 31, 2014
4.7.2	Launch the fully operational website with Russian and English content.		The fully operational Project Website launched. Deadline - May 31, 2014
4.7.3	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.		The Project Website content regularly updated. During the year
4.7.4	Based on the traffic index achieved, amend/upgrade the website functionality and visibility, as needed, and suggest measures for further improvement of its quality and popularization.		The report on the results of traffic index analysis prepared, and the Project Website functionality and visibility amended/ upgraded accordingly. The measures for its further improvement presented to and approved by the EE Department. Deadline - Sep 30, 2014
4.8	Annual market monitoring reports for new building construction with the emphasis on energy efficiency aspects.	Project Manager	The energy efficiency building construction market monitoring report for 2013-2014 prepared
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 and 2014, and, on this basis, draft reports on market monitoring for new residential building construction with the emphasis on energy efficiency and GHG emission aspects.		A report on the energy efficiency building construction market monitoring for 2013 and 2014 prepared and approved by the EE Department. Deadline - Dec 31, 2014
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.	Project Manager	The Mid-term Report prepared and discussed, and recommendations for adjustments of respective interventions of the Project approved by stakeholders and incorporated into the Project implementation strategy and adaptive approaches.
4.9.1	Conduct a Mid-term Project Evaluation Study by means of collecting and analyzing actual data of Project's results and comparing them with the objectives, targets, baseline scope and requirements stipulated in the Project Document.		A short progress report of the study prepared and submitted to the EE Department. Deadline - Nov 15, 2014

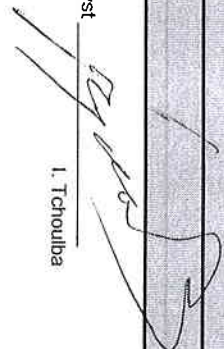
4.9.2	Compile and present a Mid-term Evaluation Report describing the current progress of the Project and providing necessary recommendations for adjustment of the Project's implementation strategy.	5 000	5 000	71200 - international consultants	A Mid-term Evaluation Report completed, presented to the EE Department and stakeholders, approved by the UNDP CO and EE Department, and published online. Deadline - Dec 31, 2014
	Bank fee, GEF	2 300	2 300	71300 - local consultants	
	Bank fee, UNDP	1 200	1 200	71600 - travel	
		420	420	71300 - local consultants (translation)	
		25	25	74510 - bank charges	Bank charges. During the year
		10	10	74510 - bank charges	Bank charges. During the year
	Outcome 4 total:	2 275	12 485	51 085	100 860

Effective project management and monitoring ensured

PM1	Project monitoring and reporting.	250	250	71600 - travel	Project Manager	At least two Project Steering Committee meetings held. Deadline - May 31 and Dec 31, 2014
PM2	Project management and project office functioning.	375	375	71300 - local consultants	Project Manager	All project reports submitted and approved in due time. Deadline - July 15, 2014 (for semiannual report to the Ministry of Economy) and Dec 15, 2014 (for APR/PIR and Logs)
		750	750	71300 - local consultants (translation)		Project office successfully operated. Project plan successfully fulfilled. Throughout the Project
		11 550	11 550	71400 - contract. serv. individ.		
		3 750	3 750	71400 - contract. serv. individ.		
		250	250	71600 - travel		
		2 000	2 000	72100 - contract. serv. companies		
		3 050	3 050	72200 - Furniture & Equipm.		
		375	375	72400 - communicat.		
		750	750	72500 - Office Supplies		
		2 125	2 125	73100 - utilities		
		375	375	73400 - equipment services		
		1 250	1 250	74500 - miscellan.		
		175	175	74500 - miscellan.		
	Project management total:	24 775	21 225	21 725	23 225	90 950

Total for UNDP					83 530	
Total for GEF					976 434	
Total 2014:	93 980	135 300	298 910	531 774	1 059 964	

Project Manger
A. Grebenkov 

Programme Analyst 
I. Tchoulba

