Deputy Resident Representative UNDP Belarus APPROVED BY: 1 F. Garakhanov

Date "

_2013

2013

*Minenkov

APPROVED BY:
National Project Director
Project Neg0077154

Annual Detailed Work Plan 2013

Improving Energy Efficiency in Residential Buildings in the Republic of Belarus No. 00077154

| 1.2.1 Deve | 100 | i | 1 1 2 Prov | _ | 1114 | | 1113 | | 1112 | | | d pe | | 1.1 A f | |
|--|--|---|------------------------------|---|--|--|--|---|---|---|---|---|--|--|---|
| buildings based on the hest domestic and international | At least 50 completed energy audits providing information on factual energy consumption and energy balance of di of existing residential buildings of different age and using different construction techniques. | submitted guidelines directly to the EE Department, Ministry of Architecture and Construction and other relevant authorities in the course of conciliation and adoption procedures. | the guidelines for adoption. | discussions during activity 1.1.1.3, revise the draft guidelines prepared as per activity 1.1.1.2 on energy performance monitoring and calculation for residential buildings and submit | With a view of stakeholders' comments after ad hoo | buildings' energy performance monitoring and calculation methodologies and practices. | Organize a round table (ad-hoc meeting) on residential | monitoring and calculation for residential buildings. | Draft methodological quidelines on energy performance | applicable to different types of residential buildings. | and other internationally recognized methodologies and practices for energy performance monitoring and calculation | performance monitoring and calculation applicable to different types of residential buildings: Conduct a critical analysis and evaluate the best Furnese. | contemporary European norms or other applicable international standards. Develop methodological guidelines for energy | ormally adopted and endorsed methodology for h | Activity description |
| | ation on factual energy consusing different construction te | | 840 | 3 000 | 000 | 720 | 960 | 4 000 | 1 200 | 960 | 4 000 | | mernational standards. | nework and mechanisms to | Output costs as per budget accounts, US\$ i - 2013 II - 2013 III - 2013 IV - 2013 |
| | imption and energy b chniques. | 960 960 | 840 | 3 000 | 600 | 720 | 960 | 4 000 | 1 200 | 960 | 4 000 | | monitoring and calc | enforce the legislation buildings | accounts, US\$ Total 013 IV - 2013 US\$ |
| | alance of diffe | GEF 71 | GEF 0 | GEF | GEF | GEF | GEF | GEF | GEF | GEF | GEF | | ulation in line | tion for impr ngs | al Donor |
| | fferent type | 71300 - local consultants | consultants | 71200 - international consultants | contract. serv. | 71300 - local consultants 72100 - | consultants | 71200 - international consultants | consultants (translation) | 71300 - local consultants | 71200 - înternational | | ne with | oving the er | Budget Account |
| 101 | Project Manager | | | | | | | | | | | | Project Manager | nergy efficiency | Responsible |
| Guidelines for energy audits of residential buildings submitted to the EE Department and the Ministry of Architecture and Construction, | Energy audits of at least 5 residential buildings organized and conducted. | The guidelines endorsed by the EE Department and the Ministry of Architecture and Construction, and adopted by competent authority(ies). Deadline - Dec 31, 2013 | | Revised guidelines submitted to the EE Department and the Ministry of Architecture and Construction. Deadline - August 31, 2013 | | At least 15 representatives of stakeholders attended the round table and a respective minute with recommendations prepared. Deadline - July 15, 2013 | | First draft of methodological guidelines prepared. Deadline - June 30, 2013 | | 31, 2013 | A report, approved by the EE Department and published online, on the results of critical analysis of existing methodologies and practices for buildings' energy performance months. | A report and a draft of methodological guidelines for buildings' energy performance monitoring and calculations submitted to the EE Department and published online. Deadline - August 31, 2013 | Formally adopted methodological guidelines for energy Project Manager performance monitoring and calculation of residential buildings. | A formally adopted and endorsed methodology for buildings. | Annual Target |

| | | | | | | 1.2.3 | | | | | | 7.7.1 | 2 | | | 12.1.6 | | | | | | 1.2.1.5 | 121.4 | 1213 | | | | | 12.12 | | | Ņ |
|---|-------------|--------------------------|----------------|---------------------------|--|--|---------------|---------------|-------------|------------------------------|----------------------------------|--|-------------|--|---|--|----------------|-----------------|---------|---------------------------|-------------|---|--|--|---------------|---------------------------|--|---|--|----------------------|--|---|
| | | | | | capacity in energy audit of residential buildings. | Organize a 2-day training workshop for national experts and local energy auditing firms to improve their | | | | | publish them online and offline. | curriculum and training materials for technical training workshops on energy audit of residential buildings, and | | Control of the Contro | guidelines for improvement of energy audit services in | Based on the results of activity 1.2.1.5 above, update | | | | | | Conduct energy audits of at least 5 residential buildings in line of the plans approved under activity 1.2.1.3. | Acquire equipment needed for the energy audits as per the procurement plans stipulated under activity 1.2.1.3. | Prepare and approve action plans, equipment specifications and equipment procurement plans for energy auditing residential buildings of different age and construction techniques. | | | | energy addit services in residential buildings in belards. | Provide recommendations and draft a guidelines, based on the analysis as per activity 1.2.1.1 above, for improvement of | The Haustan procures | and determine gaps between the domestic and the best | domestic practices for energy audit in residential buildings |
| | | | | | | | | | | | | | | | | | | | | | | | 5 | 840 | | 1 200 | 960 | | 6 000 | 960 | | 4 000 |
| 420 | | 5 000 | 1 320 | 720 | | 6 000 | 1 800 | | 1 200 | | 960 | 7 000 | 840 | | 4 000 | | 660 | 15,000 | | 2 400 | | 7 500 | 55 000 | | | | | | | | | |
| 420 | | 5 000 | 1 320 | 720 | | 6 000 | 1 800 | | 1 200 | | 960 | 7 000 | 840 | | 4 000 | | 660 | 15 000 | | 2 400 | | 7 500 | 55 000 | 840 | | 1 200 | 960 | | 6 000 | 960 | | 4 000 |
| GEF or | | GEF in | GEF 7 | GEF 7 | Ω | GEF or | GEF & | 4 G | GEF or | | GEF 7 | GEF in | GEF | | GEF in | - 1 | GEF 7 | GEF o | 7 | GEF 7 | | 7 GEF in | GEF E | GEF 7 | | GEF o | GEF , | | GEF ir | GEF (| | GEF ir |
| 71300 - local consultants (translation) | consultants | /1200 - international | 71600 - travel | 71300 - local consultants | companies | 72100 - contract. serv. | & video prod. | (translation) | consultants | consultants 71300 - local | 71300 - local | international consultants | consultants | 71300 - local | international | 71200 - | 71600 - travel | contract. serv. | 72100 - | 71300 - local consultants | consultants | 71200 - international | 72300 - Equipment | 71300 - local consultants | (translation) | 71300 - local consultants | consultants | consultants | 71200 - international | consultants | consultants | international |
| č | | | PMU PR Expert | | | | | | | | | | | 0 | | 110 | | | | | | | PMU Procurement Expert | | | | | | | | | |
| | | | | | | A two-day training for ca. 60 energy auditors organized and held. Deadline - Dec 31, 2013 | | | | | 4 | curriculum on energy audit of residential buildings prepared and published online and offline. Deadline - Dec 15, 2013 | | Compliandon, position and So, 4010 | submitted to the EE Department and the Ministry of Architecture and | Revised guidelines for improvement of energy audits in residential buildings | 276 | | | | 35 | Energy audits of at least 5 residential buildings conducted and respective reports submitted to stakeholders. Deadline - Oct 31, 2013 | The equipment necessary for energy auditing acquired and handed over to an energy audit company selected to conduct energy audits of buildings. Deadline - Sep 30, 2013 | Action plans, equipment specifications and equipment procurement plans for energy audits in residential buildings submitted to and endorsed by the EE Department. Deadline - June 30, 2013 | | | and the second control of the second control | LE Department and the Ministry of Architecture and Construction, Deadline - June 30, 2013 | Recommendations concerning improvement of energy audit practices and a draft of guidelines for energy audits of residential buildings submitted to the | | buildings. Deadline - May 31, 2013 | A report, approved by the EE Department and published online, on the results of critical analysis of existing practices for energy audit in residential |

| | | 1512 | ø | | 1.5.1.1 Co | | 4 | 1.5 A f | the dis: | 1.4.2 Ba | | 1.4 1 Co | | 1.4 A | 86 | | 1 3 2 R | cc | or Jo | 1.3.2 Co | 9 | or si | | |
|-------------------------------|--|--|---|--|--|--|---|--|---|--|--|--|--|--|--|---|--------------------------------|--|--|---|-------------------------------|---|--|--|
| buildings. | existing practice of successful introductions of energy performance standards for newly constructed residential | print of county for the county for t | | energy performance based standards and those of the EU applicable to newly constructed residential buildings. | Conduct critical analysis and evaluate gaps between national | and standards for newly constructed buildings | newly constructed buildings and, as applicable, those going through a major renovation with the initial focus on residential buildings. | residential areas. A finalized draft with related stakeholder consultations | the best applicable options for further development of district heating and hot water supply systems in | Based on the results of analysis above, recommend | options and practices revealed in activities 1.3.1-1.3.3 on the feasibility of various typical schemes used for district heating and hot water supply in residential areas in Belarus. | Conduct an analysis of impact of different technical | used in Belarus and the buildings' central water heating + radiator scheme connected to district heating, in particular, with related recommendations for future development. | completed analysis of the impact of the new low or | Belarus. | building performance with the least possible | residential buildings. | construction industry with a focus on different types of | options and practices revealed in activity 1.3.1, which would be best applicable to the Belanusian civil | Conduct a cost-efficiency analysis of different technical | or residential buildings. | supply and distribution schemes and other technical options to improve energy efficiency of various types | techniques, appropriate construction materials, design arrangements, renewable energy applications, heat | use of renewable energy sources, including an analysis of the cost-to serve low or close to zero energy buildings. |
| | | 1 200 | 1320 | 4 000 | | | going through a maj | | | | | | ng + radiator scheme | | | | | | | | 1 200 | 1680 | 4 000 | |
| 600 | 720 | | | | | | or renovation | Interview I | | | | | e connected | | | | 1 320 | | 4 000 | | | BONUTES | | Jency of different heat supply and d |
| | | | | | | | on with the i | | 840 | | 1 320 | | or different to district I | 1 000 | | 3 000 | | | | | | | | rent heat su |
| 600 | 720 | 1 200 | 1 320 | 4 000 | | | ased norm | | 840 | | 1 320 | | heat supply neating, in I | 1 080 | | 3 000 | 1 320 | | 4 000 | | 1 200 | 1 680 | 4 000 | ipply and d |
| 72100 - GEF contract serv, | GEF 71300 - local consultants | GEF consultants (translation) | GEF 71300 - local consultants | GEF international consultants | | | and standards for on residential | | GEF 71300 - local consultants | | GEF 71300 - local consultants | | systems typically sarticular, with | GET | consultants | 71200 - GEF international | GEF consultants | consultants | GEF international | | 71300 - local GEF consultants | GEF 71300 - local | 71200 - GEF international | jency of different heat supply and distribution methods |
| | | | | | | | Project Manager | | | | | | Project Manager | | | | | | | | | | | F sct Manager |
| | At least 15 representatives of stakeholders attended the round table and a respective minute with recommendations prepared. Deadline - July 31, 2013 | | by the EE Department and published online. Deadline - June 30, 2013 | A report on the results of critical analysis with respective recommendations on using the energy performance standards in Belarus submitted to the EE Department and the Ministry of Architecture and Construction, and approved | Deadline - Nov 30, 2013 | Draft of the energy performance standards for newly constructed residential buildings submitted to the EE Department and the Ministry of Architecture and Construction and sublicted and construction | The first drafts of requirements and norms for new energy efficient building design and performance submitted to the EE Department and the Ministry of Architecture and Construction. | Deadline - Dec 31, 2013 | Recommendations on the further development of district heating and hot water supply systems in residential areas submitted to the FE Department and the Misister of Australia | Construction and published online. Deadline - Oct 31, 2013 | A report on feasibility of different typical district heating and hot water supply schemes with due regard of significant reduction of centralized heat and hot water demand submitted to and approved by the EE Department and the Ministry of Architecture and | hot water supply systems. | A report, approved by the EE Department and the Ministry of Architecture and Construction and published online, with evaluation of impact of different technical options to heat and | oming Cedanie - Oct 91, 2019 | submitted to and approved by the EE Department and published | A report containing recommendations for the cost-effective low- energy performance of various types of recidential buildings | oimie, Deduille - Aug 31, 2013 | submitted to and approved by the EE Department and published | A report on cost-efficiency analysis of different technical options to improve energy efficiency of various types of residential buildings | | | Department and published online. Deadline - May 31, 2013 | A report on technical options to improve energy efficiency of various types of residential buildings submitted to and approved by the EE | A report, approved by the EE Department and published online, containing the results of cost-efficiency analysis of different technical options to improve buildings' energy efficiency. |

| 2.1.2 | 2.1.1 | 2.1 | | | 1.7 | 1.6 | | 1522 | | 1522 | | | 1.5.2.1 | 1.5.2 | | 1 5,1 3 |
|--|---|--|---|------------------|--|---|--|--|---------------------|--|---|---------------------------|--|--|---|--|
| Based on the results received under activity 2.1.1, prepare, discuss and approve a capacity building action plan for different target groups, including schedules for different measures, activities and events. | Carry out the capacity needs assessment of all relevant stakeholders and specify various target groups for enhancing their capacity in the field of energy efficiency improvement of residential buildings. | 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. | Outcome 2: Enhanced capacity of the | Outcome 1 total: | Further developed and adopted quality standards and a system of EE certification for the construction materials, accessories and appliances used in the construction sector. | Elaborated and by the Government of Belarus adopted practical procedures for the establishment of a mandatory certification of buildings, including issuing of EE passports and a system of monitoring and compliance checking on-site spot-checks. | facilitating measures for energy efficiency improvement in such buildings. | 2 Based on the results of activities 1.5.2.1-1.5.2.2 formulate design requirements with respect to energy efficiency in residential buildings under renovation new standards and residential to the companies of the standards and residential to the standards are standards. | a major renovation, | 2 Organize a round table (ad-hoc meeting) to share and discuss existing practice of successful introductions of energy performance standards for residential buildings going through | | | 1 Conduct critical analysis and evaluate gaps between national energy performance based standards and those of the EU applicable to residential buildings under major renovations. | 2 Draft the national energy performance based norms and standards for buildings going through a major renovation | standards and facilitating developments of energy efficient buildings. | Based on the results of activities 1.5.1.1-1.5.1.2, formulate design requirements with respect to energy efficiency in newly constructed residential buildings along with drafts of regulatory documents establishing energy performance based |
| | | group spe onstruction this inform | Belarusia | 0 | ıd a systen | ed practica ssports an | | | | | | | | | | |
| | | eific techn n of new bu nation thro | n specialis | 38480 | ו of EE ceri | ર્થ procedur d a system | | | | | | | | | | |
| | | ical guides illdings to s ugh the int | ts to impl | 66800 | ification fo | es for the e of monitor | | | | | | | | | | |
| 1 200 | 1 200 | , handbook support the ernet baser | ement ano | 80500 | r the const | stablishme | 1 320 | 4 000 | 600 | 720 | 1 200 | 1 320 | 4 000 | | 1 320 | 4 000 |
| 1 200 | 1 200 | s, guidelin implemen d energy pl | l effectivel | 185780 | ruction ma | ent of a ma mpliance c | 1 320 | 4 000 | 600 | 720 | 1 200 | 1 320 | 4 000 | | 1 320 | 4 000 |
| GEF | GEF | es and of tation of t atform ar | y enforc | | terials, ac | ndatory s hecking v | GEF | GEF | GEF | GEF | GEF | GEF | GEF | | GEF | GEF |
| 71300 - local consultants | 71300 - iocal consultants | ther related the envisage id the | e the new e | | ccessories | system of EE with related | 71300 - local consultants | 71200 - international consultants | contract serv. | 71300 - local consultants | 71300 - local consultants (translation) | 71300 - local consultants | 71200 - international consultants | | 71300 - local consultants | 71200 - international consultants |
| | | d Project Manager | nergy efficiency | | Project Manager | Project Manager | | | 16 | | | | | | | |
| A capacity building action plan as well as respective activities for 2014-2016 adopted by the EE Department. Deadline - Dec 31, 2013 | A report on the results of the capacity needs assessment with respective recommendations submitted to and approved by the EE Department and published online. Deadline - Oct 31, 2013 | | Outcome 2: Enhanced capacity of the Belarusian specialists to implement and effectively enforce the new energy efficiency building standards and construction norms | | The Output is to be implemented in 2014-2016 | | | Requirements and norms for energy efficient performance of buildings under renovation compiled and first drafts submitted to the EE Department and the Ministry of Architecture and Construction. Deadline - Dec 31, 2013 | | At least 15 representatives of stakeholders attended the round table and a respective minute with recommendations prepared. Deadline - Nov 30, 2013 | | | A report on the results of critical analysis with respective recommendations on using the energy performance standards in Belarus submitted to and approved by the EE Department and published online. Deadline - Oct 31, 2013 | Draft of the energy performance standards for residential buildings under major renovation submitted to the EE Department and the Ministry of Architecture and Construction and published online. Deadline - Dec 31, 2013 | | Requirements and norms for new energy efficient building design and performance compiled and first drafts submitted to the EE Department and the Ministry of Architecture and Construction. Deadline - Nov 30, 2013 |

| | 10 m | | | 2.8.2 Organiz | operation. | environ | initiativ | | of mur | 2.7 A two- | | 2.6 At leas | 2.5 At leas | techn availa | persp | 2.4 At lea | | univer | 2.2.3 Prepa | | | releva revea proce design | |
|---------------|-------------|-------------|---|--|-------------|---|---|---|--|--|--|--|--|--|--|--|---|---|---|-------------------------|--|---|--|
| | | - | selected as per activity 2.8.1, devoted to the best existing practice in application of the energy performance standards to residential buildings. | Organize study visits in appropriate EU country(ies) | on. | environmentally sustainable building construction and | initiatives and prepare quarterly plans for forthcoming events dedicated to energy efficient and | international initiatives promoting energy efficient and environmentally sustainable building construction. Monitor and cooperate with other international | of municipal authorities) in EU countries and visiting the facilities (25 people). | 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 afficient building design contents. | used and provision of other advise for private construction companies on how to integrate elements of energy efficient design in the investment projects throughout the project cycle from the design to construction and building management. | st 50 supervisors of the leading construction of | At least 50 construction inspectors from the main regional and district centers trained on methodologies for as buildings' energy performance and the correct installation of the materials and onlineart used | 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. | perspective; ii) integrated, energy efficient building design principles and techniques; iii) implications in the practical design work when moving from prescription permits building design principles and techniques; iii) implications in the practical design | 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 contract of the contrac | 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. | and adjusting curricula of selected relevant universities. | Prepare recommendations and draft ToRs for updating | | relevancy of new university courses for education process in selected universities. | relevant Belarusian universities with a view of revealing possible gaps and deficiencies in education process related to integrated energy efficient building design, construction and operation. | New courses on integrated building design and building energy efficientiversities educating architects and building engineers and at least the project |
| | | | | | 240 | | 2 000 | d environmentally su | the facilities (25 peo | v. efficient building d | impanies trained on incition companies on incition to design to | managing trained on | jional and district ce | s for optimizing build ed, energy efficient l | esign principles and | from the leading desi | l entities dealing wit ts, experiences and l | | | | | | / 3 |
| 10 650 | 1 120 | 240 | 1 000 | | | | | istainable bi | ple). | of the state | how to inte | o and equip | nters traine | fings' energ | techniques | ign institute | h constructi lessons lear | | | | | | y included i |
| | 1 120 | 240 | 1 000 | | | | | uilding cons | truction and | xpertise an | Installation grate eleme n and buildi | lient used. | d on method | y performar | ; iii) implica | s and profes | on policies, nt on buildi | 1 200 | | 600 | 1 200 | 1 200 | y included into the curricula of all key students have passed these new cou |
| 31 300 | 2 240 | 480 | 2 000 | | 240 | | 2 000 | truction. | governar | d building | of the mat nts of ene ng manage | : | lologies fo | itruction n ice; and v) ning for its | tions in th | ssional as | norms an | 1 200 | | 600 | 1 200 | 1 200 | icula of all these new |
| OFF OF | GEF cc | GF 73 | GEF in: | (t | GEF cc | , Q | GEF in | N SE | ice (inclu | supervis | erials and rgy efficie | | rassessing | orms; iv) presenta s use. | e practica | sociation | d standar efficiency | GEF | | GEF | GEF | GEF | key Bela |
| (translation) | consultants | consultants | 71200 - international consultants | (translation) | consultants | consultants | international | with other | ding the role | ion in order | s and equipment efficient design in nt. | | ing | available ation of the | ircy al design | s are trained | ds are y and | 71300 - local consultants | companies | 72100 - contract. serv. | 71300 - local consultants | 71300 - local consultants | .y included into the curricula of all key Belarusian े students have passed these new courses by the end of |
| | | | | | N 2 | . 0 | 0) [| Project Manager | Project Manager | | Project Manager | | Project Manager | Project Manager | | | Project Manager | | | | | | Project Manager |
| | | | At least 2 study tours for 5 Belarusian specialists each conducted in EU countries and short reports with recommendations prepared. Deadline - Oct 31, 2013 | | 2013 | approved by the UNDP and EE Department. Deadline - June 30, | Description of selected events, ToRs for short-term assignments and financial support documents prepared by the PMU and | 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 | action plans approved (see activity 2.1.2) | The Output is to be implemented in 2014-2016 pursuant to the | The Output is to be implemented in 2014-2016 pursuant to the action plans approved (see activity 2.1.2) | action plans approved (see activity 2.1.2) | The Output is to be implemented in 2014-2016 pursuant to the | | action plans approved (see activity 2.1.2) | The Output is to be implemented in 2014-2016 pursuant to the | The Output is to be implemented in 2014-2016 pursuant to the Project Manager action plans approved (see activity 2.1.2) | selected relevant universities submitted to and approved by the EE Department. Deadline - Dec 31 2013 | Porommondations and T.D. St | - Nov 15, 2013 | At least 15 representatives of stakeholders attended the round table and a respective minute with recommendations prepared. Deadline | A report on the results of critical analysis of curricula submitted to and approved by the EE Department and published online. Deadline - Oct 31, 2013 | Recommendations and draft ToRs for updating and adjusting curricula of selected relevant universities approved by universities and adopted by the EE Department. |

| | | | | i de | | | | ν 1 | | | | | - | | 3.1.2 | | | | | | | | | ω - | | | 3.1 | | | | 2.8.4 | | | | | 7.0.3 |
|-----------------|---------|----------------|-------------------------|---|---|---|--|---|-----------------|----------------|-----------------------------|--|--|--|---|-----------|---------|----------------|---------------|--|---|--|--|---|---|--|--|---|------------------|---|---|---------------------------------|-------------|------------------------------|--------------------------------------|---|
| | | | ii die baseiile design. | comfort conditions and customer properties stipulated | area along with keeping the same or even improved | with minimal possible energy consumption per unit | activity 3.12 and choose the most feasible and cost- | Provide least-cost analysis of the options suggested in | | | recimonyles and approaches. | account applicable energy efficiency improvement | performance building design principles and taking into | parameters, other technical and design solutions for the selected demonstrate based on integrated energy | dased of the results of activity 3.1.1 above, suggest and justify applicable building space-and-planning | | | 8 | | along with customer properties expected. | water consumption, and HVAC system requirements | number of flats and tenants, energy, heat and hot | and engineering characteristics of potential | Carry out respective studies of baseline architecture | | and taking into account new technologies and approaches for meeting the HVAC needs of those buildings in a most energy and cost efficient way. | Finalized background studies for and design of the selected demo buildings by applying integrated building design principles | Outcome 3: Demonstrated energy a | Outcome 2 total: | visits to similar UNDP projects. | Provide support for Belarusian specialists and decision- | | | | at least three international events. | specialists and decision-makers in their participation in |
| | | | | | | | | | | | | | | | | | л. | 9 | | | O C | | 9 | | | aches for meeti | selected demo b | and cost-saving | 0 0 | | | 5 | | | | |
| 5 | | | | | ŭ | | 9 | | 5 | | | | 5 | | | | 7 000 | 987 | 1 | | 640 | | 9 000 | | | ing the HV. | uildings b | g potentia | 9 880 1 | | | 280 5 | 1 120 | 240 | | 1 000 |
| 5 000 | | 987 | | 240 | 5 640 | | 9 000 | | 5 000 | 987 | 7+0 | 240 | 5 640 | | 12 000 | | | | | | | | | | | AC needs | y applying | of new e | 19 650 3 | | | 280 | 1 120 | 240 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | of those b | integrate | energy efi | - | 4 146 | 1 200 | 5 280 | 1 120 | 240 | | |
| 5 000 | | 987 | | 240 | 5 640 | | 9 000 | | 5 000 | 987 | 044 | 340 | 5 640 | | 12 000 | 000 | ¥ 000 | 987 | 047 | 3 | 5 640 | | 9 000 | | | uildings ir | building | iciency n | 61 126 | 4 146 | 1 200 | 15 840 | 3 360 | 720 | } | 1 000 |
| GEF co | | GEF 7 | | GEE C | GEF o | | GEF in | 7.00 | GEF C | GEF 7 | (t) | | GEF ' | 1 Q | GEF in | 100 | GEE 7 | GEF 7 | | CEE 7 | GET C | | GEF in | 7 | | ı a most | design p | neasure | - | 7 1 1 1 1 1 1 | GEF 7 | GEF 7 | GEF o | GEF 0 | | GEF in |
| contract. serv. | 72100 - | 71600 - travel | (translation) | 71300 - local | consultants | 71300 - local | international | companies | contract, serv. | 71600 - travel | (translation) | 71300 - local | consultants | consultants | 71200 - international | companies | 72100 - | 71600 - travel | (translation) | 71300 - local | consultants | consultants 71300 - local | international | 71200 - | | energy and | orinciples | s in at least | 200 | 71600 - fravel | 71300 - local | (translation) 71600 - travel | consultants | consultants 71300 - local | consuitants 71300 - local | international |
| | | | | | | | | | | | | | | | | | | | | | | | | | Project wanager | | | three new res | | | | | | | | |
| | | | | | | and adopted by the EE Department. Deadline - Aug 31, 2013 | selected options prepared, examined and approved by developers | A south of loost post posts in and south of south | | | | | 2013 | the EE Department for demonstration buildings. Deadline - July 31, | Design and technical solutions for different energy efficient options prepared, examined and approved by developers and adopted by | | | | | | | approved by developers and adopted by the EE Department. [Deadline - June 30, 2013] | of potential constructions at the demo sites, examined and | Department A report proported on architecture and engineering characteristic | ger sites along with schedules for different measures, activities and events approved by developers and adopted by the EE | | A relevant part of construction documents for energy efficiency | Outcome 3: Demonstrated energy and cost-saving potential of new energy efficiency measures in at least three new residential buildings in two Belarusian cities | | UNDP projects Our projects | At least 3 Belarusian specialists and decision-makers took part in at | | | | | part in at least three relevant international events. During the year |

| | 3.5 | į | 2 6 | | 3 | | | 3.1.7 | | | | 3 1 6 | | | | | | 3.1.5 | | _ | | | 8 |
|------------------|--|---|---|---|---|--|---|-----------|---|--|---|--|-------------------------------|--------------------|---|--|--|---|---------|--------------------|---|-------------------------------------|--|
| Outcome 3 total: | 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. | savings and GHG emission reduction from each building as a whole and from each specific energy efficiency measure and appliance tested. | procuring, installing and testing the new energy efficient materials, construction techniques and appliances. A monitoring report on the construction of the demonstration buildings documenting the experiences and lessons learnt from | the proposed or adopted quality standards and guidelines. | Finalized construction of the dome buildings business | along with schedules for different measures, activities and events in 2014-2016. | | | three residential buildings chosen, coordinate and complete a relevant part of construction documents | energy efficiency improvement of at least two of the | | Based on the results of activities 3.1.3.1.5 | | | | equipment manufacturers and suppliers. | | Based on the preliminary design of measures for | | | | as a result of activity 3,1,3. | |
| 0 20 867 105 601 | ganized for local architects, design to promote the solutions adoptors | e demonstration buildings docur ding as a whole and from each s | instration buildings documenting sient materials, construction tech | elines. | | | | 20000 | | | | | 5 000 | | | | | 2000 | | 987 | 240 | 5 640 | 9 000 |
| 68 641 | gners, builde ed for the de | menting the a | the experient | Il installation | 5 000 | 987 | 5 400 | 90 000 | | 987 | 5 640 | | 5 000 | 987 | 240 | 5 400 | 9 0000 | | | | | | |
| 195 109 | rs and ot | actual ene Jy efficien | nces and i appliance | are mad | 5 000 | 987 | 5 400 | 50 000 | } | 987 | 5 640 | | 10 000 | 987 | 240 | 5 400 | 9 000 | 20 000 | ľ | 987 | 240 | 5 640 | 9 000 |
| | her decision makers, on projects in | rgy and financial cy measure and | lessons learnt from s. | e in accordance with | GEF contract, serv companies | GEF 71600 - travel | GEF 71300 - local consultants | companies | 1 | GEF 71600 - travel | GEF 71300 - local consultants | companies | 72100 - GEF contract. serv | GEF 71600 - travel | 71300 - local GEF consultants (translation) | GEF 71300 - local consultants | 71200 - GEF international consultants | GEF contract, serv companies | 72100 - | GEF 71600 - travel | 71300 - local GEF consultants (translation) | GEF 71300 - local consultants | 71200 - GEF international consultants |
| | Project Manager | Project Manager | Project Manager | Project Manage | < | 9 | | V | | <u>o_</u> | | | .2 | el | <u>.</u> | <u>a</u> | | 2 | | /el | <u> </u> | <u> </u> | |
| | The Output is to be implemented in 2014-2016 pursuant to the Project Manager action plans approved (see activity 3.1.7) | The Output is to be implemented in 2014-2016 pursuant to the action plans approved (see activity 3.1.7) | The Output is to be implemented in 2014-2016 pursuant to the Project Manager action plans approved (see activity 3.1.7) | The Output is to be implemented in 2014-2016 pursuant to the Project Manager action plans approved (see activity 3.1.7) | | 1000 | An action plan as well as respective schedules and activities for 2014-2016 adopted by the EE Department. Deadline - Dec 31, 2013 | | 31, 2013 | submitted to a developer and the EE Department. Deadline - Dec | A relevant part of construction documents for energy efficiency improvement in at least two of the selected buildings completed and | | | | | - Permissing Control, 2010 | A report containing specifications for the equipment and installations and list of potential equipment manufacturers and suppliers prepared and submitted to developers and the EE Department Department of 24 24 2642 | | | | | Department. Deadline - Sep 30, 2013 | 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 |

| 0 | 4.6 | 4.5 | 4.4 | .4. | 4.3 | 4.2 | | | 4.1.5 | 1, | | 4 1 3 | | 4.1.2 | 4.1.1 | 4.1 |
|---|--|--|--|--|---|---|------------------------|--|--|--|---|--|---------------------------|--|---|--|
| origanize an international semiliar (or a separate conference session) 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. | 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. | Energy-efficiency aspects integrated into the regional and local plans for territorial development being developed by the Institute of Urban and Regional Planning (IRUP). | 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. | Conduct a critical analysis of the existing national institutional system and procedures for monitoring, reporting and verification of the energy savings and GHG emission reductions in the construction sector. | 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. | Agreed methodology and sustainable institutional arrangements for annual market monitoring keeping track on bu constructed each year as well as the sale of key building materials, accessories and appliances together with their performance characteristics. | | "Energy Marathon" Republican Contests. | In cooperation with the Ministry of Education and the EE Department, provide informational supports to the | etc. for general public about the best practices concerning energy efficient management of households. | Despect and withink bond boats bonders brooking | Prepare and publish hand-books, leaflets, brochures, etc. for professionals about the best practices concerning energy audit in residential sector. | residential buildings. | Prepare and publish hand-books, leaflets, brochures, etc. for professionals about the best practices concerning energy efficiency improvement in | Organize and carry out an ongoing information campaign (interviews, press-releases, etc.) about the Project activities. | 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. |
| 6000 3 | residential sector held in Belarus, incl DP/GEF building energy-efficiency pro | al and local plans for territorial develo | ng the required funding for its implemend including a mechanism for using the street the national level. | ω | responsibility to monitor the energy s agreed procedures and interagency ag | rrangements for annual market monito Iding materials, accessories and appli | 330 | 1 500 | 360 | ω 4 | 3 130 | 1 200 | 3 150 | 1 200 | 600 | materials and completed nation-wide ares in new buildings, including econon DP visibility requirements. |
| 5 300 5 300 GEF international consultants 71300 - local consultants 980 GEF 71600 - travel 72100 - 3 500 6 200 GEF contract, serv. | a field visit to the p | pment being developed by the Institu | entation) for promoting larger numbe he audit results for elaboration of the | 3 000 3 000 GEF 71300 - local | savings and CO2 emission reductions greements for compiling the required | oring keeping track on buildings iances together with their energy | 330 GEF 71600 - travel | 1 500 GEF 74200 - audio | 360 GEF 71300 - local consultants | 1 200 1 200 GEF Consultants 72100 - 3 150 3 150 GEF contract serv. | 3 150 GEF contract, services | G EF | 3 150 GEF contract, serv. | | 600 GEF 71300 - local consultants | awareness and information campaign nic, social, health, environmental and |
| | Project Manager | te Project Manager | Project Manager | | Project Manager | Project Manager | <u> </u> | 0 | | ~ ~ | | | × | _ | | PMU PR Expert |
| At least two international seminars on Best Practice in Energy Efficiency Improvement in Residential Buildings" organized and held. Deadline - May, 2013 and the 4th quarter, 2013 | | The Output is to be implemented in 2014-2016 | The Output is to be implemented in 2014-2016 | An analytical report concerning the existing national institutional system and procedures for monitoring, reporting and verification of the energy savings and GHG emission reductions in the construction sector along with respective recommendations submitted to and approved by the EE Department and the UNFCCC National Focal Point. Deadline - Nov 30, 2013. | | The Output is to be implemented in 2014-2016 | | | At least one "Energy Marathon" Republican Contest supported and conducted. During the year. | At least one printed material for general public about the best practices concerning energy efficient management of households. During the year. | | At least one printed material for professionals about the best practices concerning energy audit in residential sector prepared and issued. During the year. | | At least one printed material for professionals about the best practices concerning energy efficiency improvement in residential buildings prepared and issued. During the year. | At least five interviews and press-releases provided. During the year. | At least five interviews and press-releases along three printed materials provided for specialists a During the year. |

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|---|--|---|---|---|---|---|--|---|---|---|--|---|--|--------------------------------------|---|
| | 4.9.2 Compile and present an inception stage report describing the new baseline situation and proving a respective adjustment of intervention approaches of the Project suggested in the Project Document. | of residential buildings, and comparing them with the baseline described in the Project Document. | arrangements, renewable energy applications, heat supply and distribution schemes and other technical | Implement inception stage study by means of collecting and analyzing current actual baseline data on legal and institutional framework, technical standards, construction techniques, materials, design | 4.9 Final project report consolidating the results and and recommendations for the required next steps | 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, on this basis, draft a 2013 report on market monitoring for new residential building construction with the emphasis on energy efficiency and GHG emission aspects. | | | 4723 Launch the Project Website | Develop the Projec | 4.7.2.1 Prepare the Project Website's infological architecture and design of the user interface, and develop its HTML version. | Dev | 4.7.1 Prepare a LoR for the Project Website development including requirements for organizational arrangements (domain, host, provider) and legal provisions for linking to the Energy Efficiency Platform | 8,4 | |
| 1 320 360 | ort oving a 5 000 ches of . | with the | s, heat 2 640 schnical 2 640 | of ine data 7 000 al s, design | ults and lesson learnt from the impleme xt steps. | nd ential tion 113 report dding ficiency | v building construction with the empha | 540 | ect Website, 1 200 | ype version. 2 400 | nitecture and 1920 1920 | | lopment egal y Platform. | link to an Expanded Energy Platform. | 250 |
| 1 320 GEF 71300 - local consultants 71300 - local consultants 360 GEF consultants (translation) | 71200 - 5 000 GEF international consultants | 987 GEF 71600 - travel | 2 640 GEF 71300 - local consultants | 71200 - 7 000 GEF international consultants | Final project report consolidating the results and lesson learnt from the implementation of the proposed project components and recommendations for the required next steps. | 3 000 3 000 GEF 71300 - local consultants | | 72100 - 72100 - GEF contract, serv. companies | 1 200 GEF | 2 400 GEF 71300 - local consultants | 1 920 GEF 71300 - local consultants | | 2 400 GEF 71300 - local consultants | | 71300 - local 210 420 GEF consultants (translation) 500 750 GEF & video prod. |
| ocal ts ts ts ts ts ts ts ts | An inception report prepared and approved by the EE Department. Deadline - May 15, 2013 | avel | ocal ts | A report on the baseline situation in the field of energy efficiency improvements in residential buildings prepared and adopted by the EE Department. Deadline - April 30, 2013 | The inception report prepared and discussed, and recommendations for adjustments of respective interventions. Project Manager of the Project approved by stakeholders and incorporated into the Project implementation strategy and adaptive approaches. | A report on the energy efficiency building construction market monitoring for 2013 prepared and approved by the EE Department. Deadline - Dec 31, 2013 Its | Project Manager report for 2013 prepared | SETV. | The Project Website launched. Deadline - Aug 31, 2013 | Ocal A prototype version prepared and approved by the EE Department. The Deadline - July 31, 2013 | An HTML version prepared. Deadline - June 30, 2013 | The Project Website developed and launched. Deadline - Aug 31, 2013 | The ToR prepared and approved by the EE Department. Deadline May 31, 2013 its | PMU PR Expert Efficiency Platform | d. iii su |

| 4.9.3 Organize an Inception Seminar to present and discuss the Inception Stage Report describing the new baseline situation and proving a respective adjustment of intervention approaches of the Project suggested in the Project Document. PM1 Project monitoring and reporting. PM2 Project management and project office functioning. | 777 | | | | | | 1111 | | A STATE OF THE PARTY OF THE PAR |
|---|--|--------|---------|--|---------|----------|-----------------------------------|---------------------|--|
| | r to present and discuss | | | | | | | | A Semilian Digamized and red to discuss and adopt the morphost |
| | scribing the new | | 9 | | | 2 300 | GEF international | | Report. Deadline - May 31, 2013 |
| | a respective adjustment | | | | | | consultants | | |
| | he Project suggested in | | 800 | | | 900 | GEF 71300 - local | | |
| | 15 | | | | | | _ | | |
| | | | 2 965 | | | 2 965 | GEF 71600 - travel | <u> </u> | |
| | | | | | | | 72100 - | | |
| | | | 4 000 | | | 4 000 | GEF contract. serv. | > | |
| | | | | | | | companies | | |
| | | | | | | | 71300 - local | = | |
| | | | 210 | | | 210 | GEF consultants (translation) | | |
| | BINDING STATE OF THE PERSON OF | c | 40.652 | 42.440 | 24 440 | 75 532 | luan signal | | |
| | | | 40 052 | 0 | 720 | 7000 | one services on the | Pode | |
| PM1 Project monitoring and reporting PM2 Project management and project | | | ETT | Effective project | | ement at | management and morntoring ensured | nam | ceilleand that are it is |
| | .g. | | | T | | | 72100 - | | At least two Project Steering Committee meetings held. Deadline - May 31 and Dec 31, 2013 |
| | | | 500 | | 200 | 1 000 | UNDP contract. serv. | nv. Project Manager | Project Manager All project reports submitted and approved in due time. Deadline - |
| | | | | | | | companies | | July 15, 2013 (for semiannual report to the Ministry of Economy) and Dec 15, 2013 (for APR/PIR and Loas) |
| | | | | N. N. S. | | | 74000 | | Design office successfully operated Project plan successfully |
| | ect office functioning. | 250 | 1 500 | 1 250 | 1 250 | 4 250 | 71300 - local consultants | | fulfilled. Throughout the Project |
| | 7.00 | | | | | | 71400 - | | 57 |
| | | 11 140 | 14 245 | 17 290 | 17 290 | 59 965 | UNDP contract. serv. | | * |
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| | | 3 000 | | | | 2000 | | | |
| | 40. | | | | | | | Project Manager | |
| | | 200 | 200 | 200 | 200 | 2 000 | UNDP 12100 communicat. | | |
| | | | | | | | 73400 - | 37 | |
| | | 250 | 250 | 250 | 250 | 1 000 | UNDP equipment | | |
| | | | | | | | services | | |
| | | 009 | 200 | 200 | 200 | 1 200 | UNDP (Z500 - | | |
| | | 001 | 003 | 7 | 1 500 | 000 | 73100 - | | |
| | | 200 | 000 | 200 | 36 | | utilities | | |
| | | 300 | 300 | 300 | 300 | 1 200 | GEF 74500 - | | |
| | | | 2000 | 007.70 | 201 700 | 277 | | | |
| Project management total: | | 19 540 | 19 695 | | 21 /80 | 616 78 | | | |
| | Total 2013. | 19 540 | 129 574 | 226 981 | 793 967 | 600 062 | | | |

Project Manger

Programme Analyst