

**ANNUAL WORK PLAN**

UNDP/GEF Full-Sized Project "Improving Energy Efficiency in Residential Buildings in Turkmenistan"

Period: 01.01.2014 - 31.12.2014

Budget: 659,716 USD

Source of financing: GEF/UNDP

EXPECTED INTERIM OUTPUTS <i>Including baseline data and annual indicators.</i>	Connection with SP	PLANNED ACTIVITIES <i>Activity results and associated actions</i>	TIME FRAME				RESPONSIBLE PARTIES	PLANNED BUDGET		
			1 Q	2 Q	3 Q	4 Q		Budget description (including budget code)	Amount (USD)	
<p><b>Output 1.2</b> More stringent requirements for energy performance in buildings are adopted and supporting capacity for building code enforcement is strengthened</p> <p><b>Indicator 1:</b> Revised national codes (SNT) "Residential Buildings" and "Roofs and Roofing" adopted and confirmed in 2014.</p> <p>The SNT «Building Thermal Engineering» and «Building Climatology» revised by the end of 2014.</p> <p>New codes and regulations require consumption of heat energy at Level 2 or lower than Level 2 for all buildings (from 5 to 10 percent less than Level 2 for elite residential buildings); Level 1 is no longer applicable.</p> <p>By the end of the project period, new and renovated buildings of the U-148 series consume 21.2 kWh/m<sup>2</sup> per year.</p>	1.5.2	<p><b>1.2.2:</b> Development of new building codes on thermal performance of buildings, including [whole-building] requirements for energy efficiency, as well as associated calculation methodology.</p> <p>- Signing of a Protocol/Agreement on development of new building codes of Turkmenistan and methodological instructions for the new SNT with the Ministry of Construction.</p> <p>- Confirmation of new edition of SNT "«Residential Buildings» and SNT "Roofs and Roofing".</p> <p>Revision of SNT "Building Thermal Engineering" and SNT "Building Climatology"</p> <p>- Determination of the organization that will develop the SNT ["organizational developer"].</p> <p>- Preparation of Terms of Reference for revision of the SNTs.</p> <p>- Conclusion of a contract with the organization responsible for the revision of the SNTs.</p> <p>- Development of a preliminary plan and contents of the SNTs under revision.</p> <p>- Collection and analysis of necessary input information.</p> <p>- Development of a draft of the revised SNT "Building Thermal Engineering" and SNT "Building Climatology".</p> <p>- Discussion of the draft of the revised SNT "Building Thermal Engineering" and SNT "Building Climatology".</p> <p>- Receipt of notes and comments on the revised SNT.</p> <p>- Finalization of the draft document of the SNT, taking account of notes and comments.</p> <p>- Printing of news-letters on the revised SNTs.</p> <p>- Объявление динамной версии подготовленных СНТ «Строительная терминология» и СНТ «Строительная климатология».</p> <p>Development of national standards of Turkmenistan and their introduction into the register of state construction standards (GOSTS)</p>	<p><b>Outcome 1:</b></p> <p><i>Energy consumption in new buildings is reduced relative to existing requirements.</i></p>					M. Bayramov (building code expert), Ministry of Construction, I. Atamuradova (Component Manager, UNDP)		
								Ministry of Construction		
								M. Bayramov (building code expert), Ministry of Construction, I. Atamuradova (Component Manager, UNDP)		
								Ministry of Construction		
								M. Bayramov (building code expert), Ministry of Construction, I. Atamuradova (Component Manager, UNDP)	71200-International Consultant	10,500
									72100-Contracted services	50,000
									72400-Communications, Internet	1,500
									74200-Printing and publications	1,000
									74500-Miscellaneous	500
									75700-Training, Seminars	4,000
					<b>GEF Total</b>	<b>86,500</b>				
					71200-International Consultant	10,500				
					71400-Individual contracts	19,000				
					72100-Contracted services	50,000				
					72400-Communications, Internet	1,500				
					74200-Printing and publications	1,000				
					74500-Miscellaneous	500				
					75700-Training, Seminars	4,000				
					72100-Contracted services	50,000				
					75700-Training, Seminars	2,000				
					74200-Printing and publications	1,000				
					75700-Training, Seminars	2,000				

		<ul style="list-style-type: none"> <li>- Study and preparation of recommendations on the development of national standards on energy conservation.</li> <li>- Promotion of development and implementation of national standards on energy conservation in the register of GOSTs.</li> </ul>	
<p><b>Output 1.3</b> Energy Passport system and other policy instruments developed to promote and enforce energy efficient construction</p>		<p><b>1.3.1: Development of conditions for energy passports and classification of new and renovated buildings, as well as technical methodologies for calculation and assignment of energy-efficiency ratings.</b></p> <p><i>Activities will be carried out within the framework of revision of SNТ «Building Thermal Engineering» - Output 1.2</i></p> <ul style="list-style-type: none"> <li>- Development of technical methodology for classification of residential buildings with regard to energy consumption</li> <li>- Finalization of a model energy passport together with drafts of revised SNТ.</li> <li>- Development of conditions for completion [filling in] of energy passports for new and renovated buildings.</li> <li>- Development of a rating system for buildings with regard to energy consumption.</li> </ul>	<p>M. Bayramov (building code expert), Ministry of Construction</p>
<p><b>Indicator 1: Energy Passport system developed in accordance with revised building codes.</b></p> <p><b>Indicator 2: Recommendations and developed for implementation of system of labeling of buildings.</b></p>	1.5.2	<p><b>1.5.2 Development of recommendations on application of a labeling system for new, renovated, and existing residential buildings.</b></p> <ul style="list-style-type: none"> <li>- Preparation of recommendations on application of a labeling system for new and renovated or existing buildings.</li> </ul> <p><b>1.4.1: Development and support for adoption and publication of an official guidance manual for architects and construction engineers on implementation of new energy-efficient building codes.</b></p> <p><i>Development of manuals for SNТ «Residential Buildings» and «Roofs and Roofing»</i></p> <ul style="list-style-type: none"> <li>- Agreement on a final edition of these documents with the Scientific-Technical Council of the Ministry of Construction</li> <li>- Delivery of drafts of these manuals for confirmation in the Ministry of Construction</li> </ul> <p>- Confirmation of the manuals for SNТ "Residential Buildings" and "Roofs and Roofing"</p>	<p>M. Bayramov (building code expert), Mark Chao (CTA)</p> <p>M. Bayramov (building code expert), Organizational developer</p> <p>Ministry of Construction</p>
<p><b>Output 1.4</b> New official normative document developed and adopted, providing guidance on energy-efficient design and compliance with revised building codes, as well as design of buildings that exceed code requirements.</p> <p><b>Indicator 1: Manuals for SNТ «Residential Buildings» and «Roofs and Roofing» adopted and confirmed.</b></p>	1.5.2	<p><b>1.4.1: Development and support for adoption and publication of an official guidance manual for architects and construction engineers on implementation of new energy-efficient building codes.</b></p> <p><i>Development of manuals for SNТ «Residential Buildings» and «Roofs and Roofing»</i></p> <ul style="list-style-type: none"> <li>- Agreement on a final edition of these documents with the Scientific-Technical Council of the Ministry of Construction</li> <li>- Delivery of drafts of these manuals for confirmation in the Ministry of Construction</li> </ul> <p>- Confirmation of the manuals for SNТ "Residential Buildings" and "Roofs and Roofing"</p>	<p>M. Bayramov (building code expert), Organizational developer</p> <p>Ministry of Construction</p>
<p><b>EXPECTED INTERIM OUTPUTS</b></p> <p><i>Including baseline data and annual indicators.</i></p>	1.5.2	<p><b>Outcome 2:</b></p> <p><i>Turkmen gas and other national agencies understand the potential for energy conservation in the building sector and have the knowledge and capacity for determining necessary investment to be made in energy efficiency in buildings.</i></p> <p><b>Outcome 2:</b></p> <p><i>Turkmen gas and other national agencies understand the potential for energy conservation in the building sector and have the knowledge and capacity for determining necessary investment to be made in energy efficiency in buildings.</i></p>	<p>71200-International Consultant 10,000</p> <p>71400-Individual contracts 22,000</p> <p>71600-Travel 10,000</p> <p>72100- Contracted services 50,000</p> <p>72200-Equipment 40,000</p> <p>72400-Communications, Internet 1,500</p> <p>74200-Printing and publications 1,000</p> <p>74500-Miscellaneous 500</p> <p>75700-Training, Seminars 4,000</p> <p><b>GEF Total 139,000</b></p>
<p><b>Output 2.1</b> Analysis conducted on the most feasible ways to reduce energy consumption in the residential building stock.</p> <p><b>Indicator 1: Energy audit carried</b></p>	1.5.2	<p><b>2.1.1: Preparation of multidimensional research on the potential for energy efficiency in existing buildings.</b></p> <p><i>Energy audits of selected residential buildings in the cities of Turkmenistan</i></p> <ul style="list-style-type: none"> <li>- Signing of a Protocol/Agreement with ten Ministry of Communal Services on the completion of energy audits and renovation of pilot buildings and development of an investment plan.</li> </ul>	<p>A. Zornov (energy audit expert), Ministry of Communal Services, I. Atamuradova (Component Manager, UNDP)</p>
		<p><b>PLANNED ACTIVITIES</b></p> <p><i>Activity results and associated actions</i></p>	<p><b>PLANNED BUDGET</b></p> <p>Budget description (including budget code)</p> <p>Amount (USD)</p>

<p>out for 22 buildings in cities of Turkmenistan conducted. Documentation of results and recommendations completed.</p> <p>Indicator 2: Monitoring and assessment of energy consumption in 6 selected buildings after initial auditing of energy consumption in 2012.</p>		<ul style="list-style-type: none"> <li>- Selection of 22 buildings in cities of Turkmenistan and their approval for undergoing energy audits.</li> <li>- Procurement of equipment for conduction of energy audits.</li> <li>- Preparation of Terms of Reference for conducting energy audits.</li> <li>- Determination of the organization responsible for implementation of energy audits ("executing organization").</li> <li>- Collection of energy-related information and assessment of energy consumption in selected buildings.</li> <li>- Definition of measures for reduction of energy consumption in buildings being audited.</li> <li>- Determination of the potential for cost-effective reduction of energy consumption on the whole in the residential building stock of Turkmenistan.</li> <li>- Preparation and presentation of a report on obtained results to interested ministries and agencies for review and issuance of notes and recommendations.</li> <li>- Finalization of the report, taking account of received notes and recommendations.</li> <li>- Presentation of a final version of the report to interested ministries and agencies for their information.</li> <li>- Oversight over energy consumption in 6 existing residential buildings, equipped with devices for measurement of building-level energy consumption.</li> </ul>													
<p>Output 2.2 Responsible staff are trained in energy management and determination of energy conservation in the residential sector</p> <p>Indicator 1: Recommendations and methodologies on monitoring of energy consumption and energy management developed and presented to interested parties.</p> <p>Indicator 2: At least 30 professionals, including staff of Turkmengas, trained in the methodology of monitoring energy consumption.</p> <p>Indicator 3: Results of energy audits and energy management published on the project's website.</p>	<p>1.4.2</p> <p>1.5.2</p>	<p><b>2.1: Development of recommendations on a system of energy management and monitoring of energy consumption in existing residential buildings.</b></p> <p><b>2.1.1: Development of recommendations on a system of energy management and monitoring of energy consumption in existing residential buildings.</b></p> <ul style="list-style-type: none"> <li>- Oversight over energy consumption in 6 existing residential buildings, equipped with devices for measurement of building-level energy consumption.</li> <li>- Study and analysis of data and information on the pilot complex of buildings.</li> <li>- Development of an energy management plan for the complex of buildings.</li> <li>- Discussion of the energy management plan with national partners.</li> <li>- Development of general recommendations to plan and implement the energy-management</li> <li>- Discussion of the general energy management plan with national partners.</li> <li>- Preparation of the report and recommendations to plan and implement energy-management for existing residential buildings of Turkmenistan.</li> <li>- Discussion of the general energy management plan with national partners.</li> </ul> <p><b>2.2: Correction and confirmation of the methodology of energy audit.</b></p> <ul style="list-style-type: none"> <li>- Correction of the methodology on energy audit, with addition of a section on cooling.</li> <li>- Presentation of methodology on energy audit to interested organizations for review and agreement.</li> <li>- Finalization and confirmation of methodology on energy audit, taking account of notes from interested organizations and sent for confirmation.</li> <li>- Dissemination among interested agencies of final version of methodology for energy audit and publication of this methodology on a page of the project's website.</li> </ul> <p><b>2.2.3: Delivery of training seminars on energy management and energy audit for interested parties.</b></p> <ul style="list-style-type: none"> <li>- Preparation of training materials on energy audit, and delivery of training seminar.</li> <li>- Preparation of training materials on energy management, and delivery of training seminar.</li> </ul> <p><b>2.2.4: Preparation of training materials on energy audit, as well as of results of lessons learned after energy audits and activities on energy management.</b></p> <ul style="list-style-type: none"> <li>- Summarizing and publication of materials on energy audit, including results and lessons learned, summarized and published on a page of the project's website and news-letters.</li> </ul>													
		<ul style="list-style-type: none"> <li>- Finalization and confirmation of methodology on energy audit, taking account of notes from interested organizations and sent for confirmation.</li> <li>- Dissemination among interested agencies of final version of methodology for energy audit and publication of this methodology on a page of the project's website.</li> </ul> <p><b>2.2.3: Delivery of training seminars on energy management and energy audit for interested parties.</b></p> <ul style="list-style-type: none"> <li>- Preparation of training materials on energy audit, and delivery of training seminar.</li> <li>- Preparation of training materials on energy management, and delivery of training seminar.</li> </ul> <p><b>2.2.4: Preparation of training materials on energy audit, as well as of results of lessons learned after energy audits and activities on energy management.</b></p> <ul style="list-style-type: none"> <li>- Summarizing and publication of materials on energy audit, including results and lessons learned, summarized and published on a page of the project's website and news-letters.</li> </ul>													
		<ul style="list-style-type: none"> <li>- Preparation of training materials on energy audit, and delivery of training seminar.</li> <li>- Preparation of training materials on energy management, and delivery of training seminar.</li> </ul> <p><b>2.2.4: Preparation of training materials on energy audit, as well as of results of lessons learned after energy audits and activities on energy management.</b></p> <ul style="list-style-type: none"> <li>- Summarizing and publication of materials on energy audit, including results and lessons learned, summarized and published on a page of the project's website and news-letters.</li> </ul>													
		<ul style="list-style-type: none"> <li>- Summarizing and publication of materials on energy audit, including results and lessons learned, summarized and published on a page of the project's website and news-letters.</li> </ul>													

		<ul style="list-style-type: none"> <li>- Summarizing and publication of materials on energy management, including results and lessons learned, summarized and published on a page of the project's website and news-letters.</li> <li>2.2.5: Development of an investment plan on energy efficiency in the residential building stock (construction, reconstruction)</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment of an investment plan for the residential building stock according to the results of energy audits</li> <li>- Terms of Reference for an international consultant on economic assessment developed, and approval obtained.</li> <li>- International consultant on economic assessment contracted.</li> <li>- Carrying out of consultations with national stakeholders on development of investment plan.</li> <li>- Development of investment plan outline.</li> </ul>	<ul style="list-style-type: none"> <li>- Manager, UNDP</li> <li>- I. Aamuradova (Component Manager, UNDP), Mark Chao (CTA)</li> <li>- I. Aamuradova (Component Manager, UNDP)</li> <li>- M. Bayramov (building code expert), IC on economic assessment</li> </ul>	<ul style="list-style-type: none"> <li>- 74200-Printing and publications 500</li> <li>- 71200-International Consultant 10,000</li> <li>- 71200-International Consultant</li> <li>- 71200-International Consultant 14,000</li> <li>- 71400-Individual contracts 22,000</li> <li>- 71600-Travel 10,000</li> <li>- 72100- Contracted services 200,000</li> <li>- 72400-Communications, Internet 1,500</li> <li>- 74200-Printing and publications 1,000</li> <li>- 74500-Miscellaneous 500</li> <li>- 75700-Training, Seminars 4,000</li> <li>- GEF Total 253,000</li> </ul>
<p><b>EXPECTED INTERIM OUTPUTS</b></p> <p>Including baseline data and annual indicators.</p>	<p>Connection with SP</p>	<p><b>PLANNED ACTIVITIES</b></p> <p>Activity results and associated actions</p>	<p>TIME FRAME</p> <p>1 Q 2 Q 3 Q 4 Q</p>	<p>RESPONSIBLE PARTIES</p> <p>A. Zornov (energy audit expert)</p>	<p>Budget description (including description and budget code)</p> <p>Amount (USD)</p>
<p>Output 3.1: Three new multifamily residential buildings with significantly improved energy characteristics designed and built</p>		<p>3.1.2: Calculation of energy consumption base line for pilot residential buildings.</p> <ul style="list-style-type: none"> <li>- Correction of calculations of baselines for 3 selected pilot buildings, taking account of parameters of heat supply and cooling.</li> </ul> <p>3.1.4: Development of initial design and cost estimation documentation for construction of pilot residential buildings.</p> <p><i>Pilot elite 12-story 114-unit residential building</i></p> <ul style="list-style-type: none"> <li>- Development and agreement on initial design and cost-estimation documentation with the international consultant</li> <li>- Preparation of a separate design and cost estimate of energy-conservation measures of the design.</li> </ul>		<p>M. Akhmedov (construction expert), SC "Turkmen oilgas construction", S. Terekhov (IC on building design)</p> <p>M. Akhmedov (construction expert), SC "Turkmen oilgas construction", I. Aamuradova (Component Manager, UNDP)</p>	<p>71200-International Consultant 14,000</p>
<p>Indicator 1.2: pilot buildings with design energy consumption 15 percent less than required by code and 5 percent less than required by prevailing best practices of elite building construction designed and built by the end of 2014</p>	<p>1.5.2 7.7.3</p>	<p><i>Pilot elite 12-story 114-unit residential building</i></p> <ul style="list-style-type: none"> <li>- Preparation and conclusion of a contract with the contractor «Turkmenneftegazstroj» for implementation of energy-conserving measures.</li> <li>- Signing of Protocol/Agreement with the client Turkmenneftegazstroj on implementation of energy-conservation measures.</li> </ul>		<p>M. Akhmedov (construction expert), SC "Turkmen oilgas construction", S. Terekhov (IC on building design)</p>	<p>72100-Contracted services</p>
<p>Indicator 2: Design of 2 new elite buildings completed (114-unit and 66-unit).</p>		<p><i>Pilot elite 12-story 66-unit residential building</i></p> <ul style="list-style-type: none"> <li>- Completion of development and agreement on initial design and cost-estimation documentation with the international consultant.</li> </ul>		<p>M. Akhmedov (construction expert), SC "Turkmen oilgas construction", S. Terekhov (IC on building design)</p>	
<p>Indicator 3: Construction of a building of the U-148 series and an elite (114-unit) building completed and monitoring begun by the end of 2014.</p> <p>Construction of one 66-unit building begun by the end of 2014.</p>		<p><i>Pilot elite 12-story 66-unit residential building</i></p> <ul style="list-style-type: none"> <li>- Preparation of separate cost-estimation documentation of energy-conservation measures of the design.</li> </ul>		<p>M. Akhmedov (construction expert), SC "Turkmen oilgas construction"</p>	

*Outcome 3: Energy-efficient design and technologies are incorporated and visually demonstrated in new and reconstructed residential buildings.*

<ul style="list-style-type: none"> <li>- Preparation and conclusion of a contract with the contractor – Private company "Dovannat" for implementation of energy-conservation measures.</li> </ul>				M. Akhmedov (construction expert), "Dovannat", I. Alamuradova (Component Manager, UNDP)		72100-Contracted services	
<ul style="list-style-type: none"> <li>- Signing of a Protocol/Agreement with the client Turkmenneftegazstroï on implementation of energy-conservation measures.</li> </ul>				M. Akhmedov (construction expert), SC "Turkmen oil&gas construction", I. Alamuradova (Component Manager, UNDP)			
<p><b>3.1.5: Receiving of permission for construction of the pilot residential buildings.</b></p>							
<p><i>Pilot elite 12-story 114-unit residential building</i></p>				M. Akhmedov (construction expert)			
<ul style="list-style-type: none"> <li>- Support for the process of admission and passage of design documentation through the State Building Plan Inspection Agency (Goskapsperizal).</li> </ul>				M. Akhmedov (construction expert)			
<p><i>Pilot elite 12-story 66-unit residential building</i></p>				M. Akhmedov (construction expert)			
<ul style="list-style-type: none"> <li>- Support for the process of admission and passage of design documentation through the State Building Plan Inspection Agency (Goskapsperizal).</li> </ul>				M. Akhmedov (construction expert)			
<p><i>Typical private house for rural area</i></p>							
<ul style="list-style-type: none"> <li>- Study possibilities to construct energy-efficient typical private house and carrying out of consultations with national partners.</li> </ul>							
<p><b>3.1.6: Construction and oversight over construction of the pilot residential buildings.</b></p>							
<p><i>Pilot 9-story 54-unit building of the U-148 series</i></p>							
<ul style="list-style-type: none"> <li>- Implementation of construction work, in accordance with the timetable of work on energy-conservation measures.</li> </ul>				Department of Construction of the Ashgabat City Administration		72100-Contracted services	70,000
<ul style="list-style-type: none"> <li>- Implementation of oversight over execution of energy-conservation measures, with visits to the construction site 1-2 times per week.</li> </ul>				M. Akhmedov (construction expert)			
<ul style="list-style-type: none"> <li>- Entry into operation of the residential building.</li> </ul>				Department of Construction of the Ashgabat City Administration			
<p><i>Pilot elite 12-story 114-unit residential building</i></p>				SC "Turkmen oil&gas construction"		72100-Contracted services	
<ul style="list-style-type: none"> <li>- Implementation of construction work, in accordance with the timetable of work on energy-conservation measures.</li> </ul>				M. Akhmedov (construction expert)			
<ul style="list-style-type: none"> <li>- Implementation of oversight over execution of energy-conservation measures, with visits to the construction site 1-2 times per week.</li> </ul>				M. Akhmedov (construction expert)			
<ul style="list-style-type: none"> <li>- Entry into operation of the residential building.</li> </ul>				SC "Turkmen oil&gas construction"			
<p><i>Pilot elite 12-story 66-unit residential building</i></p>				Private company "Dovannat"		72100-Contracted services	
<ul style="list-style-type: none"> <li>- Implementation of construction work, in accordance with the timetable of work on energy-conservation measures.</li> </ul>				Private company "Dovannat"			
<ul style="list-style-type: none"> <li>- Implementation of oversight over execution of energy-conservation measures, with visits to the construction site 1-2 times per week.</li> </ul>				M. Akhmedov (construction expert)			
<p><b>3.1.6: Monitoring and assessment of energy consumption in pilot residential buildings.</b></p>							
<p><i>Pilot 9-story 54-unit residential building of the U-148 series</i></p>							
<ul style="list-style-type: none"> <li>- Regular measurement of indices of energy consumption, temperature, solar radiation, etc.</li> </ul>				M. Akhmedov (construction expert), A. Zornov (energy audit expert)			
<p><i>Pilot elite 12-story 114-unit residential building</i></p>							
<ul style="list-style-type: none"> <li>- Regular measurement of indices of energy consumption, temperature, solar radiation, etc.</li> </ul>				M. Akhmedov (construction expert), A. Zornov (energy audit expert)			
<p><b>3.1.9: Continual documentation of the process of design and construction of the 3 pilot residential buildings.</b></p>							
<ul style="list-style-type: none"> <li>- Documentation of important steps of design and construction for each pilot building.</li> </ul>				M. Akhmedov (construction expert)			
<ul style="list-style-type: none"> <li>- Printing of news-letters on demo-buildings for construction.</li> </ul>				M. Akhmedov (construction expert)		74200-Printing and publications	500

<p><b>Output 3.2</b> Multifamily residential buildings are renovated with significantly improved energy-related characteristics</p> <p><b>Indicator 1:</b> Designs of pilot buildings developed for renovation with reduction of energy consumption by at least 44 percent.</p> <p><b>Indicator 2:</b> Renovation of pilot buildings completed and monitoring begun by the end of 2014.</p>		<p>Conduction of the seminar on energy-efficient integrated design of construction.</p> <p><b>3.2.2: Calculation of baseline energy consumption and energy efficiency of 3 residential buildings chosen for reconstruction, using data from energy audits of these buildings.</b></p> <ul style="list-style-type: none"> <li>- Correction of baseline calculations for residential buildings under renovation, taking account of parameters of heat supply and cooling.</li> </ul> <p><b>3.2.3: Development of Terms of Reference for design of energy-efficient renovation of 3 pilot residential buildings.</b></p> <ul style="list-style-type: none"> <li>- Agreement on measures on energy conservation in pilot buildings for renovation.</li> <li>- Official preparation of an order for design of 3 pilot buildings for reconstruction (capital renovation).</li> <li>- Development and signing of a "Task order for design of the reconstruction of three pilot buildings".</li> </ul> <p><b>3.2.4: Development of initial design and cost-estimation documentation for the reconstruction of 3 pilot buildings.</b></p> <ul style="list-style-type: none"> <li>- Signing of a Protocol/Agreement with the client, the Ministry of Communal Services, on implementation of energy-conservation measures (together with Task 2.1.1).</li> <li>- Completion of development and agreement about initial design and cost-estimation documentation with the international consultant.</li> <li>- Preparation of separate cost estimation documentation for energy-conservation measures of designs.</li> <li>- Preparation and conclusion of a contract with the contractor for implementation of energy-conservation measures.</li> </ul> <p><b>3.2.5: Renovation and special technical oversight of implementation of energy-conservation measures for renovation of 3 pilot buildings.</b></p> <ul style="list-style-type: none"> <li>- Implementation of construction work, in accordance with the timetable for work on energy-conservation measures.</li> <li>- Provision of technical oversight over implementation of energy-conservation measures.</li> <li>- Entry into operation of the residential buildings.</li> <li>- Printing of news-letters on demo-buildings for renovation.</li> <li>- Conduction of the seminar on energy-efficient integrated design of renovation.</li> </ul> <p><b>3.2.6: Monitoring and assessment of energy consumption in the pilot residential buildings.</b></p> <ul style="list-style-type: none"> <li>- Regular measurement of indices of energy consumption (as carried out in Task 2.1.2), temperature, solar radiation, etc.</li> </ul>																																																			
	<p>1.5.2 7.7.3</p> <p><b>Outcome 4:</b> Replication of results is carried out by development of typical building designs, and policy development in energy efficiency of buildings.</p>	<table border="1"> <tr> <td>M. Akhmedov (construction expert)</td> <td>75700-Training, Seminars</td> <td>2,000</td> </tr> <tr> <td>A. Zornov (energy audit expert)</td> <td></td> <td></td> </tr> <tr> <td>M. Akhmedov (construction expert), Ministry of Communal Services</td> <td></td> <td></td> </tr> <tr> <td>Ministry of Communal Services</td> <td></td> <td></td> </tr> <tr> <td>M. Akhmedov (construction expert), Ministry of Communal Services</td> <td></td> <td></td> </tr> <tr> <td>M. Akhmedov (construction expert)</td> <td>74200-Printing and publications</td> <td>500</td> </tr> <tr> <td>M. Akhmedov (construction expert)</td> <td>75700-Training, Seminars</td> <td>2,000</td> </tr> <tr> <td>M. Akhmedov (construction expert), A. Zornov (energy audit expert)</td> <td></td> <td></td> </tr> <tr> <td>71200-International Consultant</td> <td></td> <td>37,000</td> </tr> <tr> <td>71400-Individual contracts</td> <td></td> <td>2,000</td> </tr> <tr> <td>71600-Travel</td> <td></td> <td>10,000</td> </tr> <tr> <td>72100-Contracted services</td> <td></td> <td>20,000</td> </tr> <tr> <td>72400-Communications, Internet</td> <td></td> <td>1,500</td> </tr> <tr> <td>74200-Printing and publications</td> <td></td> <td>1,000</td> </tr> <tr> <td>74500-Miscellaneous</td> <td></td> <td>500</td> </tr> <tr> <td>75700-Training, Seminars</td> <td></td> <td>4,000</td> </tr> <tr> <td><b>GEF Total</b></td> <td></td> <td><b>76,000</b></td> </tr> </table>	M. Akhmedov (construction expert)	75700-Training, Seminars	2,000	A. Zornov (energy audit expert)			M. Akhmedov (construction expert), Ministry of Communal Services			Ministry of Communal Services			M. Akhmedov (construction expert), Ministry of Communal Services			M. Akhmedov (construction expert)	74200-Printing and publications	500	M. Akhmedov (construction expert)	75700-Training, Seminars	2,000	M. Akhmedov (construction expert), A. Zornov (energy audit expert)			71200-International Consultant		37,000	71400-Individual contracts		2,000	71600-Travel		10,000	72100-Contracted services		20,000	72400-Communications, Internet		1,500	74200-Printing and publications		1,000	74500-Miscellaneous		500	75700-Training, Seminars		4,000	<b>GEF Total</b>		<b>76,000</b>
M. Akhmedov (construction expert)	75700-Training, Seminars	2,000																																																			
A. Zornov (energy audit expert)																																																					
M. Akhmedov (construction expert), Ministry of Communal Services																																																					
Ministry of Communal Services																																																					
M. Akhmedov (construction expert), Ministry of Communal Services																																																					
M. Akhmedov (construction expert)	74200-Printing and publications	500																																																			
M. Akhmedov (construction expert)	75700-Training, Seminars	2,000																																																			
M. Akhmedov (construction expert), A. Zornov (energy audit expert)																																																					
71200-International Consultant		37,000																																																			
71400-Individual contracts		2,000																																																			
71600-Travel		10,000																																																			
72100-Contracted services		20,000																																																			
72400-Communications, Internet		1,500																																																			
74200-Printing and publications		1,000																																																			
74500-Miscellaneous		500																																																			
75700-Training, Seminars		4,000																																																			
<b>GEF Total</b>		<b>76,000</b>																																																			

EXPECTED INTERIM OUTPUTS Including baseline data and annual indicators.	Connection with SP	PLANNED ACTIVITIES Activity results and associated actions	TIME FRAME				RESPONSIBLE PARTIES	PLANNED BUDGET	
			1 Q	2 Q	3 Q	4 Q		Budget description (including description and budget code)	Amount (USD)
<p><b>Output 4.2</b> Design institutes and large residential construction companies are trained and encouraged to include greater energy efficiency in design of residential buildings.</p> <p><b>Indicator 1:</b> Seminars delivered on energy-efficient construction and renovation of buildings, and on experience of implementation of integrated building design</p> <p><b>Indicator 2:</b> A section entitled «Energy conservation» developed and implemented in typical educational programmes of existing disciplines. Educational materials for the section «Energy Conservation» developed for students by the end of 2014.</p>	1.5.2 7.7.3	<p>4.2.1: Training on energy-efficient construction and renovation of buildings, and on the experience of implementation of integrated building design for architects and/or engineers.</p> <p>- Презентация результатов строительства реконструкции типовых домов</p>						71200-International Consultant	37,000
		<p>4.2.2: Development and implementation of educational plans/programmes for students of the Architectural-Construction Institute</p> <p>- Signing of a Protocol/Agreement with the Architectural-Construction Institute on development and implementation of educational programmes.</p> <p><i>Development and addition of a section entitled "Energy Conservation" into typical educational programmes of existing disciplines</i></p>					A. Zornov (energy audit expert), M. Akhmedov (construction expert), Architectural-Construction Institute		
		<p>- Study of the possibility of adding a section "Energy Conservation" to existing programs of disciplines of 4-5 courses.</p>					A. Zornov (energy audit expert), M. Akhmedov (construction expert), Architectural-Construction Institute		
		<p>- Preparation of Terms of Reference for development of the section "Energy Conservation".</p>					A. Zornov (energy audit expert), M. Akhmedov (construction expert), Architectural-Construction Institute, I. Almuradova (Component Manager, UNDP)	72100-Contracted services	20,000
		<p>- Selection of the Executing organization for development of the section "Energy Conservation"</p>							
		<p>- Development of the section "Energy Conservation" and educational/methodological materials.</p>					A. Zornov (energy audit expert), M. Akhmedov (construction expert), Executing organization		
		<p>- Presentation of revised typical programmes and educational-methodological materials to the educational/methodological council of the Architectural-Construction Institute, the Ministry of Education, and the Ministry of Construction for discussion and commentary.</p>							
		<p>- Finalization of typical programmes and educational/methodological materials, taking into account notes and comments.</p>							
		<p>- Preparation and confirmation of a working programme on the basis of the revised typical programme.</p>					A. Zornov (energy audit expert)	74200-Printing and publications	1,000
		<p>- Printing of news-letters on revised educational programs.</p>					A. Zornov (energy audit expert), M. Akhmedov (construction expert), Architectural-Constructor, Institute		
<p><b>Output 4.3</b> Recommendations of the project are included in strategies and programmes on energy efficiency</p>	1.5.2 7.6.2	<p>4.2.4: Organization of a study tour for specialists for familiarization with best practices in energy management of residential buildings.</p>							
		<p>- Development of Terms of Reference for the study tour.</p>					I. Almuradova (Component Manager, UNDP), Mark Chao (ICTA)		
		<p>- Determination of the executing organization of the study tour.</p>							
		<p>- Determination of the list of participants and receipt of permissions.</p>					I. Almuradova (Component Manager, UNDP)	75700-Training, Seminars	4,000
		<p>- Fulfillment of the study tour</p>						71600-Travel	10,000
<p>4.3.1: Continual communication and regular exchange of results received by the project, among the project team and partners and interested parties.</p> <p>- A plan of activities on information dissemination to partners and interested parties is established.</p> <p>- Work in accordance with the plan is carried out.</p>					I. Almuradova (Component Manager, UNDP), Mark Chao (ICTA)				

<p><b>Indicator 1:</b> Executive reports on results, conclusions, lessons learned, and policy recommendations are prepared and presented to key governmental and regional decision-makers.</p> <p><b>Indicator 2:</b> The project website is regularly updated.</p> <p><b>Indicator 3:</b> Agreement with the national partner concluded by the end of the project on continued operation of the website.</p>	4.3.2: Preparation of reports and recommendations (for high-level governmental decisionmakers) on the basic strategic questions of the project.	- Development of a report on the importance and expected benefits of revised building codes.	M. Bayramov (building code expert)	
	4.3.3: Organization of high-level round-table meetings for decisionmakers for review of the executive reports.	- Preparation and holding of meetings at the level of deputy ministers on the building codes revised under the project	I. Alamurowa (Component Manager, UNDP)	75700-Training, Seminars
	4.3.6: Support for updating of the project website with results of the project.	- Publication of a report on the importance and expected benefits of revised building codes on the website.	M. Bayramov (building code expert)	
	- Publication on the website of an executive report on energy audits conducted for selected buildings.	A. Zomov (energy audit expert)		
	- Publication on the website of an executive report on demonstration buildings.	M. Akhmedov (construction expert)		

**Outcome 5. Project Management**

- Component Manager, Director of Project Support, Assistant	71400-Individual contracts	38,000
- International conferences, seminars	71600-Travel	5,000
- Internet and mobile phone	72400-Communications and Internet	3,000
- Office supplies for the Component Manager and the project team	72500-Office supplies	1,000
- Computer equipment	72800-Informational equipment	1,500
- Bank fees and other expenditures	74500-Miscellaneous	3,000
- Meetings of the Project Steering Committee	75700-Training, seminars	4,000
	<b>GEF Total</b>	<b>55,500</b>
- International consultant for Midterm Evaluation of the project	71200-International Consultant	15,000
- Office supplies for the project team and Project Implementation Unit	72500-Office supplies	2,000
- Rental of office premises, other.	74500-Miscellaneous	3,000
- UNDP CO Salary Costs - NP Staff	61100-NP Staff	11,627
- UNDP CO Salaries Costs - GS Staff	61200-GS Staff	18,089
	<b>UNDP Total</b>	<b>49,716</b>
	<b>TOTAL</b>	<b>659,716</b>

Approved by Project Board:

Maksat Babayev,  
National Project Coordinator  
State Corporation "TurkmenGaz"



Jacinta Barrins,  
Resident Representative  
UNDP in Turkmenistan

