



**REQUEST FOR PROJECT PREPARATION GRANT (PPG)**  
**PROJECT TYPE: Full-sized Project**  
**THE GEF TRUST FUND**

**Submission date:** 22 July 2009  
**Re-submission date:** 14 September 2009

**GEF PROJECT ID<sup>1</sup>:**  
**GEF AGENCY PROJECT ID: 4134**  
**COUNTRY(IES):** Turkmenistan  
**PROJECT TITLE:** Improving Energy Efficiency in the Residential Buildings Sector of Turkmenistan  
**GEF AGENCY(IES):** UNDP  
**OTHER EXECUTING PARTNER(S):**  
**GEF FOCAL AREA(s):** Climate Change  
**GEF-4 STRATEGIC PROGRAM(s):** CC-SP1  
**NAME OF PARENT/PROGRAM/UMBRELLA PROJECT (if applicable):** **FRAMEWORK FOR PROMOTING LOW GREENHOUSE GAS EMISSION BUILDINGS (GLOBAL)**

**A. PROJECT PREPARATION TIMEFRAME**

Start date of PPG	October 2009
Completion date of PPG	December 2010

**B. PAST PROJECT PREPARATION ACTIVITIES (\$)**      **NOT APPLICABLE**

**C. PROPOSED PROJECT PREPARATION ACTIVITIES (\$)**

Describe the PPG activities and justifications:

The PPG will cover the following preparatory activities:

1. Baseline data collection and information gap analysis  
The assessment will be made through desk reviews of existing reports and studies and through interviews with all key stakeholders. No new field research will be financed through the PPG. Data and information gaps will be identified that will have to be addressed in the course of the full project. In particular, the following information will be collected:
  - 1.1. Existing construction practices, prototype designs, energy metering, energy management practices, and energy-efficient materials and technologies used in the residential construction sector in Turkmenistan.
  - 1.2. Existing institutional, legal and policy framework for energy efficiency in construction and building maintenance. Current and proposed legal arrangements for privatized housing units at an aggregated level (i.e. condominium or home-owner association designation)
  - 1.3. Building code current practice (review, approval, oversight and monitoring procedures), including estimates of enforcement levels.
  - 1.4. Barriers to improved energy efficiency in construction and building maintenance, differentiated by type of housing developer.
  - 1.5. Baseline data on the energy performance of the housing stock in Turkmenistan; baseline activities in the residential sector, including planned government construction and estimates of

<sup>1</sup> Project ID number will be assigned by GEFSEC. If PIF has already been submitted, please use the same ID number as PIF.

private construction; estimates of regional distribution of planned construction; projected trends in tariffs; projected trends in privatization; and projected changes in the profile of the housing stock during and subsequent to the project period.

1.6. Estimated CO<sub>2</sub> emissions from construction and the residential housing sector in Turkmenistan.

1.7. Analysis of current issues regarding data collection, aggregation, analysis, and quality control related to end-use energy consumption statistics and associated CO<sub>2</sub> emissions in the residential sector.

## 2. Institutional capacity assessment for promotion of energy efficiency in the residential sector

2.1 Collection and analysis of information on existing policies and the legal and regulatory framework for energy management during the procurement, design, approval, commissioning, and operation phase of residential buildings. Deficiencies in the policy and legal framework will be identified and explained.

2.2 Assessment of the existing institutional framework pertaining to energy consumption and efficiency in residential buildings, including a detailed analysis of principal-agent relationships in the housing sector.

2.4 Assessment of the current system of professional education and training in the area of residential building development, design, construction, and management in Turkmenistan.

2.5 An institutional capacity scorecard will be completed and used to form the baseline and recommendations for capacity strengthening activities. Particular emphasis will be placed on defining the proposed partnership between the project and Turkmengas, the primary supplier of fuel for the residential buildings sector. Definition of capacity needs for realizing energy efficiency gains in the residential sector and development of corresponding recommendations for activities under the proposed full size project.

2.6 Analysis of successful institutional models and best practices from relevant previous and current EE buildings projects.

2.7 Drafting of institutional arrangements for effective promotion and incorporation of efficient building codes, standards, norms, and energy management mechanisms.

2.8 Development of an appropriate replication strategy.

## 3. Stakeholder analysis and stakeholder involvement plan

3.1. Collection and analysis of stakeholders' views, current roles, and potential roles in improved energy efficiency in the residential buildings sector through stakeholder consultations.

3.2 Development of a stakeholder involvement strategy and plan that will include recommendations for capacity building and awareness raising measures. Opportunities for public-private partnerships will be assessed.

## 4. Design of demonstration projects

4.1 Scoping of demonstration projects (the project will support two pilot initiatives – one initial program for Turkmengas and/or a municipality and a replication initiative): consultations on the type, scope, location, co-financing and implementation arrangements will be conducted. Selection criteria for demonstration sites and potential partners in both initiatives will be established.

4.2 Collection of baseline information on potential demonstration sites and typical residential buildings to establish a measurable monitoring and evaluation framework for the project.

4.3 Assessment of average construction costs and initial and net life-cycle costs of feasible energy efficiency measures

4.4 Development of a project learning strategy: The full project learning strategy and plan will be developed, including identification of potential lessons and knowledge products, the institutional systems and means for replicating the project results, and the means for communicating project lessons both nationally and internationally.

<b>List of Proposed Project Preparation Activities</b>	<b>Output of the PPG Activities</b>	<b>Project Preparation Amount (a)</b>	<b>Co-financing (b)</b>	<b>Total c = a + b</b>
Baseline data collection and information gap analysis	*baseline data for the residential sector *data related to current and planned policies in housing policies and programs *projections of costs, institutional arrangements, and emissions during and subsequent project implementation	16,700	30,000	46,700
Institutional Capacity Analysis	*analysis of legal, institutional, and regulatory framework *institutional scorecard *assessment of key partners *recommendations on capacity strengthening activities	23,300	40,000	63,300
Stakeholder analysis and stakeholder involvement plan	*stakeholder consultations *stakeholder matrix *stakeholder involvement plan; *stakeholder capacity building needs and plan	5,000	35,000	40,000
Demonstration projects and replication strategy	*baseline information on selection criteria and characteristics for demonstration sites *project learning strategy	40,000	45,000	85,000
<b>Total Project Preparation Financing</b>		<b>85,000</b>	<b>150,000</b>	<b>235,000</b>

**D. FINANCING PLAN SUMMARY FOR PROJECT PREPARATION GRANT: (\$)**

	Project Preparation	Agency Fee
GEF financing	85,000	8,500
UNDP	30,000	
National Government (in-kind)	120,000	
<b>Total</b>	235,000	

**E. PPG REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)<sup>1</sup>**


**F. PPG BUDGET REQUEST**

Cost Items	Total Estimated Person Weeks for GEF Grant (PW)	GEF (\$)	Co-financing (\$)	Total (\$)
Local consultants *	117 (GEF)	23,400	45,000	68,400
International consultants*	15 (GEF)	46,500	30,000	76,500
Travel		15,100	25,000	40,100
Workshops			40,000	40,000
Sundries			10,000	10,000
<b>Total PPG Budget</b>		85,000	150,000	235,000

\* Annex A for Consultant cost details should be prepared first before completing this table. See notes on Annex A for the required detailed information. This table is the sum of all local and international consultants presented in Annex A.

**G. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
John Hough UNDP/ GEF Officer-in-Charge		September 14, 2009	Marina Olshanskaya	+421-259 337-285	<a href="mailto:marina.olshanskaya@undp.org">marina.olshanskaya@undp.org</a>

**Annex A**

**Consultants Financed by the Project Preparation Grant (PPG)**

<b>Position / Titles</b>	<b>\$/ Person Week<sup>1</sup></b>	<b>Estimated PWS<sup>2</sup></b>	<b>Tasks to be performed</b>
<i>Local</i>			
Building Code Expert	200	12	Identify all codes relevant to the residential sector and provide a description of the regulations, particularly those relevant to the energy performance of residential buildings. Provide an overview of the review, permitting, and enforcement process and an institutional assessment of all relevant stakeholder. Work with the IC Building Codes Expert to recommend the project approach and training scope, activities, timetable, and budget in the FSP under Component 1.
EE Institutional Analysis and Stakeholder Involvement Expert	200	39	Conduct and oversee data collection and analysis in the residential buildings and construction sector. Make an inventory of all relevant existing information sources in the sector., and collect and analyze any available data on energy consumption in residential buildings (and buildings more broadly if data are scarce) in Turkmenistan. Provide an overview of all relevant institutions, policies, and programs affecting energy performance in buildings. Assess the existing institutional framework on energy efficiency in the residential buildings sector, including a detailed analysis of principal-agent relationships. Identify institutional capacity gaps at all levels. Compile and institutional scorecard with indicators. Convene stakeholder consultations, draft a stakeholder matrix and stakeholder involvement plan. Provide data and analysis in support of the IC EE Buildings Specialist, the IC Utility Partnerships Specialist, and the IC Housing Policy Specialist. Provide data and analysis in support of the development of the project baseline and incrementality scenario. Work with the IC EE Buildings Specialist to develop an outreach and replication strategy. Assess and provide recommendations on the project scope and activities for the FSP. Develop logical framework and impact indicators for FSP.
Architect/Engineer	200	30	Work with IC Architect/Engineer to identify potential demonstration partners

			and regions. Provide information on construction costs and current design trends and prototype designs. Provide information in support for the development of a project baseline regarding the performance of current buildings.
EE Training and Education Consultant	200	8	Describe the current system for training architects, energy managers, and building managers, including specific educational institutions, numbers of faculty and students, and specific types of curriculum, and materials. Make recommendations for education and training in support of energy efficiency in buildings, including recommendations on the specific activities, target groups, scope, and budget.
Construction Materials and Insulation Specialist	200	8	Analyze construction materials used in building construction sector, collect information on local producers of construction materials; propose locally available energy efficient materials that can be used for building construction; provide information on the cost of materials that are commonly used in construction and those that would be available during the proposed project period. Support the LC and IC Architect/Engineer by reviewing estimates and activities related to the demonstration components of the FSP.
Energy and GHG Monitoring Specialist	200	20	Describe and analyze the effectiveness of collection, assessment, and use of data on EE in buildings at all levels and by different housing developers. Identify potential barriers in the processes of data collection, aggregation, analysis, and dissemination for the residential buildings sector. Make recommendations for addressing these barriers that identify key stakeholders and measures. Collect available data on energy consumption in the residential sector and on associated GHG emissions. Provide support and information to the IC Energy and GHG Monitoring Specialist in the development of the indicators for energy and GHG emissions in the project framework and in the development of a baseline and project scenario (including projections for direct and indirect emissions reductions from the project).
<i>International</i>			
Utility Partnerships Specialist	3500	2	Assess data provided on institutional relationships and work with key project partners to finalize the scope, activity, and

			budgeting for Component 2. Provide information on best practices and make recommendations to in-country partners.
EE Buildings Specialist	3500	8	Review baseline information delivered by the local experts. Review and analyze the description of barriers to the effective promotion of EE in residential buildings and integrated building design approach. Suggest international best practices on the integrated building design approach and energy performance standards, energy audits and certification, and energy information management system in energy and building construction sectors. Assist local project team to define project scope and provide recommendations on the suggested project strategy. Carry out cost effectiveness analysis of the project strategy. Assess sustainability of suggested project outcomes and outputs. Review and finalize GHG emission reduction estimated of the project. Propose project monitoring and evaluation framework with a set of measurable impact and progress indicators. Calculate costs of expected project outcomes and outputs, co-financing sources and co-financing commitments.
Housing Policy Specialist	3500	1	Analyze information and data provided by the EE Institutional Analysis and Stakeholder Involvement Expert regarding current institutional arrangements in the housing sector and proposed reforms in the housing sector. Describe the implications of current and proposed arrangements for utility payments and for financing. Draft specific recommendations for Component 5 of the proposed FSP and provide expert review and commentary on proposed staffing, target groups, scoping, and budgeting for this component. Provide an overall review of the RCE and assess potential interactions with housing reform.
EE Building Codes Expert	3500	1	Work with the IC Building Codes Expert to recommend the project approach and training scope, activities, timetable, and budget in the codes sector for the FSP.
Energy and GHG Monitoring Specialist	1500	3	Estimate the local, national and global environmental benefits generated by the proposed FSP, including GHG emission reductions (direct and indirect) during the project and subsequent to the conclusion of the project. Propose a set of CC indicators (CO <sub>2</sub> eq avoided, kW/h or TOE of energy saved) to track the project's progress and effectiveness. Recommend baseline and target values on indicators, develop and

			document assumptions for baseline and target scenarios. Review LC analysis of issues regarding data collection, aggregation, analysis, and quality control related to end-use energy consumption statistics and associated CO <sub>2</sub> emissions in the residential sector and make recommendations to address any shortcomings in data and optimize the quality of M&E activities.
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<sup>1</sup> Provide dollar amount per person week.

<sup>2</sup> Provide person weeks needed to carry out the task and corresponds to the dollar amount per person week in the previous column.