

PROJECT IDENTIFICATION FORM (PIF)

**PROJECT TYPE: MEDIUM-SIZED PROJECT** THE GEF TRUST FUND

> Submission Date: August 14, 2009 Resubmission Date: September 25, 2009 Resubmission Date: October 21, 2009 Resubmission Date: October 28, 2009

#### **INDICATIVE CALENDAR\*** Milestones **Expected Dates** mm/dd/yyyy Work Program (for FSP) Nov. 2009 CEO Endorsement/Approval Oct. 2010 Agency Approval Date Dec. 2010 **Implementation Start** Jan. 2011 Mid-term Evaluation (if May 2011 planned) Project Closing Date Dec. 2013

\* See guidelines for definition of milestones.

PART I: PROJECT IDENTIFICATION

GEF PROJECT ID <sup>1</sup> : 4048 P	<b>ROJECT DURATION:</b> 36 months
<b>GEF</b> AGENCY PROJECT ID: 4335	•
COUNTRY(IES): Georgia	
PROJECT TITLE: Promotion of	Biomass Pellet Production and
Utilization in Georgia	
GEF AGENCY(IES): UNDP	
OTHER EXECUTING PARTNEL	<b>R(S):</b> Ministry of Environment
Protection and Natural Resources	
<b>GEF FOCAL AREA</b> (S) <sup>2</sup> : Climate	Change

**GEF-4 STRATEGIC PROGRAM(s):** CC-SP4-Promoting Sustainable Energy Production from Biomass

NAME OF PARENT PROGRAM/UMBRELLA PROJECT (if applicable):  $\ensuremath{\mathsf{N/A}}$ 

#### A. PROJECT FRAMEWORK

**Project Objective**: Launch and promotion of biomass pellet production and utilization in Georgia.

Project	Inv., TA, or	Expected Outcomes	Expected Outputs	Indicative GEF Financing	e a	Indicative Co- Financing <sup>a</sup>		Total (\$)c = a + b
Components	b STA			(\$) a	%	(\$) b	%	
1. Piloting of biomass pellet production in Georgia	TA, Inv.	Increased confidence in the feasibility of biomass pellet production; Construction of commercial biomass pellet production plants in Georgia.	<ol> <li>Completed feasibility study and business plan for establishing of pilot pellet production plant;</li> <li>Prepared detailed design for pilot pellet plant;</li> <li>Installed and commissioned pilot pellet plant;</li> <li>Trained pilot plant staff in plant operations and maintenance.</li> </ol>	400,000	9	4,000,000	91	<mark>4,400,000</mark>
2. Creation of the demand for pellet utilization	STA, TA	Created local demand for pellets through introducing pellet-based high efficiency stoves and linking pellet producers with local producers and importers of pellet-based high	<ol> <li>Completed feasibility study on local production of pellet-based high-efficiency stoves in Georgia;</li> <li>Completed market study for diffusion of pellet-based high efficiency stoves;</li> <li>Enhanced capacities for local production of high efficiency stoves;</li> <li>Established linkages</li> </ol>	205,000	51	200,000	49	405,000

<sup>&</sup>lt;sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>&</sup>lt;sup>2</sup> Select only those focal areas from which GEF financing is requested.

		efficiency stoves and , potential consumers	between local producers of pellets, local producers and/or importers of pellet- based high efficiency stoves and potential consumers.					
3. Enabling policy framework for biomass resource development and utilization	ТА	Approved policy and regulatory framework for the development and utilization of modern biomass in Georgia	<ol> <li>Government-endorsed         <ul> <li>national strategy for the             development of a biomass             sector in Georgia;</li> <li>Recommended policies for             the promotion, local             production and utilization of             pelletized biomass fuel.</li> <li>Established monitoring             system, including system for             monitoring and reporting of             CO<sub>2</sub> emission reductions.</li> </ul> </li> </ol>	145,000	54	100,000	37	270,000
4. Promotion of pellet production and utilization	ТА	Improved public knowledge and awareness about biomass fuel development and utilization. Increased demand in the utilization of pelletized biomass fuel	<ol> <li>Printed and electronic promotion materials for pellet production and utilization;</li> <li>Developed and disseminated knowledge products including manuals and case studies on the use of pellets and pellet-based high efficiency stoves.</li> </ol>	<mark>85,000</mark>	65	<mark>45,000</mark>	35	<mark>130,000</mark>
5. Project management		<mark>90,000</mark>	36	155,000	64	<mark>245,000</mark>		
Total project c	osts			925,000	<mark>17</mark>	4,500,000	<mark>83</mark>	5,425,000

<sup>a</sup> List the \$ by project components. The percentage is the share of GEF and Co-financing respectively of the total amount for the component. <sup>b</sup> TA = Technical Assistance; STA = Scientific & Technical Analysis.

### B. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE and by NAME (in parenthesis) if available, (\$)

Sources of Co-financing	Type of Co-financing	Project
Project Government	In Kind	<mark>\$100,000</mark>
Contribution		
GEF Agency - UNDP	Cash	<mark>\$155,000</mark>
Private Sector	In Kind	<mark>\$145,000</mark>
Private Sector	Ferrero	$4,100,000^{3}$
Total Co-financing		<mark>\$4,500,000</mark>

### C. INDICATIVE FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	PreviousProjectPreparation Amount (a)4	Project (b)	Total c = a + b	Agency Fee
GEF financing		925,000	925,000	<mark>92,500</mark>
Co-financing		<mark>4,500,000</mark>	<mark>4,500,000</mark>	<mark>0</mark>
Total		<mark>5,425,000</mark>	<mark>5,425,000</mark>	<mark>92,500</mark>

<sup>3</sup> See attached letter. Initial Assessment only and capital investment is subject to a favorable feasibility study.

<sup>4</sup> Include project preparation funds that were previously approved but exclude PPGs that are waiting for approval.

### D. GEF RESOURCES REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES)<sup>1</sup> N/A

#### PART II: PROJECT JUSTIFICATION

## A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:

1. Due to the appropriate climatic conditions, hazelnut cultivation has been a traditional activity in Georgia but it never had broad commercial meaning, as the hazelnut trees were grown in small household farms. It is especially popular in the West Georgia (Samegrelo, Guria, Apkhazia regions). For the last 20-25 years, and more intensively after the breakup of the Soviet Union, this business has been scaled up and commercialized. The Samegrelo (Zugdidi) region is leading in cultivating and processing the hazelnuts. Since 2007 Ferrero, the famous producer of confectionary and other food products, has been involved in the development of the hazelnut business in Georgia. It has already purchased and has been planting 3,000 ha of land in Zugdidi region. Ferrero is going to increase this business in Georgia and make the country one of the biggest suppliers of hazelnuts to their own industry. According to the rough estimates, Georgia is the 5<sup>th</sup> or 6<sup>th</sup> hazelnut producer in the world market producing and exporting annually 35,000-45,000 tons of hazelnuts, 50% of which is produced in Samegrelo region where the pilot pellet plant will be established. Considering that the ratio of kernels to waste is 40/60, about 21,000-27,000 tons of hazelnut waste is produced in the country annually. A part of this biomass fuel (shells, husks) is used by hazelnut processing plants (such as the project participant "Dioskuria") for their own heat requirements and another part is exported to Turkey. The amount of this biomass fuel used in Georgia is burnt directly in inefficient stoves, wasting a significant amount of heat which is so important for the country's energy sector and particularly for the regions without heat supply. In addition, large amounts of sawdust are available in Georgia (particularly in regions adjacent to the project location), together with low quality wood, wood waste and other usable wood-like materials. However, available sawdust is a waste of previous industrial activities. The data on the current production of sawdust in Georgia, which is one of the main determinants of the potential pellet plant capacity, is not available. In Georgia sawdust is neither available from a single supplier and nor can it be found in small number of large deposits. It is only available in large number of small deposits raising the costs of its transportation.

2. Approximately 1.5 million cubic meters of wood was cut in Georgia before 1950, but in the period before independence, the imports from the Russian Federation constituted the main source of wood for Georgia. After the independence (1990), the Georgian market has lost the cheap wood supplies from Russia, while local wood resources came under strong pressure as result of both the rising local demand on firewood and the increasing exports of beech tree wood. According to the official statistics approx. 984.2 thousand cubic meters of wood material (liquid wood, industrial wood, special cutting for firewood) was produced in Georgia in 2006, approximately 30% of which is fuel wood, including 12% of sawdust. According to some calculations, Georgia could produce 1,360 thousand cubic meters of wood per year if it applies sustainable conservation measures which will lead to ecological equilibrium and an improvement of ecosystem services provided by the forest, such as water regulation, soil-protective health resort-sanitation, etc. Of this quantity, the estimated amount of waste usable for producing biofuels will amount to 470 thousand cubic meters, which is 0.3% of the whole stock (reserve). Moreover, cutting wood volumes exceeding 300,000 cubic meters have a potential capacity to provide energy to a minimum of 30,000 families.

3. Georgia is not rich in fossil fuel and other energy resources (except from hydro) and it is a fossil fuel (NG, diesel, etc.) importer country. However, different quantities of nearly all types of resources could be found on its territory. Such resources are: hydro, wood, coal, peat, oil, associated gas, and geothermal water. Also there are quite favorable conditions for the use of solar and wind energy. Wood and forest resources account for the second largest energy resource in the country after the hydro resources. Georgia is rich in forests, but they are not evenly distributed in East and West Georgia, and some of the regions are poor in firewood. In energy balances based on statistical data, the annual demand on wood equals to 300-350 thousand tones which is 18% of non-power energy use (in 2006), while some independent researchers show that it amounts to 450-550 thousand tons. The country's residential sector is the biggest consumer of biomass (88%).

4. The biomass potential of Georgia is so important that it could be successfully used to significantly enhance the country's energy security. First of all, this concerns the plantation of forests and other types of biomass which can produce biomass fuel to replace imported fossil fuel (NG, Diesel) and reduce the country's dependence on imported energy. This resource needs better estimations in elaborating the concept for the future energy security of the country. Biomass (wood, nutshells, etc.) is certainly a renewable source although its misuse can carry grave implications for the environment in general and for the forest in particular. The deforestation and desertification of land as a result of non-sustainable use of wood resources are well known phenomena across the world. Up until recently, forest exploitation in Georgia used to be performed based on the principle of short-term usage, which resulted in excessive logging and widespread violations of predetermined quotas. This practice sharply diminished the frequency of small tree thickets (coppices) and excluded large areas of forests from wood usage for long periods of time. As a result of such poor wood harvesting and forest management, the total volume of damaged and degraded forest areas exceeds 200,000 hectares, according to the Forest Fund calculations. However, the introduction of pellet fuel and pellet-based high efficiency stove technology in Georgia could result in reducing wood cutting for heating purposes, as well as provide for such additional benefits as savings on heating costs for the population, reduction of emissions produced by heating, reduction in the share of fossil fuels used for heating through substitution with renewable biomass fuels and finally, eliminating hazardous emissions for the households that currently use regular wood stoves.

5. Currently, there are a number of barriers that hinder the development of a local production and utilization of biomass based fuels such as pellet fuel. Those are mostly technical, knowledge, policy and institutional barriers. More specifically, there is very limited knowledge among decision makers, private sector and local communities about pellet technologies and benefits out of utilization of pellet fuel. There is no enabling environment, including policy framework for development of biomass and particularly, pellet production. At the know-how level, although there is several industries in Georgia that wish to produce biomass fuel, they do not have enough technical capacities and knowledge how to establish and operate such industries.

6. This project will address the abovementioned barriers through creating the confidence and knowledge base and increasing awareness on pellet production and utilization in the country, facilitating the establishment of a supplydemand chain for the pellet market and, supporting the establishment of an enabling policy environment for pellet production and utilization.

7. The overall objective of the project is to assist with the development of the pellet production and utilization industry in Georgia through demonstration activities including the launch of a pilot plant.

8. Outcome 1: Piloting of Biomass Pellet Production in Georgia – A feasibility study and business plan will be carried out as part of the project activities with the objective of leveraging private sector investment by leading European chocolate maker Ferrero in a pellet plant in Georgia. Ferrero has indicated that they are potentially interested in investing up to us\$4 million dollars in a pilot pellet plant, should the feasibility study, business plan, and barrier removal activities of the project prove that the concept is commercially viable. Prior to making this investment, Ferrero should be able to match GEF funding on a 1:1 basis for activities related to the feasibility study, business plan, and due diligence on the investment into the pilot plant. Ferrero envisages creating a joint venture partnership with an international project development company, experienced in developing biomass projects and part of the feasibility study activities would involve determining the most appropriate joint venture partner or partners. In addition, it is likely that a local biomass supply company would be set up to provide a long-term supply of biomass to the pellet plant. Key stakeholders such as Dioskuria, local sawmills, and local entrepreneur would potentially be shareholders in this supply company giving them a vested interested in providing a long-term secure supply of biomass to the project. It is envisaged that the pilot pellet plant will be established in the Zugdidi region (Samegrelo, West Georgia) of Georgia. The pilot plant will aim to demonstrate the commercial viability of the approach which can lead to replication. It is envisaged that the plant will be constructed in the hazelnut processing factory "Dioskuria". The amount of hazelnut processing waste (e.g. nutshells) that is currently produced in this factory is about 4,000 tons, of which 2,400 tons (60%) is used as biomass fuel to supply the heat requirements of the factory, the rest being exported to Turkey. "Dioskuria" committed to purchase the nutshells from other entrepreneurs and sawdust from nearby sawdust mills. At this stage the understanding of potential pellet producing entity – "Dioscuria" – is that they have to be involved in the marketing of high-efficiency stoves (boilers) along with pellets. They also have committed to make long term agreements with local schools and populations who are ready to make in-kind contributions in the

distribution of high-efficiency burning devices and pellets. Certain incentives will be provided to encourage local populations to purchase the stoves. The capacity of the demonstration plant will be determined as part of the feasibility. However, based upon initial analysis the pellet plant should be able to produce pellets from a mix of nutshells and sawdust. Briquettes from low quality woody biomass can also be produced in addition to the pellets. In accordance with very rough preliminary assessments, it is possible that 10,000 tons of pellets would be produced annually. However, this figure would need to be assessed as part of the feasibility study. Similar pellet plants have been established in Poland, Romania, Slovenia, etc. Preliminary analysis shows that Romanian case is very similar to the conditions in Georgia with regard to the biomass quality. However, further detailed analysis as part of the feasibility study has to be done in order to assess the plant capacity which will be conducted during the project preparatory phase. Most probably it will be small (600kg/h) or medium size (4t/h) plant. Pellets will substitute coal used currently by railway (about 1,500 tons annually) and will be sold to the population from nearby villages having acute energy deficits particularly in the winter season. Similarly, a thorough pellet and stove producer market assessment will be undertaken as part of the PPG, covering Western (e.g. Germany, Austria and Italy) and Eastern European countries (e.g. Romania, Poland), and contacts with prospective suppliers will be established.

9. <u>Outcome 2. Creation of the demand for pellet utilization</u> – currently, there is no demand for pellet utilization in Georgia. The demand can be created by establishing pellet-based production of high efficiency stoves in Georgia and linking stove producers with pellet producers on the on hand, and pellet and high efficiency stove producers with potential consumers on the other hand. A pre-feasibility study carried out by UNDP in 2007 touched this issue and concluded that there are several factories (Kutaisi Auto Mechanical Plant, Ltd. "METALURG", Tbilisi Aircraft Manufacturing Factory - TAM, etc.) in Georgia which have the technical capacity to manufacture such stoves. The study concludes that Georgia has the potential to manufacture both cast and steel stoves. At least two companies could provide the full production cycle for both types of stoves, while other manufacturers could produce steel stoves or, if supplied with cast parts, assemble cast stoves. The internal market does not justify large scale investment in several factories, but for a limited number of players it could be a profitable opportunity. During the project preparatory phase, these local capacities will be validated. If these studies prove non-viability of establishment of local production of pellet-based high efficiency stoves, the project will work with the importers of pellet-based high efficient stoves to link them with pellet producers;

10. <u>Outcome 3 Enabling policy framework for biomass resource development and utilization:</u> - in order to create the enabling policy framework for biomass development in Georgia and more specifically, pellet production the project will elaborate a strategy for biomass development and policy options for pellet production and utilization and, facilitate the endorsement of the strategies and policies by the government;

11. <u>Outcome 4. Promotion of pellet production and utilization</u> - the project will raise an awareness on pellet production and utilization through implementing public outreach program and creating and disseminating various knowledge products; and

12. The project will establish a mechanism that promotes North-South and South-South exchange of experience, information and technologies. Other global benefits are: Reduction of  $CO_2$  emissions through replacing the fossil fuels (coal, diesel) used for meeting heat demand and increased/maintained amount of  $CO_2$  absorbed by sinks (forests) due to improving the burning efficiency of biomass fuel and protecting the natural forests from cutting and degradation. The project will contribute to meeting the objectives of the three Rio Conventions: the UN Framework Convention on Climate Change - UNFCCC (mitigation of GHGs), the UN Convention on Biodiversity - CBD (improved management of forests) and the UN Convention to Combat Desertification – UNCCD (rehabilitation of degraded lands). The local production of biomass is a precondition for the successful replication of this pilot project and for the development of the biomass resource as strategic fuel for Georgia. Mainly eroded (dry), unusable and unproductive lands will be used for this purpose. Properly managed biomass production process will stop the land degradation process and facilitate its rehabilitation.

#### **B.** Describe the consistency of the project with national/regional priorities/plans:

13. In 2006-2009 Georgia has prepared its Second National Communication (SNC) to the UNFCC. The National Climate change Strategy has been developed in accordance with the COP guidance (17/CP.7) for preparation of NAI National Communications. The energy sector strategy, based on the principle: "increase the security of Georgia's energy sector through maximal utilization of local renewable resources and increasing of energy efficiency along with the mitigation of GHGs" is a part of the climate change strategy. Development of biomass energy resource is one of the priorities under this strategy. Considering the biomass fuel as Georgia's future (as fossil fuel importer country) it's also highlighted in the document that this idea is still very new for the country and it needs time and serious efforts to introduce and develop this industry in the country.

#### C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH GEF STRATEGIES AND STRATEGIC PROGRAMS:

14. The proposed project, which is aimed at removing barriers to the transfer of biomass pelleting technology is in line with the criteria for receiving support from the GEF under GEF- SP4-Promoting Sustainable Energy Production from Biomass. Biomass energy is among Georgia's indigenous renewable energy resources which the country intends to develop and utilize. The proposed technology which will improve the efficiency of handling and utilizing solid biomass is in line with the country's energy sector strategy, based on the principle: "increase the security of Georgia's energy sector through maximal utilization of local renewable resources and increasing of energy efficiency along with the mitigation of GHGs". Development of biomass energy resource is one of the priorities under this strategy. This project is submitted for consideration of the proposed piloting of biomass pelleting technology application and biomass pellet utilization with the view of replicating the demonstrated by end of project.

#### **D.** JUSTIFY THE TYPE OF FINANCING SUPPORT PROVIDED WITH THE GEF RESOURCES:

15. The GEF funds will be used for financing technical assistance activities for introducing the pellet production in Georgia and promoting its utilization. It is envisaged that each \$1 of GEF financing will leverage at least \$4.50 of private sector investment related to the pilot project, should the feasibility study and business plan prove the viability of the concept. In addition, over the longer-term as a private sector pellet industry is developed, additional private sector investment should be leveraged. GEF funds under the project will include support for: (i) development of feasibility and market studies for production and utilization of pellet fuel in Georgia and production and marketing of pellet-based high-efficiency stoves; (ii) development of business plan and detailed design for a pilot pellet plan in partnership with Ferrero; (iii) development of policies and strategies for biomass development and production and utilization of pellet technologies; (iv) training of local personnel of pilot pellet plant for plant operation and maintenance; (v) awareness raising on pellet production and utilization and associated pellet-based high-efficiency stove roduction.

#### E. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

16. Since 2004 Georgia has been implementing the GEF project "Georgia-Promoting the Use of Renewable Energy Resources for Local Energy Supply". The main components of the project are to establish a Revolving Fund, to prepare the Renewable Energy Development Strategy and to prepare the business plans for Small Hydropower Plants (SHPPs) for submission to the revolving fund on the competitive basis. The project will work in close cooperation and coordination with the implementers and stakeholders of that GEF-funded project. At the initial stage, the eligible projects for the Revolving Fund are SHPPs and geothermal hot water supply while in the future other renewable sources and among them biomass projects will be eligible for soft loans from the Fund. In a long-term perspective this fund is being considered a potential investor for the pellet industry program.

17. Another project is related to the development of hazelnut plantations (as forest) and consequently the hazelnut biomass. This is a CDM project developed by Ferrero together with Agrigeorgia. Subject to favorable feasibility study, Ferrero invests in new technology for high standard hazelnut cultivation in Georgia. In close cooperation with Ferrero's project, the CDM potential of biomass industry in Georgia will be assessed and project idea notes will be prepared. A proposal on the plantation of energy forests in order to rehabilitate the degraded lands in East Georgia (Dedoplistskaro region) and to supply the local population with biomass energy resources (Dedoplistskaro region is not rich in forests and has scarce energy resources) has been prepared in the SNC. Later on in 2008, on the basis of this proposal, the Government of Germany (through the Deutsche Gesellschaft fuer Technische Zusammenarbeit GTZ GmbH) launched the project "Climate Resilience Rehabilitation of Degraded Landscapes in Georgia".

phase (already started) of the project considers the rehabilitation of wind-breakers, while the plantation of energy forests is considered as a next step. In case of success with these energy forests, Dedoplistskaro is planned to be the first priority region in East Georgia where the current technology will be replicated. The proposed project will coordinate and work very closely with these two projects, particularly in the preparation of biomass development strategy.

# F. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING:

18. To invest in one small (or medium) scale pellet plant could not be considered as completely removing all barriers to developing a biomass pellet production industry in Georgia because as far as such single installation cannot ensure the replication of the technology at the national or regional levels and its penetration into the national market. The barrier removal process would not be successful without a strategic plan for the replication and market penetration of a concrete technology and without creating an environment which promotes private sector investment. GEF support of the project will ensure the development of the strategy and the contribute to developing the enabling environment. Full knowledge should be transferred to the country which is an additional financial burden for the private sector involved in the barrier removal process. GEF support covers the incremental costs associated with helping to removing these barriers.

# G. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED, AND IF POSSIBLE INCLUDING RISK MITIGATION MEASURES THAT WILL BE TAKEN:

Risk	Risk Rating	Risk Mitigation Strategy
Political risk of a renewed conflict may hinder the project implementation, especially those activities which will be implemented adjustment to the conflict zones	М	Therefore, during the PPG phase very thorough risk assessment will be conducted especially, during the design of a pilot project. Based on this assessment a risk management strategy will be developed to be a part of the CEO endorsement and UNDP-GEF project document. Regardless of this, UN, including UNDP is well-established in adjustment to conflict zones and currently implements various livelihood and post-conflict recovery and rehabilitation projects there. Therefore, it has on-the ground experience and expertise how to work in volatile situations.
Underdeveloped/inexistent internal market for pellets (a challenge that at the same time implies an attractive opportunity).	L	This risk could be reduced by exporting pellets to the European market which is attractive (demand and price are high). This measure is considered as an interim stage before the development of local market, but in this case the local effect will delay.
Unpredictability of sawdust supply in the long term	L	For reducing this risk, the financial parameters of the pilot plant should be calculated for the lowest guaranteed supply of biomass and rely mainly on the nutshell biomass. Good feasibility study could easily mitigate this barrier.

#### H. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

19. The potential of  $CO_2$  reduction resulting from the implementation of the strategy developed for the biomass sector will be assessed during the project implementation. The reduction of  $CO_2$  through the pilot project will be calculated during the project preparation stage. A conservative estimate of this is no less than 17,500 t  $CO_2$  annually in case of annual production of 10,000 tons of pellets. Considering a 10 years life for the pilot plant and the requested GEF funding for this project, the unit abatement cost is around (US \$5.4/ton  $CO_2$ ). This does not include the  $CO_2$  emission

reduction from potential pelletizing plant replications that will be assisted by the project. These figures will be updated and confirmed during the project preparation, and monitored and evaluated during the course of project implementation, along with other metrics.

#### I. JUSTIFY THE COMPARATIVE ADVANTAGE OF GEF AGENCY:

20. The proposal is submitted through UNDP which is listed amongst the ten GEF implementing agencies. It should be highlighted that priority has been given to UNDP because it is the only agency having its own operational office in Georgia working with relatively small grants (WB and EBRD have lowest threshold at 5 million USD). In addition, most of the climate change-related GEF projects (almost all) realized in Georgia have been successfully implemented through UNDP. These are: Georgia's Initial National Communication (INC, 1997-1999), second phase of INC (2000-2002, TNA), Georgia's Second National Communication (2006-2009); Removing barriers to the energy-efficiency rehabilitation of heat and hot water supply systems (1999-2000). Removing barriers to the development of small hydro power plant sector (1999-2000); Georgia - promoting the use of renewable energy resources for local energy supply (started in 2004). Under the financial support of UNDP the "Pre-Feasibility Study on Producing High Efficiency Stoves, Fuel Pellets and Briquettes in Georgia, and Related Environmental, Social and Economic Benefits" has been carried out. This study provides important background and is the starting point for the barrier removal process.

# PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the country endorsement letter(s) or regional endorsement letter(s) with this template).

NAME	POSITION	MINISTRY		<b>DATE</b> (Month, day, year)
Ms. Nino Tkhilava	GEF OFP in Georgia	Ministry c	of	08/04/2009
	_	Environment		
		Protection an	d	
		Natural Resources		

### **B. 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 Deputy Executive Coordinator	JohnHough	10/28/2009	John O'Brien, Regional Technical Advisor – Climate Change Mitigation	+421 917 415 017	john.obrien@undp.org