



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Medium-sized Project

THE GEF TRUST FUND

Submission Date: 17 June 2010

Re-Submission Date:

PART I: PROJECT IDENTIFICATION

GEF PROJECT ID: PROJECT DURATION: 18 months
 GEF AGENCY PROJECT ID: COUNTRY: Burkina Faso
 PROJECT TITLE: Promoting energy efficiency technologies in beer brewing sector in Burkina Faso

GEF AGENCY: UNIDO

OTHER EXECUTING PARTNER: Ministry of Environment (SP/CONEDD - Permanent secretary of National council on Environment and Sustainable Development); Ministry of Mines & Energy.

GEF FOCAL AREA: Climate Change

GEF-4 STRATEGIC PROGRAMS: CC-SP-2 Industrial Energy Efficiency

NAME OF PARENT PROGRAM/UMBRELLA PROJECT: GEF Strategic program for West Africa - Energy Component

INDICATIVE CALENDAR	
Milestones	Expected Dates
CEO Endorsement/Approval	July 2011
Agency Approval Date	September 2011
Implementation Start	November 2011
Mid-term Evaluation	July 2012
Project Closing Date	April 2013

A. PROJECT FRAMEWORK

Project Objective: Promotion of energy efficiency (EE) equipment in energy intensive small and medium enterprises (SMEs) in Burkina Faso

Project Components	Type	Expected Outcomes	Expected Outputs	Indicative GEF Financing		Indicative Co-Financing		Total (\$) c = a + b
				(\$ a)	%	(\$ b)	%	
1. Technology deployment and demonstration	TA	State of the art equipment and technology Improved cookers in energy intensive SMEs	1. Optimised design ready for production and implementation; 2. Implementation of pilot project(s) in identified sub sector, the results of which compiled and widely disseminated.	90,000	45	110,000	55	200,000
2. Stimulation of market demand for energy efficiency goods and services through certification and standardisation	TA	Supportive quality assurance for delivering sustainable improvements in energy efficiency in industry and contributing to improved competitiveness	1. National industrial EE best practices dissemination program; 2. Consultation with key stakeholders from both public and private sector, in order to streamline the use of EE equipment and technologies in industry; 3. Policy recommendations on development and establishment of national certification program	82,000	40	125,000	60	207,000

3. Capacity building including development of toolkits	TA	Increased awareness at the user's level	1. Awareness raising in industry through promotion campaign and development of toolkits aiming for industry decision-makers to understand the potential for EE benefits and related economic and environmental benefits, and a cadre of industry representatives to be equipped with the technical capacity and tools to implement, operate and maintain the EE measures (<i>demand side</i>);	200,000	50	200,000	50	400,000
		Behavioural change with regard to energy saving in target sub sectors						
3. Monitoring and Evaluation				15,000	50	15,000	50	30,000
4. Project Management and Coordination				43,000	46	50,000	54	93,000
Total project costs				430,000	46	500,000	54	930,000

* INV = Investment; 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 Contribution	Grant (in kind)	500,000
GEF Agency(ies) - UNIDO	Grant	
Bilateral Aid Agency(ies)	Unknown at this stage	
Multilateral Agency(ies)	Unknown at this stage	
Private Sector	Unknown at this stage	
NGO	Unknown at this stage	
Others	Unknown at this stage	
Total Co-financing		500,000

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

	Previous Project Preparation Amount (a)	Project (b)	Total c = a + b	Agency Fee
GEF financing		430,000	430,000	43,000
Co-financing		500,000	500,000	
Total		930,000	930,000	43,000

D. GEF RESOURCES REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)

N/A. The project is for a single focal area, single country, and single GEF Agency.

PART II: PROJECT JUSTIFICATION

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

The Issue:

In Burkina Faso, being a landlocked country in the Sahelian zone without fossil fuel resources of its own, the provision of energy is largely dependent on (expensive) fuel imports. The country's electricity infrastructure is poorly developed and essentially centered around the urban centers. Access to electricity services is around 13% (2007), and 5% in rural areas. Consequently, in rural areas, energy requirements are almost completely met by the utilization of traditional biomass. Indeed, over 90% of Burkina Faso's energy needs are covered by traditional fuels, with wood and charcoal constituting the bulk. The already huge demand for wood is further increasing, proportionately with the demographic growth rate (2,3 % per year) as well as with the high urbanization rate (17,62% in 2006).

Adding to this are the recurring droughts which accelerate the desertification and further reduce the availability of wood. The scarcity of wood resources and the environmental degradation (through deforestation and consequent desertification) is making the rural population increasingly vulnerable to energy poverty, and consequently a lack of opportunities to take part in income generating activities. Burkina Faso is thus at the same time faced with fast diminishing wood resources and an extreme and continued energy dependency on wood biomass. To adequately address this rising demand for wood, it is imperative for Burkina Faso to widely disseminate and adopt energy efficient equipment, such as more efficient cookers. A wide dissemination and use of this relatively easy to manufacture and use technology has a key role to play in releasing the pressure on the wood resources.

Apart from the use of wood for cooking at household level some industries historically have been using large quantities of wood. The situation is such that, in an attempt to reduce the use of the critically scarce wood resources, a number of policy initiatives have been put in place, most notably the army as well as bakeries, both large wood consumers, have been banned from using wood for their energy needs. The above, combined with a steadily increasing demand for electricity at both industrial and private household level undoubtedly turns the provision of energy into the top priority for industrial (and rural) development in Burkina Faso.

A next set of sectors using significant amount of wood include breweries and catering services (e.g. restaurants and food processing companies), which are under increasing scrutiny to reduce their wood consumption. The need to reduce their wood dependence is derived not only from an environmental perspective as put forward by government policies, but also from an economic perspective since the increasing wood price is presenting a major obstacle in maintaining a viable and competitive business.

The Project

The project thus seeks to release the pressure on wood resources by promoting and disseminating the use of energy efficient equipment and technologies in energy intensive sectors. Taking the relatively small-scale nature of industries in Burkina Faso into account the focus will be on small and medium sized enterprises with high energy intensity (specifically wood). Within the energy intensive industries most notably the brewery sector has been identified as target sector. The local sorghum based beer (*dolo*) is being produced in thousands of mostly small companies (called "*dolotières*") around the country; in the capital Ouagadougou alone, about 4000 small breweries are in use.

The main project activities will thus include:

- Support optimised design of the equipment and technology;
- Support quality assurance of the technology through dissemination of best practices and assist in national certification program;
- Provide training in the production and commercialisation of the equipment (*supply side*);
- Provide training in the use of these techniques, with a focus on women (*demand side*);
- Demonstrate the use of the equipment and technology and disseminate results to sensitise industry;

The technology for improved cookers ("*foyers améliorés*") for local beer breweries ("*dolotières*") is being developed primarily by the Institute for Research, Applied Science and Technology (IRSAT), though still needs further technical improvement for a successful implementation in local industry. The major partners in the project include: association of beer breweries, research institutions (e.g. IRSAT), Ministry of Environment, and GTZ which has been active in the field of improved cookers, with an emphasis on improved cooking stoves at household level (see further).

Generally the immediate impact of the project will include the following benefits:

- Environmental: CO₂ emission reductions related to avoided wood use;
- Socio-economic: the financial burden of the cost of energy (wood) on the users will be relieved;
- Health: the use of improved equipment will reduce the amount of fume generated during the brewing process to which the employees are exposed, affecting particularly women.

Component 1: Technology deployment and demonstration

Significant expertise at research and initial demonstration level is available in the country, i.e. national research institutes have been working on the improvement of existing cookers. Moving away from the traditional forms of heating, several types of improved cookers have been developed in different materials (e.g. in metal, in ceramic etc.) aiming to further reduce the wood fuel requirements compared to traditional heating. These devices are fairly small, portable and primarily intended for use at household level.

For larger consumers the development of an improved cooker has been initiated (mainly by IRSAT, with support from GTZ); this type of cooker is larger, fixed and is able to significantly reduce the need for wood. This device has a clear potential in a number of economic sub sectors (e.g. beer brewing, food processing etc.), but needs technical optimisation in order to allow for a successful introduction into these sectors. The current challenge is therefore to get the energy efficient technology refined and ready to be adopted in key sectors.

This project will therefore focus on an increased use of energy efficient cookers in the beer brewing sector in Burkina Faso. Appropriate beer breweries will be identified in terms of scale and use of equipment for pilot project(s). IRSAT (and possibly the Ecology Centre Albert Schweitzer) will be included as research and technical partners in the project.

Component 2: Stimulation of market demand for energy efficiency goods and services through certification and standardisation

The successful introduction of a new type of equipment or technology depends on the credibility of the equipment with the target user. In order to establish and strengthen the trust in the new technology the following initiatives will be undertaken:

- Dissemination of national industrial EE best practices;
- Consultation with key stakeholders from both public and private sector, in order to streamline the use of EE equipment and technologies in industry;
- Development of a set of tailored policy recommendations leading to the development and establishment of a national certification program.

The mentioned initiatives are intended towards the implementation of an industry wide energy efficiency standard, starting with the sector in question.

Component 3: Capacity building including development of toolkits

1. Awareness raising in industry through promotion campaign and development of toolkits (demand side)

An awareness raising campaign consisting of several specific initiatives will be developed and implemented, with specific focus on the beer brewing sector, with a view to demonstrate the technical and economic advantages of the improved cookers. Tailored toolkits will be developed and presented to industry decision-makers in order to demonstrate the potential for EE benefits and related economic and environmental benefits. Finally, specific training will be foreseen in order for a cadre of industry representatives to be equipped with the technical capacity and tools to implement, operate and maintain the EE measures.

2. Training on manufacturing, marketing and commercialisation (supply side)

Supporting this awareness raising initiatives at user's level, the technology providers will be trained in the manufacturing of high quality energy efficient equipment using local materials. Since the technology providers will need to be able to commercialise their product, they will be intensively supported in a commercialisation and marketing strategy.

Global Environmental Benefits: Implementation of energy efficiency equipment will lead to global environmental benefits delivered in the form of reduced CO₂ emissions from the avoided burning of traditional fuels (primarily wood) and an increased carbon sequestration (by reducing the cutting of wood). The expected level of reduced emissions will be estimated at the PPG phase based on the detailed forecast of technologies in target sub sectors.

B. THE CONSISTENCY OF THE PROJECT WITH NATIONAL/REGIONAL PRIORITIES/PLANS:

The project is consistent with the country's national priorities, since the country's energy policies, through different energy sector reforms, have been aiming for an efficient and reliable energy provision at a lower cost to the country, as also outlined National White Paper (LBN).

At regional level a new policy known as the Regional White Paper, was approved of and adopted on 12 January 2006 by the ECOWAS Authority of Heads of States. The overall goal is to use energy as a trigger in the achievement of the Millennium Development Goals (MDG), and specifically to reduce poverty. As part of this coordinated effort all members of ECOWAS are in the process of developing appropriate energy policies.

Institutional arrangements

The project leader will be the Ministry of Environment and the execution will be assured by regional Directions of the Ministry, in close cooperation with the other project partners.

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

The project is consistent with the GEF strategic programmes under the Climate Change focal area, and more specifically with:

- CC-SP-2 Industrial Energy Efficiency: the project will contribute to the sector transformation process in the use of energy efficient equipment, which will enable the Government to further establish the appropriate policy and regulatory framework and contribute to climate change mitigation through replication of such projects.

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

The GEF resources being requested for this project will be targeted towards establishing a market environment that will promote an increased use of energy efficient equipment in the targeted (sub)sectors. The GEF funding will contribute to (1) reducing GHG emissions through a significantly lowered use of wood resources in Burkina Faso; (2) developing a market by reducing institutional and awareness barriers that prevent an increased use of this fairly easy to produce and use equipment.

E. COORDINATION WITH OTHER RELATED INITIATIVES:

The project will be streamlined with the similar projects which are ongoing, most notably the FAFASO project, funded by the Netherlands and being implemented by GTZ. GTZ has been running the project to increase the use of improved cookers since 2005 (effective start 2006). This project aims to build upon the experience gained by GTZ's initiative, and specifically complements these efforts by focusing on the industrial sub sectors as mentioned. GTZ's initiative is called FAFASO (foyers améliorés for Burkina Faso) and has been focusing primarily on the use of improved cookers at household level. GTZ aims to scale up the use of the improved cookers throughout the country, but aims to do so primarily for households. Therefore the current UNIDO project, which will focus on a specific sector of industrial consumers (i.e. the beer breweries), a clear compatibility can be achieved with GTZ's efforts in scaling-up the overall use of improved cookers among different target groups throughout the country. The willingness of GTZ to coordinate both initiatives was demonstrated during UNIDO's mission in June 2010, and was afterwards formalised in an initial offer of collaboration. The details of the coordination and the partnership will be established during the project preparation phase.

GTZ has been active in different parts of the country, with a primary focus on Ouagadougou and Bobo Diulasso. A combination of UNIDO's and GTZ's efforts will be actively pursued by designing the project in line with GTZ's activities and timelines. The exact geographic target zone will be defined during the project preparation phase.

The project will also link into the GEF Strategic Program for West Africa - Energy Component, led by UNIDO. This regional harmonization and coordination will be undertaken through ECOWAS (the Economic Commission of West African States), of which Burkina Faso is a member. The present project will therefore liaise with ECOWAS which through its activities in promoting energy efficiency and renewable energy among its members is the most suited regional institution to organize the coordination and

harmonization between these GEF projects. Provisions to undertake this coordination will be part of the coordination mechanism of the programme.

F. THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT:

Without the support through GEF, the “business as usual” scenario will involve a continued reliance on the scarce wood resources, thus further increasing desertification. In this scenario, the fairly easily realisable energy savings would remain unexploited.

GEF assistance will catalyze the market based scale-up and replication of the use of the improved cookers by addressing barriers related to capacity building and awareness creation and increased appreciation of the technical feasibility and economic viability of the technology in question. The project is expected to lay the foundation for market environment for a wider use of (continually improving) efficient equipment, thus allowing the Government to scale up and replicate the project achievements across the country and throughout different sectors.

GEF involvement will trigger co-financing, mainly from multilateral agencies and the private sector. Multilateral agencies will also take advantage of the political commitment to energy efficiency and the established market environment to support viable and effective investments in energy efficient equipment.

G. RISKS THAT MIGHT PREVENT THE PROJECT OBJECTIVE FROM BEING ACHIEVED, AND RISK MITIGATION MEASURES THAT WILL BE TAKEN:

- **POLITICAL:** low government commitment to sustainable energy in general and the project in particular; **Potential impact:** high; **Probability:** very low. An efficient use of available energy (primarily wood) sources is a key priority in the country's policy strategy. Government representatives have been enthusiastic, proactive and reliable in the project preparation. **Management:** regular communication, close follow-up with national counterparts and clear allocation of roles and tasks will ensure smooth implementation.
- **TECHNICAL:** **Potential impact:** high; **Probability:** very low. The technical risks related to the components of demonstration and capacity building are negligible or non-existent. The proposed initiatives have been successfully carried out by UNIDO in different countries and environments. **Management:** On the capacity building initiative specific attention will be awarded to the technical robustness of the promoted equipment.
- **MARKET:** sector participant(s) are not interested in engaging in the project. **Potential impact:** high; **Probability:** low. The sector participants are striving to reduce energy costs as part of the rationalization and continued competitiveness of their business. There might be a risk in not being able to identify and enthuse a sufficient number of sub sector participants and thus for the project to not attain a sizeable impact. **Management:** The preparation phase will play a major role in mitigating this risk through a tailored dialogue with sector associations and achieve their active involvement.
- **FINANCIAL:** Funding / credit constraints from financing institutions might prevent users to invest in energy interventions. **Potential impact:** medium; **Probability:** medium. Lack of available funds could have an impact on project outputs. **Management:** Careful selection of suitable partner enterprises will allow minimizing or eliminating this risk.
- **IMPLEMENTATION:** **Potential impact:** high; **Probability:** very low. UNIDO has significant experience in the design and implementation of this type of projects, including first hand knowledge of the key success and failure factors to be taken into account. **Management:** This risk will be addressed through detailed activities for each of the project components in close collaboration with the national counterparts. A thorough stakeholder negotiation process is planned for the preparation phase in order to streamline and refine the project.
- **SUSTAINABILITY:** The realisation of pilot projects supported by tailored capacity building efforts for relevant stakeholders will demonstrate the potential of the improved cookers to make commercial sense and form the conditions for an increased uptake of energy efficiency measures in launching the given (sub)sector to a path of low carbon growth.

H. THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The cost effectiveness of the project will be determined during the project preparatory phase.

I. THE COMPARATIVE ADVANTAGE OF UNIDO:

The GEF Council document GEF/C.31/rev.1 gives UNIDO comparative advantage for the Strategic Programme(s) proposed under the project. The project has a strong focus on productive capacities based on the use of energy efficiency equipment, i.e. a strong linkage

between the technologies to be applied and productive activities, which is clearly part of UNIDO's overall mandate. In addition, UNIDO is leading the GEF Programmatic Energy project for West Africa that cover this and similar projects.

PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT AND GEF AGENCY

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT ON BEHALF OF THE GOVERNMENT:

NAME	POSITION	MINISTRY	DATE
Mr. Mamadou Honadia	GEF Operation Focal Point	Ministère de l'Environnement et Cadre de Vie	15 June 2010

B. GEF AGENCY 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 (M-D-Y)	Project Contact Person	Telephone	Email Address
Mr. Dmitri Piskounov Managing Director UNIDO GEF Focal Point	<i>R. Vujacic (OIC)</i>	06-17-10	Mr. Mark Draeck	+43-1- 26026-5317	m.draeck@unido.org

