



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: FULL-SIZED

TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT INFORMATION

Project Title:	Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses		
Country(ies):	Ethiopia	GEF Project ID: ¹	5501
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	5200
Other Executing Partner(s):	Federal level: <input type="checkbox"/> Environment Protection Authority (EPA), Ministry of Water and Energy, Ethiopian Rural Energy Development and Promotion Centre Regional level: <input type="checkbox"/> Dire Dawa Administration, Somali, Harari, Oromia and Amhara National Regional States, Environmental and Water and Energy Bureaus, and Addis Ababa University	Submission Date: Resubmission Date:	July 22, 2013 August 29, 2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	60 months
Name of parent program (if applicable): <ul style="list-style-type: none"> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> • For PPP <input type="checkbox"/> 	n/a	Project Agency Fee (\$):	\$ 388,719

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK²:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-3 Renewable Energy: Promote investment in renewable Energy technologies	GEFTF	2,620,781	22,150,000
CCM-2 Promote Market Transformation for Energy-Efficiency in Industry and the Building Sector	GEFTF	1,471,000	15,850,000
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
Total Project Cost		4,091,781	38,000,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the reference attached on the [Focal Area Results Framework](#) when completing Table A.

B. INDICATIVE PROJECT FRAMEWORK

Project Objective: To promote and encourage significantly greater use of renewable energy technologies for household and productive uses in rural communities in Ethiopia						
Project Component	Grant Type³	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Strengthened National Rural Energy, Regulatory, and Legal Framework	TA	Favorable legal and regulatory, environment created for small scale off grid renewable energy investments in rural areas.	1.1 Development of Technical Standards to support the development of small scale solar technologies 1.2 Development of Technical Standards to support the development of the Improved Cookstoves market 1.3 Enforcement of technical standards for small scale solar technologies and improved cookstoves 1.4 Specific regulations in place to provide tax breaks for producers of small scale solar technologies and improved cookstoves 1.5 New regulations to further strengthen the capacity of the EREDPC to promote and enforce the increased use of renewable energy in village communities	GEFTF	500,000	2,800,000
2. Rural Public Awareness Campaign on Renewable Energy Technologies	TA	Greater awareness among rural populations about the benefits of renewable energy for household and productive uses	2.1 Public Awareness Strategy Developed for Small Scale Renewable Energy 2.2 Public Awareness Campaign for small scale RETs designed and implemented 2.3	GEFTF	460,000	2,500,000

³ TA includes capacity building, and research and development.

			Showcasin g of specific RETs introduced through technology roadshows 2.4 Short videos, newspaper articles, and presentations developed and disseminated widely.			
3. Sustainable Financial Mechanism (SFM) for RETs for rural households - Clean Start.	TA and Investment	Investment in small scale RETs technologies supported by this project increased by at least 2 MW for solar energy and by at least 100,000 additional improved cookstoves SFM (Clean Start) continues to operate successfully at the end of this project	3.1 Memorandum of Understanding (MoU) for operating modalities for working with Clean Start Programme 3.2 Clean Start Programme to support small scale solar technologies (solar lamps, solar hot water, solar cookers) implemented and in place 3.3 Clean Start Programme to support Improved Cookstoves implemented and in place. 3.4 Clean Start Lessons Learned Publications prepared and published on the Solar Technologies and Improved Cookstoves Programmes	GEFTF	TA: \$600,000 Inv: \$1,500,000 Total: \$2,100,000	TA: \$1,300,000 Inv: 24,000,000 Total: \$25,300,000
4. Business Incubator to Promote Greater Entrepreneurship for Investment in RETs	TA	Greater number of small scale entrepreneurs and manufacturers are successfully producing and profitably selling RETs both for household consumption and productive uses.	4.1 Business Incubation Unit (BIU) within the Ethiopian Rural Energy Development and Promotion Center (EREDPC) established. 4.2 Business Training Courses for Entrepreneurs	GEFTF	TA: \$242,000 Inv: \$600,000 Total: \$842,000	TA: \$400,000 Inv: 6,000,000 Total: \$6,400,000

			(Business Plan, Marketing Strategy, Capital Raising) conducted. 4.3 Request for Proposals (RFP) carried out. 4.4 Selection of Entrepreneurs conducted (once per year) 4.5 Awarding of grants of \$6000 to 100 entrepreneurs through the BIU 4.6 Business Mentors assigned. 4.7 Monitoring and Reporting of Results conducted. 4.8 BIU continues and is sustained beyond the lifetime of the project			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
		Subtotal			3,902,000	37,000,000
		Project Management Cost (PMC) ⁴ (Direct project cost of \$ 20,000 included in PMC)		GEFTF (select)	189,781	1,000,000
		Total Project Cost			4,091,781	38,000,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Environment Protection Agency	In kind	2,000,000
National Government	Ministry of Water and Energy	In kind	4,000,000
National Government	Ethiopian Rural Energy Development and Promotion Center (EREDPC)	In Kind	2,000,000
National Government	Ethiopian Rural Energy Development and Promotion Center (EREDPC)	Cash	2,000,000
GEF Agency	UNDP	In kind	400,000
GEF Agency	UNDP	Cash	600,000
Foundation	Barr Foundation	Cash	1,800,000
Foundation	Global Alliance for Cookstoves	Cash	1,500,000

⁴ To be calculated as percent of subtotal.

Foundation	Horec	Cash	5,000,000
Government	Government of Norway/NORAD – Energizing Development	Cash	8,000,000
Non Government Organization	Hilti Foundation	Cash	500,000
Non Government Organization	Solar Energy Foundation	Cash	700,000
Academic Institution	Addis Ababa University	Cash	500,000
Private sector	Private sector/ (includes UNCDF Clean Start Programme)	Cash	9,000,000
(select)		(select)	
Total Cofinancing			38,000,000

D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				0	0	0

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

E. PROJECT PREPARATION GRANT (PPG)⁵

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

	Amount Requested (\$)	Agency Fee for PPG (\$) ⁶
• No PPG required.	-- 0--	--0--
• (up to) \$50k for projects up to & including \$1 million	_____	_____
• (up to)\$100k for projects up to & including \$3 million	<u>\$100,000</u>	<u>\$9,500</u>
• (up to)\$150k for projects up to & including \$6 million	_____	_____
• (up to)\$200k for projects up to & including \$10 million	_____	_____
• (up to)\$300k for projects above \$10 million	_____	_____

PPG AMOUNT REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY

Trust Fund	GEF Agency	Focal Area	Country Name/Global	(in \$)		
				PPG (a)	Agency Fee (b)	Total c = a + b
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total PPG Amount				0	0	0

⁵ On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

PART II: PROJECT JUSTIFICATION⁷

PROJECT OVERVIEW

A.1. Project Description

Global environmental problems, root causes and barriers that need to be addressed

1. Ethiopia is an early stage emerging economy located in Eastern Africa. The country has the second largest population of any country in Africa with a total population of 91 million and the population is growing at about 2.8 annually. Ethiopia is 1,100,000 square km and its capital is Addis Ababa. The government of Ethiopia is committed to making Ethiopia a middle income country with per capita income of at least \$1,125 per person by the year 2025. Ethiopia's population is predicted to top 120 million by 2025 with the median age remaining under 20. Ethiopia has eleven regional administrative state governments and city council administrations. At the federal level, the Ministry of Energy and Water (MEW) is responsible for the overall development of the energy sector in the country. Within the Ministry of Water and Energy, a Rural Electrification Fund has been established with the goal of debt financing small-scale rural energy initiatives. Policy issues related to rural energy are the responsibility of the Ethiopian Rural Energy Development and Promotion Centre (EREDPC). This department is focused on the issue of rural electrification, primarily through the expansion of the national grid. To date, the EREDPC has played a limited role in the promotion of small scale off grid renewable energy technologies and access to modern energy services. Responsibility for the development and deployment of small scale renewable energy technologies lies within the responsibility of the Ministry of Water and Energy which has led the development of the off grid rural electrification master plan. Ethiopia has nine states and sixty-three sub-regions. Within the sub regions there are over 500 Wareda or local administrations.

2. Ethiopia's economy and the wellbeing of its people are closely linked to agriculture and the use of natural resources. Climate change compounds a number of challenges facing natural resources management in Ethiopia. Effective mitigation of and adaptation to climate change and the construction of a Climate Resilient Green Economy in Ethiopia will depend on many factors which includes the successful promotion of household rural renewable energy. Ethiopia faces a fast growing demand for energy and an unsustainable rate of fuel wood consumption. Ethiopia's energy consumption is predominantly based on biomass energy sources (94%). This includes fuel wood, charcoal, branches, leaves and twigs. Charcoal is currently made, sold, transported, and used as a major source of fuel in rural areas despite a recent Government ban on its use. The prevalence of charcoal sales along the roadsides indicates that enforcement of this ban is weak, if not lacking altogether.

2. In a 'business as usual' scenario, this increased rate of deforestation and degradation is expected to worsen over the coming decades, as the population grows at 2-3 per cent per year. Firewood consumption is expected to increase in the same proportions by at least 2-3 percent per year. Unsustainable fuel wood consumption prevents forests from regenerating, and leads to increased vulnerability to climate change. However, the Ethiopian government has recently started aggressive soil conservation and reforestation efforts. These measures are a step in the right direction but do not stop the problem of widespread clearcutting of forested land without any controls or restrictions currently in place. Ethiopia signed the United Nations Framework Convention on Climate Change in 1992 and ratified the Kyoto Protocol in 2005. Its annual GHG emissions are 150 million tonnes CO₂e, and its per capita emissions are low, at 2 tonnes CO₂e per capita compared to an average of more than 10 tonnes CO₂e in Europe and over 20 tonnes CO₂e in the United States. Ethiopia aims to become carbon-neutral by 2025 and the development of renewable energy solutions forms an important part of the Ethiopian Climate Resilient Green Economy Strategy. In addition, Ethiopia has an off grid rural electrification master plan which promotes the development and deployment of small-scale renewable technologies in areas of the country where extension of the grid is not practical or economically viable.

4. This project aims to reduce Ethiopia's energy related CO₂ emissions by promoting renewable energy and low Green House Gases (GHG) producing technologies as a substitute for fossil fuels and non-sustainable biomass utilization in the country with a focus on rural household appliances for cooking, lighting and heating. The activities proposed in the project are designed to remove barriers that hamper the wide-scale use of off-grid renewable energy technologies in households and productive uses in rural areas of Ethiopia where extending the grid is simply not feasible in the short run and where the ability to pay for larger scale solutions is often limited. The barrier removal activities of this project aim to accelerate the provision of small scale renewable energy technologies to rural communities in Ethiopia which without this project would otherwise not have had the opportunity to benefit from such services, thereby providing them with access to modern energy. Thermal energy supply for households in rural areas is mostly still by users – (i.e - households collect and transport their fuel requirements for cooking and baking.) Very little of the supply in rural areas is commercial (purchased). There are essentially no intermediaries for fuel supply of thermal fuels in rural areas. In urban areas the largest share of the energy used for cooking and baking is purchased. Biomass fuels are brought in by collectors from urban peripheries (for wood) and further away (for charcoal).

Status of the Energy Sector in Ethiopia

5. The vast majority of Ethiopia's national energy needs are derived from fuel wood, crop and animal waste and human and animal power. Only 5% comes from electricity and 95% of this is generated by hydro-power. This means that the energy intensity of the Ethiopian grid is very low. The energy sector in Ethiopia can be generally categorized into two major components: traditional and modern (traditional biomass usage and modern fuels: i.e. electricity and petroleum). There is a high level of dependence on imported fuel. As more than 80% of the country's population is engaged in the small-scale agricultural sector and lives in rural areas, traditional energy sources represent the principal sources of Energy in Ethiopia. At the national level it is estimated that sold biomass in its various forms makes up 88% of total energy consumed in the country from wood and charcoal used mainly for heating and cooking. Concerning electricity generation, renewable energy in Ethiopia has focused on large hydropower. However, much of the small hydro-power, solar and wind potential in Ethiopia is yet to be developed. The present energy mix greatly increases vulnerability to climate change and the poorest segment of the population is the most vulnerable. For example, reliance on fuel wood and charcoal brings widespread land degradation, exposing bare soil to erosive rainfall and gully erosion. The power generation sector only accounts for very low GHG emissions (less than 3% of total GHG emissions) as large hydropower accounts for over 90% of total power generation capacity in Ethiopia.

6. Domestic energy requirements in rural and urban areas are mostly met from wood, charcoal, animal dung and from agricultural residues. These domestic energy requirements contribute to increased deforestation and loss of soil nutrients and land degradation. In urban areas, access to petroleum fuels and electricity has enabled a significant proportion of the population to employ these sources for cooking and other domestic energy requirements. However, in rural areas, some 30 million people are living on less than one dollar per day and there is a lack of ability to afford access to modern energy. Likewise the cost of petroleum fuels for cooking particularly kerosene is steadily rising with government not subsidizing these fuels.

7. Kerosene as a household fuel is becoming dirtier and more dangerous as it is less highly refined, thus containing benzene and other aromatics that are dangerous carcinogens. Most kerosene stoves in the Ethiopian market are cheaply made stoves with low efficiencies (<35%). Kerosene has increased 210% in retail price in the past three years, and is likely to continue to increase in price as the price of petroleum rises. There are no restrictions on the ability of local communities to cut and collect fuel wood. Due to a lack of awareness, the additional costs involved and the limited ability of local communities to pay, the application of more efficient appliances is severely limited. The numbers of renewable energy technologies currently in use such as solar lamps, solar hot water systems, solar cookers or improved cook stoves based on ethanol/biogas is very small. However, their potential, given that over 70 million people in Ethiopia lack access to modern energy services, is very large.

8. While affordability remains a big problem, small scale renewable energy offers the opportunity to reduce greenhouse gas emissions while at the same time providing for the basic energy needs of rural communities. Essential rural energy needs such as hot water, cooking, and lighting can all benefit from the introduction and dissemination of renewable energy technologies in a sustainable manner. Despite the large potential, however, small scale renewable energy solutions are yet to achieve any significant impact in substituting away the dependence of rural communities on wood, charcoal, and animal dung for their basic energy needs including heating, hot water, lighting, and cooking. The rate of electrification in rural Ethiopia is less than 1%. In many parts of the country extending the grid is simply not practical due to the costs involved. Solar lanterns offer a low cost fully renewable alternative to burning of wood or charcoal as do small scale off grid solar PV systems. Yet, the use of solar PV systems remains very low due to their unaffordability to the majority of the rural population. Solar PV systems are even more expensive costing at least \$750 for a small unit and rural populations typically cannot afford solar power without donor funding which brings into question the sustainability of such initiatives.

Problem Statement: The Government of the Federal Democratic Republic of Ethiopian has a vision to achieve middle-income status by 2025 and to create a climate resilient green economy with zero net carbon emission. In order to meet this challenge, the country needs to reach its economic goals in a sustainable manner which includes increased levels of access to modern energy. Fuel wood use, by far the largest source of rural energy in Ethiopia and the second largest contributor to GHG emissions, can be reduced by the introduction of small scale renewable technologies, thereby increasing household income and promoting sustainable development at the same time. However, a number of significant market barriers associated with low (or no) return on investment, high up-front costs and lack of access to capital, high risk and non financial barriers (e.g. lack of information and capacity) make it difficult to attract investment that increases access to modern energy while creating new economic opportunities. As a result, small scale renewable energy solutions have not taken off in rural areas in Ethiopia. This project will aim to remove these barriers and help transform the market in Ethiopia for small scale renewable energy technologies in a sustainable manner.

Root Causes and Barriers

9. Ethiopia faces four significant barriers which are preventing the widespread dissemination of small scale renewable energy technologies. They are as follows:

Barrier 1 – Need for Strengthened National Regulatory and Legal Framework for Rural Renewable Energy in Ethiopia

A key issue concerning the National Energy Policy of Ethiopia is that there is no authority or Agency responsible for introducing rural energy initiatives other than for expanded grid electricity and petroleum products. In addition, The Climate Resilient Green Economy (CRGE) strategy for Ethiopia is mainly focused in the energy sector on expanding electricity generation from renewable energy for domestic and regional markets and extending the grid. The main priority is to boost generation capacity mainly from hydropower energy, but also from geothermal, wind and solar energy while at the same time extending the electricity grid. There is no national regulatory and legislative framework for renewable energy for the rural sector and no incentives to specifically promote and encourage renewable energy for rural populations. In addition, there is no legislation or regulations currently enacted which provides up to date technical standards for small scale renewable energy technologies or for improved cookstoves. The Renewable Energy Fund (REF) of the Ministry of Water and Energy with a capitalization of under \$2M and limited capacity does not have the capacity to finance large number of smalls scale renewable projects, working with micro-entrepreneurs. It is

important to strengthen the institutional capacity of EREDPC and of the REF to promote small-scale renewable energy solutions to rural communities and to enforce policies and regulations. In particular, the new and updated technical standards need to be enforced. In the absence of a coherent national legislative and regulatory framework for rural energy, there is a significant barrier to the promotion of renewable energy for rural populations.

Barrier 2 –Lack of Public Awareness about the Benefits of low cost renewable energy household appliances:

There is a lack of awareness among rural populations in Ethiopia on the possibilities for gaining access to energy, including renewable energy. Public awareness campaigns have been more typically targeted at urban areas and manufacturers of appliances have also focused on urban populations where the ability to pay for renewable energy technologies is higher. The lack of awareness is made more acute by the lack of appliances such as televisions and radios in some rural communities making these advertising channels not available. Public awareness campaigns need to be carefully thought out and targeted in order to best overcome these barriers. It is important for the campaigns to solicit feedback and comments in order to better understand what is effective. It is also important to involve the private sector in public awareness campaigns which is why there is some \$2.5 million of cash co-financing from the private sector under this component. These funds represent the marketing budgets of all the entrepreneurs and private companies who will be involved in the large scale public awareness campaigns.

Barrier 3 –Lack of Affordability of Small Scale Renewable Energy Solutions and lack of a Financial Support Mechanism to help accelerate the dissemination of household renewable energy appliances:

Lack of affordability of household energy related appliances among rural populations where the majority of people earn less than 1 USD per day is a significant issue. A financial support mechanism (e.g – performance grants, revolving fund, investment fund, microcredit scheme, carbon finance mechanism etc ...) which would help to subsidize the cost of these appliances or provide households with access to credit is needed to enable them to make purchases that would normally simply not be affordable. The lack of performance of the Renewable Energy Fund (REF) over the past ten years (pipeline of over 240 projects but disbursement of under \$2 million USD in ten years) simply shows the difficulty of implementing a private sector approach in rural Ethiopia where inability to pay is such a significant barrier. In addition, the development of business skills and small-scale entrepreneurship will help to ensure that the solutions are sustainable. The barrier that many of these appliances are unaffordable to people in Ethiopia living in a rural environment is a significant one and should not be underestimated. Working with an existing financial mechanism, the UNCDF-UNDP Clean Start Programme which focuses on micro-loans will increase the chances of the project successfully overcoming the affordability barrier. Clean Start combines assistance with financing arrangements, quality assurance for renewable energy technologies, and targeted advisory services to bring energy to rural poor. The experience of the Clean Start Programme will be critical in helping to overcome the financial barriers.

Barrier 4 – Lack of entrepreneurs involved in supplying renewable energy technologies to rural communities in Ethiopia:

There are four main reasons why there are a lack of entrepreneurs and small businesses successfully supplying renewable energy technologies to rural communities in Ethiopia. The first reason is that the urban market is more lucrative with urban customers having higher incomes and higher ability to pay as compared to the rural market. The second reason is that the rural setting isolates many rural communities and there is

additional time and costs (low economies of scale) involved in travel to these rural areas. Economics does not make it attractive to establish shops or supply centres in remote rural communities. Thirdly, donors destroy the market for entrepreneurs interested in supplying rural communities with energy related appliances. No entrepreneur can compete with this. Donors who give away appliances for free are a much more attractive opportunity for rural communities than entrepreneurs or business people who sell the appliances. Donors need to stop giving away appliances in order for the market for small scale renewable energy appliances in rural areas to develop. The fourth reason is a lack of business skills and start-up capital for entrepreneurs to enter the market. Component 4 aims to overcome this barrier and assist local entrepreneurs with developing successful small scale renewable energy businesses. Each entrepreneur selected for the programme will be provided with \$6,000 grant in cash for salary (\$3000 over 12 months) and technologies (\$3000 grant). The rest of financing requirements will need to be met by micro-credit and from co-financing. The cost to GEF of supporting 100 small scale RETs at \$6,000 per entrepreneur is estimated as \$600,000.

The baseline scenario and any associated baseline projects

10. Rural communities in poor countries are key to increased economic production and to social progress. Hence, this project focuses on rural renewable energy where the barriers are the highest and where the baseline scenario shows that there is a distinct lack of progress in promoting sustainable renewable energy solutions over many years. In nearly all rural communities in Ethiopia, there is severe lack of modern energy access in local households who make up 90% of the population of the country (i.e – over 70 million people). The problem is compounded by the fact that both the National Energy Strategy of Ethiopia and the CRGE strategy of Ethiopia focus on extending the grid and on-grid renewable energy investments as the solution to the energy demands of the rural poor and where firewood, charcoal, and animal dung is cheap and readily available. Secondly, many donors have adopted a traditional grant only with no attention to sustainability approach to renewable energy which does not overcome the key financial barrier that most renewable energy populations cannot afford renewable energy technology solutions. Nevertheless, there are a number of ongoing baseline projects which are aimed at improved energy access for the rural population focusing on off-grid applications. These projects are as follows:

BARR Foundation - The BARR Foundation is a US Foundation based in Boston which has as its mission to enhance educational and economic opportunities to achieve environmental sustainability, In Ethiopia, the Foundation has an ongoing \$1.8 million USD project working with the Ministry of Water and Energy focused on supporting the urban and rural market for improved cook stoves in Ethiopia. This work, which started in 2012, has involved supporting market assessment work and support for testing the design of locally manufactured improved cook stoves with the goal of creating a strong domestic market.

The Global Alliance on Clean Cook stoves (GACC) is a Washington based NGO which is a public-private initiative to save lives, improve livelihoods, empower women, and protect the environment by creating a thriving global market for clean and efficient household cooking solutions with a goal of 100 million cook stoves adopted globally by 2020. In Ethiopia, the GACC has prepared a market snapshot of the cook stoves market in 2012. It concluded that the goal should be to develop a market where customer demand pulls improved cook stove products through the value chain. A joint and coordinated approach is required from multiple stakeholders to achieve this.

HoRec - EU Energy Facility Integrated Approach to Rural Household Energy in Ethiopia Project (2011-15) – This project, managed by the Horn of Africa Regional Environment Centre (HoREC) aims to promote renewable energy technologies in rural communities in Ethiopia. The primary technologies chosen for this project are: fuel saving stoves, solar lanterns, solar cookers, solar home systems, plant oil cookers and biogas technology. Project partners and associates in attendance included representatives from the Ministry of Water and Energy, Oromiya Water, Mineral and Energy Bureau, GIZ, ICCO-Kerk in Actie, ENDA, SNV, Solar

Cooking Netherlands, SEDA, PISDA, ORDA, FfE, REST and ANCEDA. The project is focused on support for demonstration projects and is fully complementary with this planned GEF project.

National Biogas Programme (NBP) of Ethiopia – This programme was established in 2007 and works with EREDPC to promote the uptake of domestic biogas in selected regions in Ethiopia. The programme operates on a cost-sharing basis with other investors and donors. Results to date include over 1200 biogas plants constructed and the programme is operating in 37 woredas. The model from the national biogas programme has been studied for its application to the national investment programme on improved cook stoves.

GiZ Energy Coordination Office (ECO) – Working with the Ministry of Water and Energy the ECO has since 2010 been working to promote renewable energy in Ethiopia. A key achievement includes that photovoltaic solar systems have been installed in 100 off-grid and remote public health centres and four community centres. In addition, Ethiopia's first solar technology training centre has been set up at Selam Vocational Training Centre, in Addis Ababa, in collaboration with the Ethiopian Alternative Energy Promotion and Development Centre, four pilot micro-hydropower plants have been constructed in three villages of the Southern Nations, Nationalities and People's Region, with a total capacity of 125 kW, and to date more than 650 small-scale producers of improved, energy-efficient cooking stoves have become established in 310 districts and seven regions which has led to the sale of an additional 500,000 cook stoves. This project will work closely with the GiZ Energy Coordination Office.

UNDP National Investment Programme for Improved Cookstoves – This initiative was launched in April 2012 and it aims to accelerate the deployment of improved cook stoves in Ethiopia with the goal of 9 million disseminated by the end of the year 2015.

UNCDF-UNDP Clean Start Programme – The Clean Start Programme is a run jointly by the UN Capital Development Fund and by UNDP. The purpose of the Clean Start programme is to provide financing opportunities to the poor in developing countries with a focus on those segments of the population who typically would not have access to credit. The Clean Start programme is operating in Ethiopia but has not yet developed any comprehensive programme to support off-grid renewable energy solutions. The types of support Clean Start can and does provide includes support for developing business plans, risk capital grants, brokering partnerships with energy suppliers and multi-national financial institutions, support for financial product development and roll-out, strengthening energy supply chains, and support for developing energy projects that can benefit from additional revenues from carbon finance. This makes the Clean Start programme an ideal partner for this project for supporting the activities related to the financial support mechanism (component 3) and business incubation unit (component 4).

The proposed alternative scenario, with a brief description of outcomes and components of the project

11. In the alternative scenario proposed by this project, a more holistic and market based approach is undertaken towards promoting renewable energy technologies in rural communities in Ethiopia. This more holistic approach would clearly not take place without the GEF project. The four components described as follows consisting of a combination of de-risking instruments (Component #1) and market-enabling activities (Component #2 and Component #4) that will combine with a financial support mechanism (Component #3) in order to help transform the market for off-grid renewable energy technologies in rural communities. The renewable energy technologies that have been selected by this project have been chosen firstly because they are small scale and secondly because they are the most suitable (and affordable) for rural communities in Ethiopia. The initial list of technologies includes improved cook stoves, solar cookers, solar hot water systems, and solar lanterns. This list of technologies has been chosen in consultation with the Ethiopian EPA and technologies needed to be affordable to be selected. By affordable, we mean that they need a payback period of 5 years or less and need to cost no more than five times annual GDP which is $5 \times \$513 = \$2,565$. The following table demonstrates the cost and the average number of months/years it will take for an Ethiopian person who earns \$43 per month to pay back the cost of the technology.

Technology	Cost Range per Unit	Payback Period for Person Earning \$43 per month
Improved Cookstoves	\$10 - \$100	0.25 – 2.5 months
Solar Cookers	\$7 - \$120	0.16 – 3 months
Solar Hot Water Systems	\$2,500+	5 years
Solar Lanterns (300W system)	\$50 - \$300	1.25 – 7 months

This initial list of technologies has been selected following consultations with the Ethiopian EPA. The list will be reviewed during the PPG phase of the project development in close consultation with all the key project partners. Solar PV technology will also be explored during the project preparation but typically the payback (without subsidy) of a Solar PV system is 8-10 years or more meaning that based on the initial analysis solar PV is simply not affordable. To date, nearly all Solar PV systems that have been installed in Ethiopia have been with grant only money. The alternatives to these technologies are most often fuelwood and charcoal which is why we believe that it does not make sense to compare the cost of the selected RETs with the cost of alternatives. The key question which needs to be asked is what is the affordability of the technology in question and what is the payback period and not what is the cost versus the alternative.

Component 1: National Rural Energy Regulatory, and Legal Framework

12. Ethiopia already has a Rural Renewable Energy Policy Framework and an updated energy policy is being developed in 2013. Under this framework, Ethiopia has a vision to become a renewable energy hub by 2015 and for the energy sector to play a significant role for socio-economic development and transformation of the country through provision of a sustainable, reliable, affordable and quality energy service for all sectors in an environmentally benign manner. While a main goal of the updated national energy policy is to promote and support expansion of the grid, there is also an emphasis on promoting small scale renewable energy technologies and improved cookstoves for rural household use. Therefore, this component one involves place the strengthening of the legislative and regulatory basis to support the widespread dissemination of small scale renewable energy technologies by focusing on amendments to legislation, new regulations in a manner which is consistent with the new energy policy.

In particular, this work will require the development of technical standards to promote the further development of the market for small scale solar technologies and for improved cooktoves. The work undertaken under this component will be based upon a comprehensive gap analysis assessment taken out during the project preparation grant phase which means that there may be some adjustments to this component during the full project preparation. The design, manufacture and sale of the new more efficient cookstoves and small scale RETs will reduce pressure on the natural environment from demand from fuelwood and charcoal and thereby enhance climate resilience. New technologies which meet minimum technical standards and requirements which will be put in place under component one of the project are more likely to be robust and climate resilient than old technologies.

In Ethiopia, rural communities are key to increased economic production and to social progress. The provision of energy services is at the core of any serious endeavor to confront the significant problems that rural communities face in all developing countries and Ethiopia is no exception. A stronger enabling environment in the context of the participating rural areas is required to support and promote small scale renewable energy technologies in Ethiopia and to create the right mix of incentives for rural communities to seek alternative sources for their energy needs.

On the supply side, removing all import taxes, duties, and levies on imported renewable energy technologies as well as providing tax breaks to domestic producers of renewable energy technologies would help in promoting the wide spread dissemination of small scale renewable energy technologies might help. In addition, the institutional capacity to support the national policy on rural energy in Ethiopia needs to be strengthened through the enhancement of the capacity of the Ethiopian Rural Energy Development and Promotion Centre (EREDPC) to raise awareness on the benefits of renewable energy technologies to local

communities and to promote and enforce the increased use of renewable energy in village communities in a manner which is consistent with Government policies. The expected outcomes of this component will be that a strengthened regulatory and legislative basis is in place to support rural energy in Ethiopia and new legislation is adopted to support this policy and these new policies and legislation will de-risk the opportunities to invest in renewable energy and underpin the renewable energy market transformation that this project hopes to accelerate.

Component 2: Rural Public Awareness Campaign on Renewable Energy Technologies

13. Under this component a public awareness campaign (supported with cash both from GEF for general awareness and cash from private sector partners for specific product based marketing) focused on the benefits of improved cook stoves and small scale renewable energy technologies such as solar cookers, solar lanterns, and solar hot water cookers will be launched. The public awareness campaign will specifically aim at rural populations with a specific focus on the highlands areas. GEF support will focus on general awareness raising activities and designing the public awareness. It will not focus on the promotion of specific brands or technologies. Private sector funding (as \$2.5M co-financing) will focus on marketing and awareness raising activities for specific products and technologies. In this manner, the GEF money and the private sector funds will complement each other. The Ethiopian highlands, owing to their moderate and friendly climate and the absence of some of the most deadly tropical diseases that characterize the lowlands, have attracted most of the human and livestock population. Nearly 50% of the Ethiopian population lives at altitudes above 2200m and 89% in altitude of 1400m and over. It is thus only one tenth of the total population that inhabits areas with an altitude below 1400m. While this project will be national in its scope, it makes sense to focus on the highlands areas of Ethiopia given that the highlands have a higher density of human population, meaning that there is the potential to achieve greater impact. Taking into account that in many highlands areas there will be people without access to televisions, radios, or internet the approach to public awareness raising will incorporate technology road shows organized by the project. A technology roadshow is a trip of several days which will involve various private sector companies involved in the manufacture, distribution and/or sales of small scale renewable energy technologies. Accompanying the technology roadshow should be a representative of the Cleanstart Programme (for financing of projects). The purpose of the technology roadshows is to raise awareness of the benefits of small scale renewable energy technologies and to facilitate sales. This 'technology roadshow' approach will help demonstrate the advantages of small scale renewable energy solutions for basic energy needs. Further analysis on which areas the public awareness component of this project is to focus and how it should be designed will be undertaken as part of the PPG phase. CSOs, the public and indigenous peoples will be involved in component 2 of the project on increased public awareness. In this component, the project will seek to work with larger companies also, not only the micro-entrepreneurs targeted under component 3 and component 4 of the project.

Component 3: Sustainable Financial Mechanism for Rural Household Renewable Energy Solutions

14. Component 3 of the project is aimed at supporting the domestic market for household renewable energy appliances in Ethiopia. Therefore the financial support mechanism will only be available to domestic micro green enterprises and community associations. Financial support mechanisms can come in different forms such as subsidies, performance grants, loan guarantees, microcredit schemes, carbon finance mechanisms (e.g – Nationally Appropriate Mitigation Action(s) and/or programmatic CDM projects) and investment funds/revolving funds. Given the lack of cash available to rural populations in Ethiopia it is important to design a sustainable financial mechanism which is realistic and which has the possibility to be scaled up in the future, if and when it proves to be successful. For this reason, the PPG phase of this project development will examine the best modality to establish a sustainable financial mechanism in the project. Following discussions and analysis, it is recommended to work with the UNCDF-UNDP Clean Start Programme (<http://www.uncdf.org/en/cleanstart>) which is a \$22 million USD project which aims to improve access to modern energy and reduce greenhouse gas emissions by assisting poor households and micro-entrepreneurs to obtain access to sustainable low-cost decentralized clean energy supplies through micro-finance loans focused on pilot countries in Africa. The Clean Start Programme is operational in Ethiopia but it does not yet have any

comprehensive programme in place and operating successfully to provide support for off-grid renewable energy solutions. Under Clean Start, a combination of focusing on the appropriate financing arrangements, targeted quality assurance, and technical advisory services is viewed as the best means of promoting a market for small scale entrepreneurs to develop successful businesses related to small scale solar technologies and for improved cookstoves. The Clean Start Programme will focus on the provision of financing arrangements and low cost loans which will help enable the entrepreneurs under component 4 of the project to be successful and which will also help rural communities with financing arrangements under the project.

The choice of partner for the financial support mechanism has been selected as the Clean Start Programme for three reasons. Firstly, the Programme is already active in Ethiopia which should make it easier to work with a programme which is already on the ground. Secondly, UNDP is already a core partner of Clean Start with UNCDF which should make it much easier for this project to cooperate with Clean Start. Thirdly, the Clean Start Programme focuses on micro loans for the rural poor and has less focus on grid connected energy sector projects. This makes Clean Start an ideal choice of partner for this project. Sustainability is also enhanced by working with Clean Start due to the fact that even after the UNDP GEF project will close, the Clean Start programme will continue. The selection of the Clean Start mechanism should be reviewed, in discussion with the Ethiopian EPA, as part of the further development of this project during the PPG stage in order to ensure and get confirmation from all stakeholders and partners. One possibility that will be explored during PPG phase will be to explore the development of a NAMA with Cleanstart

Component 4: Business Incubator to Promote Greater Entrepreneurship for Investing in Renewable Energy Technologies

15. Component 4 recognizes that market based approaches offer the best possibilities for scaling up investment in small scale renewable energy solutions and are the most sustainable. It is important to promote entrepreneurship and commercialization and mass production. This will allow domestic producers of small scale renewable energy technologies to benefit from economies of scale and bring down the prices of improved appliances. For example, in the case of the improved cook stoves, it is important that they will be manufactured in Ethiopia and meet the minimum technical standards as developed under component one of the project. As improved cook stoves using liquid fuels or solar cookers enter the market they will create demand for Ethiopia's domestically produced ethanol. This, in turn, will encourage the production of more ethanol in Ethiopia and the expansion of ethanol distillation capacity, which is an objective that has recently been embraced by the Ethiopian government. Component 4 will therefore set out to support entrepreneurs entering the market with venture capital to launch their new businesses. It is initially envisaged that each entrepreneur (100 entrepreneurs selected via tender) will be given \$6,000 seed funding for one year salary (\$3,000) and for a technology grant (\$3,000). It will be important to make sure funding for salary is provided on a monthly basis and not up front in one payment to increase chances of success. Matching co-financing will be a requirement of participation meaning at least \$6,000 of co-financing. This means that each micro business will be launched with \$6,000 of GEF money and at least \$6,000 of cash co-financing for a total of a minimum of \$12,000 to provide funds to develop the detailed business plan, working capital and capital for stock for at least 12 months. Additional working capital and stock of RETs will need to be gained through innovative financing mechanisms such as for example, Clean Start, and loans will need to be taken out by those entrepreneurs who do not have \$6,000 co-financing contribution available. Training will be provided to the micro-businesses on the basis of the soundness of the financial structuring. Ongoing programmes to support entrepreneurship such as those run by UNDP and by IFC "Clean Energy SMEs Capacity Building and Investment Facility" will be studied in order to apply lessons learned to the business incubator to be developed by this project. The IFC Clean Energy for SMEs Capacity Building and Investment Facility is focused on support for larger scale entrepreneurs and larger small and medium sized businesses with assets and with balance sheets. It provides technical assistance, training, and assistance with obtaining financing to SMEs. These businesses are all larger than the small scale micro-entrepreneurs targeted by this project. Secondly, it does not have a specific focus only on small scale solar technologies and improved cookstoves. Instead, it is focused more on grid connected renewable energy projects in Ethiopia. Therefore, there is no overlap with the IFC project. Rather, lessons learned can be taken from the IFC project and synergies created,

where appropriate. The support for micro green entrepreneurs under this project will go beyond simply providing funding. It will extend to support for the development of business plans and ongoing business mentoring. It is also important to elicit feedbacks from consumers or service recipients on the quality and reliability of the appliances or the service so the business incubator must provide business mentoring, quality assurance, and advisory services and make sure the quality standards are met.

Financing support for entrepreneurs will be provided through the working relationship with the Clean Start mechanism. Financial support will only be provided to entrepreneurs who are selling products which meet the minimum technical standards, as established under component one of the project. In addition, the involvement of Clean Start should help to ensure the sustainability of the BIU beyond the lifetime of the project as funding from Clean Start can be used to enhance and expand the BIU if it proves to have developed a successful model for supporting the development of the market.

Incremental cost reasoning and expected contributions from the baseline, the GEF TF and co-financing

16. The GEF funds will be used for incremental activities designed to remove the identified barriers. In particular, the GEF funds will be used for those incremental activities that expand the scope of, or supplement, the baseline activities in leading to or enhancing global environmental benefits. A component-by-component assessment of the incremental activities and expected global environmental benefits is provided below.

Table 2: Project Activities and Incremental Reasoning

Baseline practices	Alternative to be put in place by the project	Global Benefit
Component 1: National Rural Energy Regulatory, and Legal Framework		
No strengthened legislative and regulatory basis to support integrated national rural energy for Ethiopia	New Legislation and Regulations put in place in Ethiopia to support small scale renewable energy technologies with a focus on technical standards and quality assurance	Significant reduction in Greenhouse Gas emissions from new legislation, policies, and regulations.
Component 2: Rural Public Awareness Campaign on Renewable Energy Technologies		
Lack of public awareness in rural communities about the benefits of renewable energy technologies for hot water, lighting, and cooking	Successful national public awareness campaign which leads to increased public awareness on the benefits of small scale renewable energy technologies	
Component 3: Sustainable Financial Mechanism (SFM) for RETs for rural households.		
Donors continue to fund ‘white elephant’ renewable energy projects which are inherently unsustainable due to the inability of local communities to pay for the demonstration projects which they have been provided	With support from financial mechanism (i.e – Clean Start), 1,000 new entrepreneurs and small	Significant reduction in greenhouse gas emissions from

	businesses involved in the production, sale, and distribution of RETs in Ethiopia leading to investment and investment and deployment by the end of the project of at least 2 MW of solar energy and the dissemination of an additional 100,000 improved cook stoves.	sustainable financial mechanism successfully operating.
Component 4 : Business Incubator with Seed Funding for Entrepreneurs and Domestic Manufacturers		
At least 100 entrepreneurs in Ethiopia are unable to launch improved businesses due to lack of capital and business expertise	100 entrepreneurs launch micro-businesses to sell either small scale solar technologies, improved cookstoves (or both) with at least a 25% success rate (i.e – still in business and profitable after 12 months)	Reduced greenhouse gas emissions due to business incubator supporting 25 additional successful businesses of RET entrepreneurs

17. Firstly, this project will identify certain specific technologies and appliances as those technologies which have the greatest potential to (a) be affordable and (b) provide significant reductions in GHG emissions. Clearly, it makes sense to focus on those appliances and technologies that have the potential to be affordable to village communities in the future. In particular, the project will focus on the small scale solar PV, solar hot water cookers, solar lanterns, and improved cook stoves (including solar). The complete list of technologies to be focused on by this project will be finalized during the PPG phase after further analysis concerning affordability, scalability, and global environmental benefits is carried out.

Global Environmental Benefits

18. The vast majority of Ethiopia's national energy needs are derived from fuel wood, charcoal, agricultural crops and animal waste and human and animal power. If this project is successful, this situation will change and in future the demand for fuel wood, charcoal and animal waste for energy will decrease. Small scale renewable energy solutions (and in particular solar energy) will have replaced these fossil fuel alternatives.

While this number may be considered to be quite low we need to take into account that unlike in many other countries where we are substituting away from coal and gas fired power plants with perhaps some large hydro, in the case of Ethiopia we are mainly substituting away from firewood and charcoal. More detailed estimates of the CO₂ emission reductions from this project will be carried out during the PPG phase. A very preliminary and conservative initial estimate indicates that the total direct project CO₂ emissions reduction from the deployment of 2 MW of solar energy and the dissemination of an additional 100,000 improved cook stoves is 220,000 tonnes of CO₂ over the lifetime of the investments. This is based on an initial assumption that on average one improved cook stove saves 2 tonnes of CO₂e over its life time and that the 1MW of solar energy is displacing approximately 4,000 tonnes of CO₂e per annum.

19. There are also significant local environmental benefits associated with this project. Smoke is a carcinogen which is produced during the burning of charcoal and wood and which can cause a high incidence of respiratory problems among the local population. The reduction of the use of charcoal and wood through improved cookstoves, especially through those that use ethanol or solar energy will have the additional benefit of decreasing and eventually eliminating the burning of charcoal and wood and therefore respiratory diseases. Solar energy for lighting and hot water will also have similar benefits.

20. There are also significant adaptation benefits associated with this project through the delivery of increased reliable energy supply, which promotes energy access among the poor. The energy use dependence on biomass products greatly increases vulnerability to climate change. For example, reliance on fuel wood and charcoal brings widespread land degradation, exposing bare soil to erosive rainfall and gully erosion. As climate impacts increase, there is likely to be a higher reliance on forest products for livelihoods. Energy generated by hydropower is also vulnerable to fluctuations in rainfall, temperature and evaporation. For example, reduced power production during drought years already takes a significant toll on the economy. Drought also has the potential to cut power supply

Innovativeness, sustainability and potential for scaling up

21. This project is innovative in that it combines strengthening the national legislative and regulatory framework to support rural renewable energy with an innovative financing mechanism(s) (i.e – potentially the linkage with the UNDP Cleanstart Project or other financial mechanism) which will help ensure the sustainability of the project results through the successful implementation of the sustainable financial mechanism. In addition, the potential for scaling up will be greatly enhanced by the new legislation to promote renewable energy in the rural environment which includes legislation to support and incentivize increased investment in small scale off-grid renewable energy solutions and regulations to put in place new technical standards (as well as their enforcement) that will support the development of wider markets for small scale renewable energy technologies (focusing on solar) and for improved cookstoves.

A.2. Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project preparation:

22. The following table lists the stakeholders of the proposed GEF project. Included in the list are the summary of expected roles of each stakeholder in the design, development, implementation and management of the proposed project. The list of stakeholders with whom the project will cooperate will be reviewed and assessed during PPG phase again.

Stakeholders	Expected role
Environment Protection Authority (EPA) of Ethiopia	GEF Operational Focal point and Chairperson member of the Project Steering Committee. EPA will be responsible for defining the roles of the various stakeholders in more detail during PPG phase.
Ministry of Water and Energy, Rural Electrification Fund, Regional EPA, Beaura of Water and Energy and other Regional Bureaus	Ensures implementation, coordination with other relevant initiatives at a federal, regional and local level and will provide baseline data and information during project preparation.
Private sector investors (clean start, World Bank, EIB and local banks	Co-financing for business incubator activities and investment in new business opportunities. Private sector and local banks will be consulted concerning the financial support mechanism and their possible role as co-financers of the project and one financial service provider will be selected as the partner for the financial support mechanism component of the project during PPG phase.

BARR Foundation, Hoarec, Global Alliance for Cookstoves	Support for demonstration projects related to ‘improved cook stoves’, The BARR foundation, Hoarec and the Global Alliance for Cook stoves will all be consulted in detail during the PPG phase for their inputs concerning their activities related to improved cook stoves..
Hilti Foundation, Solar Energy Foundation (SEF)	Hilti Foundation and Solar Energy Foundation will be involved in designing support for demonstration projects related to ‘solar’ energy during PPG phase.
UNDP	Project Management Services related to the development of the PPG phase and responsibility for approval of GEF Request for CEO endorsement and UNDP project document.
Local communities organizations (NGOs)and women’s groups	Local communities and organizations and in particular women’s groups will be key partners in the implementation, monitoring and reporting of this project. They will be consulted during the design of the full project as to further defining their role during the full project implementation.

A.3 Risk. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable):

23. The following risks are identified but hopefully will be addressed and minimized through appropriate mitigation measures.

Risk	Level of Risk	Mitigation Action
Limited Government Capacity Impedes Timely Project Implementation.	Medium	PMU will work to help make sure this risk is mitigated. A main focus of the project is on strengthening the capacity of Regional Bureaus to undertake such projects and thereby reduce associated risks.
Lack of awareness of the benefits of clean and renewable energy technologies prevents their widespread dissemination.	Low	A large public awareness campaign targeted at rural households will aim to overcome this barrier.
Limited Affordability for rural populations of small scale renewable energy technologies	High	30 million people in Ethiopia live on less than 1 USD per day. However, three factors will help to reduce this risk. Firstly, consumer spending power in Ethiopia is increasing as the economy grows and secondly efforts are being strengthened to bring down the cost of production. Thirdly, the financial support mechanism will help to reduce the cost to consumers.
Entrepreneurs are not interested in entering the renewable energy technology market in Ethiopia.	Medium	Lack of start up capital is the number one barrier to most small scale entrepreneurs from starting their own business. If the business is shown to be profitable, there will be a clear interest to enter the market. Component 4 targets this barrier.
Overall Risk Level	High	This is a high risk project.

A.4. Coordination: Outline the coordination with other relevant GEF financed and other initiatives:

The preparation of the PIF has revealed the following ongoing and planned initiatives in Ethiopia which it would be useful for this initiative to cooperate with such as:-

A) WORLD BANK / GEF RENEWABLE ENERGY PROJECT - The World Bank has recently finished implementing a GEF Rural Renewable Energy Project which aims to promote renewable energy throughout Ethiopia with a particular emphasis on solar PV and on mini-hydro power. The project involved financing renewable energy projects from the Ethiopian Rural Electrification Fund and it aimed to leverage private capital. The World Bank GEF project has developed a renewable energy action plan and standard power purchase agreements. The difference between the World Bank project and this project is that the World Bank project has had a main focus on connection of customers to power supply. The lessons learned from the World Bank / GEF project will be applied to the development of this project.

B) DEVELOPMENT BANK OF ETHIOPIA - The Development Bank of Ethiopia has \$20 million USD for financing of renewable energy projects in the Ethiopia. This window to support renewable energy projects is part of a \$200 million USD programme that the Development Bank of Ethiopia has to support the energy sector. The Development Bank of Ethiopia also works with the Ministry of Water and Energy to support the REF (Renewable Energy Fund).

C) WORLD BANK CLIMATE INVESTMENT FUNDS (CIF)– The CIF is working in Ethiopia with the African Development Bank to support renewable energy through the Scaling Up Renewable Energy Programme in Low Income Countries (SREP), which is funded under the Strategic Climate Fund (SCF). SREP can provide policy support and technical assistance to develop national renewable energy strategies for specific technologies. It can also underwrite additional capital costs and risks associated with renewable energy investments for reducing risk to investors.

D) THE CLEAN START PROGRAMME being implemented by the UNCDF in partnership with UNDP has \$26 million dollars and aims to help poor households and micro-entrepreneurs access financing for low-cost clean energy projects. CleanStart promotes such financing arrangements, supports quality assurance measures and offers advisory and training/capacity building services to contribute to a mutually beneficial cycle of investment, awareness-building and the creation of a new, higher return market segment. The project will explore further during PPG phase how it might cooperate further with CleanStart.

E) THE EUROPEAN INVESTMENT BANK (EIB) – The EIB manages the Global Energy-Efficiency Renewable Energy Fund (GEREEF) which has \$200 million for investments in energy-efficiency and renewable energy, including in Africa. This project will explore further during PPG phase how it might cooperate more closely with GEREEF.

F) GiZ – ENERGY COORDINATION OFFICE (ECO) – The ECO is involved in promoting rural electrification in Ethiopia which includes the dissemination of efficient cookstoves as well as related enabling conditions. The work of the ECO is very complementary to the planned work of this project and every effort will be made to cooperate closely the planned activities of this project to the ECO during the PPG phase.

G) IFC SREP “Clean Energy SMEs Capacity Building and Investment Facility” (IFC) – The IFC Facility aims to support market development for clean, renewable energy-based products and services in the household and commercial segments, by providing targeted capacity building and financing to small and medium-sized enterprises (SMEs). Relevant SMEs are defined as companies selling 1) energy access devices (improved cookstoves, lighting devices, solar home systems), 2) efficient energy conversion systems for institutions (institutional cookstoves, solar water heaters, rooftop solar systems), and 3) modern fuels (biomass briquettes, sustainably-produced charcoal).” This project will aim to cooperate closely with the IFC SREP project. The difference between this project and IFC project is that the IFC project focuses on larger

businesses (i.e – SMEs) as opposed to small micro-entrepreneurs. However, there are important synergies between the two projects and these will be further explored during the PPG phase.

B. Description of the consistency of the project with:

B.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.:

24. This project is complementing the Ethiopian Energy Strategy, the Ethiopian Climate Resilient Green Economy Strategy, and the 1st National Communications of Ethiopia to the UNFCCC. It is also fully consistent with the Sustainable Energy for All (SE4All) initiative of the United Nations Secretary General.

25. The Ethiopian National Energy Strategy (1994) identifies lack of access to modern energy sources in rural area in Ethiopia as a significant challenge. It promotes a gradual shift from traditional energy sources to modern energy sources giving priority to indigenous energy resources with a goal of attaining self-sufficiency and making sure that the development and utilization of energy is benign to the environment. An updated Energy Strategy for Ethiopia is under development and is being released in 2013 and this updated strategy emphasizes the importance of off grid renewable energy solutions for communities where grid connection is not feasible. Several organizations are also developing Nationally Appropriate Mitigation Actions (NAMAs) for rural electrification and improved cook stoves in Ethiopia. This project is fully consistent with the goals set out in the Ethiopian Energy Strategy, in the off grid renewable energy master plan and in NAMAs being developed in Ethiopia for rural electrification and improved cook stoves.

26. The Ethiopian Climate Resilient Green Economy (CRGE) also aims to increase the access to energy of rural communities. Since the geography of Ethiopia and the cost implications associated with extending the grid to remote rural areas does not allow a quick extensive extension of the national electricity grid, small scale off grid renewable energy sources are excellent and cost-efficient alternatives to ensure the increasing of energy access in Ethiopia. The CRGE has a goal of having 9 million improved cook stoves in Ethiopia by 2015 and of promoting increased energy access. This project is fully consistent with the goals of the CRGE.

27. The 1st National Communications of Ethiopia to the UNFCCC (2011) re-states the goals of the Ethiopian National Energy Strategy including promoting the shift from traditional energy sources to modern energy sources and the development and utilization of energy that is benign to the environment. This project is consistent with the 1st National Communications to the UNFCCC.

28. This project is also fully consistent with the goals of the Sustainable Energy for All (SE4All) initiative launched by the United Nations Secretary General which are (i) to ensure universal access to modern energy services (ii) double the improvement in energy-efficiency by 2030 and (iii) double the share of renewable energy in the global energy mix by 2030. Ethiopia has joined the SE4All initiative and is committed to undertaking activities to meet these goals. The project supports Ethiopia participating in the SE4All initiative.

B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:

29. This project has been designed to be consistent with GEF climate change strategy objective 2 and GEF climate change strategy objective 3. GEF Climate Change Strategy Objective 2 is focused on promoting market transformation for energy efficiency in the building and transport sectors and it explicitly includes promotion of improved cook stoves. This project is full consistent with Climate Change Strategy Objective 2, which involves a synergistic combination on technical assistance, policy, regulation, and institutional capacity building to support the adoption of improved cook stoves. The project is also consistent with GEF Climate Change Strategy Objective 3 which aims to remove barriers to support the adoption of renewable energy

technologies and this project with its focus on energy access and small scale renewable energy technologies for rural communities is fully consistent with CCM-3.

B.3 The GEF Agency’s comparative advantage for implementing this project:

30. The proposed project is clearly within the comparative advantages of UNDP as stated in the GEF Council Paper C.31.5 “Comparative Advantages of GEF Agencies”. UNDP is one of the few GEF agencies present in Ethiopia where it has a country office environment unit with 8 staff currently managing over 12 projects with a disbursement of over \$15 million USD per annum. In particular, UNDP has:

- The ability to mobilize and make available quality technical expertise to develop policies and strategies, particularly in climate mitigation and adaptation, social sectors, governance and environmental management and risk disasters;
- Knowledge and a specific focus on poverty alleviation as one of its core competencies;
- The ability to partner, mobilize and empower the communities and individuals to identify and own their problems and come up with pragmatic solutions;
- A focus and extensive experience related to capacity building in all areas of support; and
- Confidence by the Government and by national and international partners.

31. In 2012, UNDP Ethiopia launched the Improved Cook stoves Investment Plan (2012-2030) of the new Climate Resilient Green Economy (CRGE) with \$1 million of core funding. This program focuses on accessing fuel wood efficient stoves at a national level and calls for an additional 4.5 million households to adopt improved cook stoves in the next five years to double the number of improved cook stoves currently disseminated and in operation in Ethiopia. The Investment Plan aims to provide an implementable national programmatic framework. In addition, UNDP implements the Entrepreneurship Development Programme for Ethiopia and therefore has a significant experience with market based approaches for environmental protection (Component 4).

32. Two recent UNDP publications on de-risking renewable energy investment environments (‘Transforming Renewable On-Grid Energy Markets’ and ‘De-Risking Renewable Energy Investment’) summarize UNDP’s empirically- and theoretically-robust ‘theory of change’ for catalyzing private-sector renewable energy investment. With specialized staff devoted to energy, finance, NAMAs and carbon mechanisms, UNDP is one of very few international organizations with the understanding of national conditions and priorities (backed by its global network of 129 Country Offices), renewable energy sectoral expertise to be able to design and implement such a program effectively in Ethiopia.

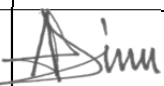
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE(MM/dd/yyyy)
Dr Tewolde GEBRE EGZIABHER	GEF Operational Focal Point	EPA	April 3, 2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator,	Signature	DATE(M M/dd/yyyy)	Project Contact Person	Telephone	Email Address

Agency name)			
Adriana Dinu UNDP/GEF Officer-in-Charge and Deputy Executive Coordinator		August 29, 2013	John O'Brien, Regional Technical Advisor EITT	+421 917 415 017	John.obrien@undp.org