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## PROMOTING SUSTAINABLE RURAL ENERGY TECHNOLOGIES FOR HOUSEHOLD AND PRODUCTIVE USES

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### MID TERM REVIEW



### Submitted By

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**TITLE OF UNDP SUPPORTED GEF FINANCED PROJECT:**  
**Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses**

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**PROJECT ID#S:**

AWARD ID: 00086749  
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Management Arrangements NIM/DIM

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**MID TERM REVIEW TIME FRAME AND DATE OF REPORT**

Time frame: September – November 2018  
Date of Report: 20<sup>th</sup> October, 2018

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**REGION AND COUNTRIES INCLUDED IN THE PROJECT:**

Africa, Ethiopia

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**GEF OPERATIONAL PROGRAM/STRATEGIC OBJECTIVE**

GEF-5 Climate Change Strategy Objective 2 – Promoting Market Transformation for Energy Efficiency in the building and transport sectors.

GEF-5 Climate Change Strategy Objective 3– Promotion of investment in renewable energy technologies

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**IMPLEMENTING PARTNERS**

UNDP and Ministry of Water, Irrigation and Energy (MoWIE)

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**RESPONSIBLE PARTNERS**

Environment, Forestry and Climate Change Commission (EFCCC); Development Bank of Ethiopia (DBE) and United Nations Capital Development Fund (UNCDF-Responsible Partner for Component 3)

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## Acronyms and Abbreviations

AEMFI	Association of Ethiopian Micro Finance Institution
AETDPD	Alternative Energy Technology Development and Promotion Directorate
APR	Annual Performance Review
BGZ	Benishangul Gumuz Regional State
CRGE	Climate Resilient Growth Economy
CRGF	Credit Risk Guarantee Fund
CRGPMC	Credit Risk Guarantee Fund Management Committee
DBE	Development Bank of Ethiopia
DIM	Direct Implementation Modality
EEA	Ethiopian Energy Authority
EFCCC	Ministry of Environment Forestry and Climate Change Commission
FeMSEDA	Federal Medium and Small Enterprises Development Agency
FSPs	Financial Service Providers
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House Gas
GTP	Growth and Transformation Plan
ICS	Improved Cook Stoves
IGAs	Income Generating Activities
M&E	Monitoring and Evaluation
MEFCC	Ministry of Environment, Forestry and Climate Change
MFI	Micro Finance Institutions
MoWIE	Ministry of Water Irrigation and Environment
MoFEC	Ministry of Finance and Economic Cooperation
MTR	Midterm Review
NBE	National Bank of Ethiopia
NIM	National Implementation Modality
N/A	Not Available
OECD/DAC	Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC)
OIB	Oromia International Bank
PIR	Project Implementation Review
ProDoc	Project Document
PSC	Project Steering Committee
RBM	Results Based Management
REF	Rural Electrification Fund
RETs	Rural Energy Technologies
SE4All	Sustainable Energy for All
SFM	Sustainable Financial Mechanism
SMART	Specific, Measurable, Attainable, Realistic and Time bound
SME	Small and Medium Enterprises
ToR	Terms of Reference
UNCDF	United Nations Capital Development Fund
UNFCCC	United Nations Framework Convention on Climate Change

UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
USD	United States Dollar

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## Executive Summary

Table 1: Project Summary

<b>Project Title:</b>	<b>Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses</b>			
Award ID:	00086749	Contributions	At endorsement (US\$)	At mid – term (US\$)
PIMS	5200	GEF financing:	4,091,781	N/A
Country:	Ethiopia	UNDP (Cash & Kind)	900,000	N/A
Region:	Africa	UNCDF CleanStart	980,000	N/A
		<b>Co-finance</b>		
		Government (Grant & In-kind)	29,179,954	
		Private Sector (Investment & In-kind)	5,800,000	
Focal Area:		<b>Others</b>		
		DBE (loan)	20,000,000	
		HIVOS, SNV, ABPP (in-kind)	6,185,945	
		RET Enterprises (in-kind and cash)	6,000,000	
GEF OP/SP		Total co-financing:	67165899	N/A
Implementing Agency:	UNDP and Ministry of Water, Irrigation and Energy (MoWIE)	Total Project Cost:	73,137,680	N/A
Implementing Partners:	Environment, Forestry and Climate Change Commission (EFCCC); Development Bank of Ethiopia (DBE) and United Nations Capital Development Fund (UNCDF).	ProDoc Signature (date project began):		June 2016
		Actual Starting Date:	October 2016	
		(Operational) Closing Date:	Proposed: June 2020	

### Project Description

Implementation of the project 'Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses' commenced in October 2016 and is slated to end in June 2020. This GEF financed and UNDP supported project is being implemented through the Ministry of Water, Irrigation, and Energy in collaboration with partners (Environment, Forestry and Climate Change Commission (EFCCC), Development Bank of Ethiopia (DBE), United Nations Capital Development Fund (UNCDF) and the private sector. Using private sector-driven and market-based approach towards promoting renewable energy technologies in rural communities in Ethiopia, the project aims to reduce Ethiopia's energy-related CO<sub>2</sub> emissions by approximately 2 million tonnes CO<sub>2</sub>e. This is to be achieved through promoting renewable energy and low greenhouse gas GHG-producing technologies as a substitute for



fossil fuels and non-sustainable biomass utilisation in the country, with a focus on rural household appliances for cooking, lighting, and heating.

Primarily, the project’s activities are designed and implemented under four components that are targeted at addressing core barriers to wide-scale use of off-grid renewable energy technologies in households and productive uses in rural areas of Ethiopia. Project components are: i) Strengthened Regulatory and Legal Framework based on National Standards; ii) Rural Public Awareness Campaign on Renewable Energy Technologies; iii) Sustainable Financial Mechanism (SFM) for RETs for rural households; and iv) Business Incubator to Promote Greater Entrepreneurship for Investment in RETs.

The project intervention logic complements national priorities as enshrined in the Ethiopian Energy Policy, the Ethiopian Climate Resilient Green Economy Strategy, the Initial National Communication of Ethiopia to the United Nations Framework Convention on Climate Change (UNFCCC) and the Sustainable Energy for All (SE4All) initiative. The project targets to enable 800,000 households to access improved and affordable RETs.

Through direct response to the identified barriers to greater use of RETs in rural Ethiopia, the project interventions (activities and outputs) are intended to support the realization of the following outcomes: i) Favourable legal and regulatory environment created for small-scale, off-grid renewable energy investments in rural areas and stakeholders are trained to comply with and implement the new standards and regulations; ii) (a) Greater awareness among rural populations about the benefits of renewable energy for household and productive uses; ii (b) Greater awareness among RET enterprises about the availability of SFM and business support; iii) Enhanced access to sustainable clean energy by low-income households and micro-enterprises through micro-finance; and iv) At least 120 small-scale enterprises and manufacturers are successfully producing and profitably selling RETs both for household consumption and for productive uses.

The analyses of the midline achievements at output and outcome levels coupled with the assessment of the facilitators and inhibitors of performance (relevance, effectiveness, and efficiency) as well as the project’s sustainability potential formed the core of this MTR as summarised in the MTR ratings and Achievement Summary Table below.

Table 2: MTR Ratings and Achievement Summary

Measure	MTR Rating	Achievement Description
Progress Towards Results	Objective Achievement Rating: <b>MODERATELY SATISFACTORY</b>	All indicators show progress although they fail short of the midline expectations. The Project has successfully put in place strong implementation structures and systems that are potentially able to accelerate achievement at output and outcome levels which will inevitably impact positively the objective indicators. For example, from the 29,995 RETs that have been distributed, an estimated 2,024,662 mega-joules/a of energy have

		been saved and bring about 101,210.34 tons of CO <sub>2</sub> e/a (Project Document, May 2018, Annex 4) GHG emission that could be avoided. Furthermore, the RETs distribution framework that has been established with an innovative combination of formulated standards, public awareness, sustainable financial mechanism and RETs Enterprise support adequately address both supply and demand bottlenecks hence creating strong potential for enhanced production and distribution as well as accessibility to RETs. The challenges and barriers both external (e.g. security) and internal (late start of the project), however, have got an effect in timely realization of the overall project objective.
	Outcome 1 Achievement Rating: <b>SATISFACTORY</b>	3 standards with their corresponding training manuals have been developed and approved. <b>Lab items procured to support the tech. aspect of standardization.</b> These have been and shall remain vital in supporting the realization of the Outcome indicators. Popularization of standards is well on course with over 900 people already reached out with workshops and trainings about the standards. Solar companies e.g. Tigist Tadesse Solar Woman and Green Hope import solar products qualified by lighting Africa and global light which follow the standards; ICS producers e.g. Abdi-Bale Enterprise, Wondwesen Ketema plc, and Ayal Nigussie plc are producing stoves (Mirt, Tikiki) qualified by the New ICS standards.
	Outcome 2 Achievement Rating: <b>SATISFACTORY</b>	At the time of the MTR, roadshow strategy was deigned. <b>Four</b> roadshows had been conducted in 4 woredas (2 regions) there are plans of scaling up the activity to 6 other regions <b>starting in mid November.</b> About 1007 RETs have been sold in the events. Although the results to date are far below the expected (30000 RETs planned to be sold in roadshows) (Project M&E plan, MoWIE, July 2018), the activities undertaken (already or yet to be) convey a ray of hope that the indicators are on track to be met.
	Outcome 3. Achievement Rating: <b>SATISFACTORY</b>	Despite delayed start, activities under this Outcome had by the MTR been started. <b>The establishment and disbursement</b> of SFM coupled with the continuous public sensitization about its availability and accessibility criteria lay a strong foundation for promoting RETs enterprises. This is potentially able to scaleup investment in and affordability of RETs in the rural communities.
	Outcome 4: Achievement Rating: <b>SATISFACTORY</b>	Project activities and outputs are on course therefore providing a firm foundation for achieving the Outcome indicators. Project has supported business development and entrepreneurship trainings in addition to innovation awards to stimulate RETs Enterprise growth. At the time of the MTR, 14 RET enterprises had been awarded. Although, the result is still far below the endline indicator target, the impressive progress within a short period of time at activity and output levels conveys hope for the Outcome indicator achievement by the end of the Project.

Project Implementation & Adaptive Management	Achievement rating: <b>SATISFACTORY</b>	Project implementation at both federal and regional levels was going on well with guidance from the Project office and other instituted governance structures. Despite delayed start, the Project implementation team was optimistic that at the current implementation momentum, the lost time shall be compensated. The implementation framework is flexible that all the necessary amendments are considered within the established governance framework.
Sustainability	Achievement rating: <b>LIKELY</b>	There is great sustainability potential for the Project being rooted on the Project design. The Project has well integrated all the key stakeholders whose participation in, ownership of, willingness to contribute towards Project implementation coupled with capacity development offered create a strong base for enhanced sustainability.

### Concise summary of conclusions

Despite the delayed start, the RETs project has progressed well in its first implementation phase (pre-MTR) with much of the achievements being registered in setting up a robust project delivery landscape. Vital structures and systems have successfully been set up forming a very strong foundation for the project's enhanced results delivery in the next implementing phase. Although some outcome indicator targets still fell short of the expectation, the established implementation landscape in terms of structures and processes are paramount for accelerating achievement of the results.

Table 3: Recommendation summary

Rec #	Recommendation	Entity Responsible
<i>Outcome 1: Favorable legal and regulatory environment created for small-scale off-grid renewable energy investments in rural areas are in place and stakeholders are trained to comply and implement the new standards and regulations.</i>		
R 1.1	Fast track the implementation procedures for the newly developed standards. The implementation procedures include the strategy on how to enforce the standards and the directive to be issued by MoWIE	Project Steering Committee/Project Team
R 1.2	Popularization of the developed standards is still required. This can be achieved through adoption of a multi-media approach such as TV, FM radios, posters, community organizations, Solar and Cookstove associations and through RE days, etc. targeting the entire Ethiopian population.	Project team
R 1.3	Production and distribution of copies of the developed standards in order to create wide awareness.	Project team
<i>Outcome 2.1: Greater awareness among rural populations about the benefits and qualities of renewable energy for household and productive uses. Outcome 2.2: Greater awareness among RET enterprises about the availability of SFM and business support</i>		
R 2.1	The outcome indicator target should be distributed among the regions in order to achieve equitable results	Project team
R 2.2	More sensitization about the SFM is still vital to support the realization of the outcome target.	Project team
R 2.3	Periodic media monitoring reports should be compiled and correlated with the RETs market survey reports to ascertain the contribution of media engagements	Project team

R 2.4	Non-media approaches such as flyers and posters (in local languages), use of social gathering sessions should be adopted to supplement the on-going media engagements.	Project team
Outcome 3: By the end of the project, more than 290,000 low-income households and micro-enterprises (1,500,000 beneficiaries) will have sustainable access to clean energy through micro-finance. It is envisaged that CleanStart, in partnership with the UNDP-implemented, GEF-financed project, will create a replicable business model for wider scale-up across other developing countries by adopting an integrated approach to addressing demand and supply-side barriers.		
R 3.1	A resource mobilization strategy should be developed to enable the project team explore alternative sources of funding to cover the gap left behind by the withdrawn UNCDF resource for output 3.1	Project Steering Committee/Project team in consultation with other relevant stakeholders
R 3.2	Outcome indicator targets should be distributed among the regions and across the remaining implementation time to ensure achievement	Project team
R 3.3	FSPs should explore alternative collateral security in the absence of capital assets. Group loans is one of the strategies the FSPs particularly MFIs practice and can be explored to enable those who do not have assets to also be able to access RETs loans	FSPs in collaboration with the project team
R 3.4	UNCDF should fast track the recruitment of the national coordinator in order to enhance the implementation of component 3 given the fact that it was delayed	UNCDF
Outcome 4: At least 120 small-scale enterprises and manufacturers are successfully producing and profitably selling RETs both for household consumption and for productive uses.		
R 4.1	Implement the newly revised criteria for participating in innovation awards to include all non-registered enterprises who have innovations to show-case	Project team
R 4.2	Exchange visits should be supported as another avenue for promoting innovation and exchange of ideas. It is important that RETs centres of excellence need to be created in the most viable geographical locations to promote innovations. For example, universities across the country could serve the purpose	Project team
R 4.3	The outcome targets should be distributed proportionately among the regions with strong gender considerations. There is a need to encourage particularly women led enterprises to participate.	Project team
<b>Project Implementation &amp; Adaptive Management</b>		
R 5.1	Better documentation and profiling of best practices should be supported through initiatives like documentaries, lessons learnt papers as well as exchange visits	Project team
R 5.2	Recruitment of regional coordinators should be given urgent consideration in order to strengthen project implementation and coordination at regional level	Project team
R 5.3	Quarterly reports should capture implementation progress of the recommended changes in the project implementation from the previous reviews	Project team
R 5.4	Risk matrix should be regularly updated to inform risk mitigation plan	Project team
<b>Sustainability</b>		
R 6.1	The project team should seriously consider the design of exit strategy for the project	Project team
R 6.2	Project sustainability-oriented trainings should be supported towards the end of the project to facilitate smooth transitioning	Project team



Figure 1: Map of Ethiopia showing the regions where the project is implemented

## 1.0 Introduction

Conducting project Mid-term review is a mandatory requirement for all GEF-financed full-sized projects (FSP) as emphasized in the GEF evaluation policy (2010)<sup>1</sup>. Primarily, MTRs are vital monitoring tools for identifying project progress and challenges in order to outline corrective actions to ensure that a project is on track to achieve maximum results by its completion. Despite some variations in the MTR processes and methodologies across projects, the ultimate focus is on; effectiveness, efficiency, relevance, and sustainability potential with an intention to inform lessons learnt and recommendations for next implementation phase.

This report therefore presents the findings of the Mid-term Review of “**Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses**” project that was undertaken between September and November, 2018 under the auspices of UNDP and the implementing partner MoWIE. This independent review was guided by the following purpose and objectives.

### 1.1 Purpose of the MTR and Objectives

The Mid-term review as is provided in the project document with a purpose to determine progress being made towards the achievement of outcomes and identification of corrective measures that would keep the project on track to realize the desired results by its completion. More specifically as given in the ToR, the purpose of this MTR was three fold namely: Assessing i) progress towards the achievement of the project objectives and outcomes as specified in the Project Document; ii) early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results; and iii) the project’s strategy, its risks to sustainability.

### 1.2 Scope & Methodology

The overall scope of the MTR was based on the OECD/DAC evaluation criteria with particular focus on relevance, effectiveness, efficiency, and sustainability. Under each of these review criteria, a number of parameters (see MTR Matrix in Annex 3) were assessed ultimately to support the generation of lessons learnt, best practices and recommendations for improved project implementation and enhanced results at full time.

The review adopted a mixed methods approach (qualitative and quantitative) in order to enhance the validity of the findings. The overall methodological approach was guided by a “Triple Results Focus Model” based on three universal review questions namely: i) Is the project doing the right things? ii) Is the project doing things right? iii) What corrective actions are needed basing on the identified gaps and limitations? Furthermore, guided by “Assessment to Action” approach, the MTR findings were also informed by both primary and secondary data.

Primary data were collected through in-depth interviews with project staff both at implementation and management levels as well as project beneficiaries during field missions. A total of 39 individual interviews were conducted (see list of MTR participants in Annex 1) with different project stakeholders.

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<sup>1</sup> <http://www.thegef.org/gef/Evaluation%20Policy%202010>

In-depth interviews made use of an interview guide. In addition, due to resource constraints, regional level stakeholders were consulted through an online self-assessment tool that was mailed to them for filling and mail back to the MTR consultants. Out of 9 self-assessment tools that were mailed to regional energy bureaus, 4 were responded and mailed back.

In addition to primary data sources, the MTR consultant reviewed a number of documents guided by the MTR matrix. The desk review took a three-phase process namely; i) identifying the required information, ii) securing the relevant documents, and iii) extracting summarised data for subsequent analysis. These were the major source of quantitative data used in this report.

The overall analytical framework was based on the OECD/DAC evaluation criteria focusing on: project relevance (internal and external consistence); effectiveness (achievements based on the outcome indicator analysis as well as facilitators and inhibitors of performance); efficiency (cost effectiveness of project implementation strategies) and sustainability (analysis of opportunities and threats). Thematic and content analysis procedures were employed to facilitate the corroboration of data from different sources to answer the review questions and support generated conclusions and recommendations.

The overall execution of the MTR followed UNDP and GEF guideline for conducting MTR for UNDP supported and GEF funded full sized projects<sup>2</sup>. As part of quality assurance procedure, the consultants prepared and presented an inception report to the key project stakeholders for review and comments. This was important for building consensus on the MTR approach as well as mobilizing the inputs of key stakeholders in the planning and execution of the MTR exercise. Field missions were undertaken in 3 regions (Amhara, Benishangul Gumuz, and Oromia) out of 9 that are participating in project implementation. The mission to Oromia region was limited to the regional Water, Mineral and Energy Bureau. However, the team was able to have telephone contact with 2 ICS enterprises located in two zones. In addition, the MTR team was able to visit 3 innovator award winning enterprises in Addis Ababa. After field missions, initial findings were presented to the project team and this provided an avenue for obtaining clarifications on emerging issues. Upon obtaining clarifications on key emerging issues, the MTR consultants prepared and submitted draft and final reports in accordance with the specifications in the ToR. By and large, the process of conducting the MTR was highly participatory with adequate quality assurance measures that were sufficiently adhered to.

### **1.3 Structure of the review report**

The MTR report is structured in five major sections following the template provided for UNDP-supported and GEF financed projects. The report opens with a rich executive summary that provided an overview of both the project design and review findings that form the basis of the conclusions and recommendations as highlighted in this preliminary section. Section one presents the general introduction of the MTR with particular focus on the MTR purpose and objectives, scope, and methodology as well as the layout of the report. Section two presents project description and development context focusing on the problem the project is seeking to address: project design and strategy, implementation arrangements, project timing and milestones as well as the project's main stakeholders.

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<sup>2</sup> Guidance for conducting Midterm Reviews of UNDP-supported, GEF-financed projects (2014)

Section two sets the pace for the analysis of the project's internal and external consistence (relevance) which is a door-way into the analysis of the project effectiveness, efficiency, and sustainability as contained in section three of the report. Primarily, this section presents analysis of project design, progress towards results hitherto, project implementation and adaptive management as well as sustainability. The results presented in this section form the basis for deriving the conclusions and recommendations presented in section four. Section five is a collection of different documents relevant to the MTR which are presented as annexes.

## **2.0 Project description and development context**

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Understanding the development context within which the project is to be and/or implemented is key to its success. It is important that the project at the design stage integrates key development aspects in its operational context in order to enhance its relevance and contribution to the desired development results. This section presents a description of the project and its development context in order to provide a solid foundation for the analysis of its internal and external consistence (relevance) in the findings section (three).

### **2.1 Development context**

With a population of nearly 88 million and a total land area of 1.1 million square km, Ethiopia is the largest country in East Africa both in terms of population and land area and the second in Africa after Nigeria. The country's population has been fast growing at 2.9% annually and is projected to exceed 120 million by 2025<sup>3</sup>. The Economic Snapshot for Ethiopia (2017) indicates that the country's population stands at 104.34 million having increased from about 88 million reported in the project document.

Ethiopian is an agricultural-based economy with the agricultural sector contributing about 40% of the country's GDP and 80% of the employment. The country's economy is also boosted by coffee exports that account for 28.9% of the total exports. Although the country has other non-agricultural export commodities such as gold, the economy heavily relies on agricultural exports which accounted for about 80% of the total export revenue in 2016<sup>4</sup>. The country has for the past years placed considerable effort to support industrial and service sectors which are equally valuable contributors to the country's GDP as seen in figure 2 below.

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<sup>3</sup> Project Document

<sup>4</sup> 4<sup>th</sup> Ethiopian Economic Update (July, 2015)



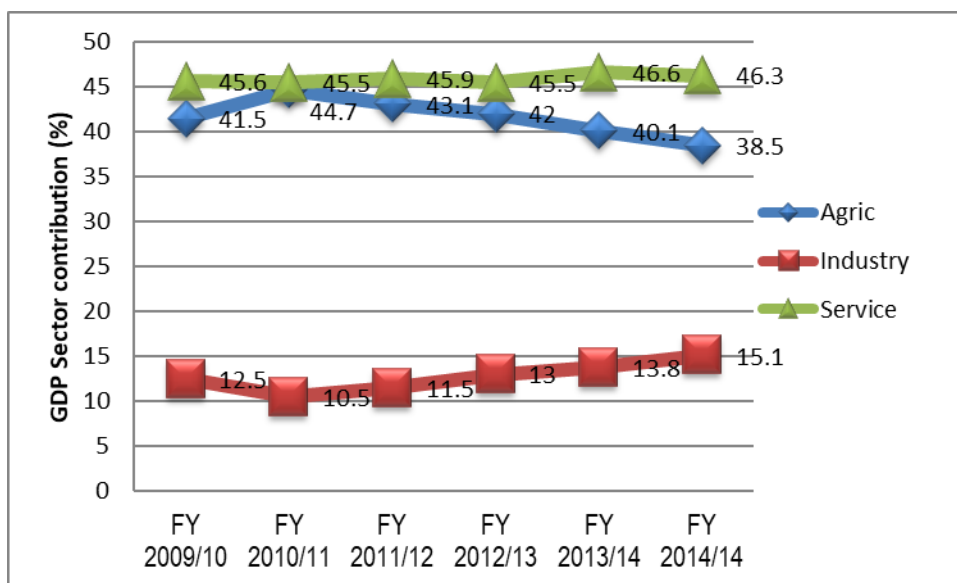


Figure 2: Sector contribution to GDP in Ethiopia, Source: GTP II (2015/16-2020)

Despite the shrink in the industrial sector, Ethiopia's economy has continued to grow at 10.3%, positively impacting on the country's poverty reduction aspirations. With nominal GDP standing at USD 51 billion and GDP per capita of USD 570, Ethiopia is one of the fastest growing economies in the world aspiring to attain a middle-income status by 2025. The country has made great strides in poverty reduction with the population living in extreme poverty having reduced from 38.7% in 2003/4 to 29.6% in 2010/11. Under GTP I, it was envisaged that by the end of 2014/15; the proportion of the population living below national poverty line would decline from 29.6 to 23.4 percent. Despite remarkable macro-economic progress registered in the past decade, there is remarkable regional disparities with the regions Oromia, Amhara and Tigray as well as Addis Ababa showing higher socio-economic development indicators than other regions.

The government of Ethiopia through the current Growth and Transformation Plan (GTP 2016/20) aspires to further reduce the population living in extreme poverty to 16.7% by 2020<sup>5</sup>. The plan identifies a number of strategies and priority areas that are envisaged to support the achievement of the set targets. Priority areas include inter alia; Macro-economic development, Agriculture and Rural Transformation, Industry & Infrastructure Development, Urban development, Housing and Construction as well as Human Resource Development.

The current Growth and Transformation Plan recognises the contribution of sustainable access to efficient energy in the transformation agenda of rural communities in Ethiopia and places considerable emphasis on the country's power generating capacity. Despite the decimal emphasis placed on the Rural Energy Technologies in the plan, there is an overall recognition of the need to strengthen a green growth economy in the country. This is evidenced through a number of initiatives that have been undertaken to promote accessibility to and usage of renewable energy. They include amongst others: The Rural Electrification Strategy; National Improved Cook-Stove Programme (NICSP); National Domestic Biogas Programme (NDBP); Rural Electrification Fund (REF).

<sup>5</sup> Growth and Transformation Plan II (GTP II) (2015/16-2019/20)

Despite decades of government interventions to expand access to electricity, national electrification level prior to the RETs project was very low (23%) with a very wide rural-urban variation in which 88% of the urban households have access to electricity compared to only 5% in the rural areas<sup>6</sup>. The geographic access nationally to electricity grid stands at about 56 %<sup>7</sup>. The low accessibility to modern energy sources drives rural populations to depend mainly on biomass despite its harmful effects to the environment and climate. Prior to the RETs project, biomass accounted for 98.65% of the overall household energy use in rural areas.

Much as Ethiopian government has been committed to promoting green economy which is also envisaged to support the attainment of a middle-income status by 2025, its realisation is threatened by the country's overdependence on non-renewable energy source that promote environmental degradation. Whereas there has been accelerating uptake and utilization of RETs, a significant gap between RETs supply and potential RETs demand due to the growing number of households and rising incomes was noted at the design stage of RETs project.

Although considerable efforts to promote access to electricity in Ethiopia had been undertaken prior to the RETs project, a number of barriers were hindering the success of such interventions. Thus, the RETs project was designed to address the problem of poor access to renewable energy for rural population by tackling accessibility barriers as presented in the next sub section.

## **2.2 Problems that the project sought to address**

Limited access to Rural Energy Technologies in Ethiopia is the ultimate problem being addressed by the RETs project. Despite the ambitious strategies undertaken by the Government of Ethiopia to electrify the major towns and villages<sup>8</sup>, access to electricity had remained low especially in rural areas. As of 2012, the electrification level was at 23% nationally and out of this percentage the majority (88%) was urban based. Besides limited access to the grid power, its unreliability (frequent blackouts) was a pertinent issue for national development<sup>9</sup>.

Despite decades of RETs distribution in rural communities of Ethiopia, uptake was by the start of this project still low on account of a number of both supply and demand side barriers. As a result, fuel-wood had remained the dominant source of residential cooking and baking energy for more than 15 million households countrywide leading to high levels of GHG emissions.

Shifting to fuel-wood-efficient or alternative-fuel stoves was envisaged to offer the highest overall potential to reduce GHG emissions. However, weak national regulatory and legal framework for renewable energy, lack of public awareness on the benefits of low-cost renewable energy appliances, lack of affordability for RETs as well as limited enterprises involved in supplying RETs to rural communities posed great hindrances to the achievement of the desired shift to efficient energy sources.

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<sup>6</sup> Project document

<sup>7</sup> The Ethiopian power sector: a renewable future. Addis Ababa: Ministry of Water, Irrigation and Electricity; 2017

<sup>8</sup> Rural Electrification Strategy (2002)

<sup>9</sup> Welfare Monitoring Survey (2012).

Thus, the RETs project is directed at accelerating distribution and purchase of RETs by addressing the four-core supply and demand side barriers above. The theory of change underpinning the project is that strengthened regulatory and legal framework coupled with enhanced public awareness on the benefits of low-cost RETs and backed by a feasible financial support mechanism will significantly stimulate demand and supply of RETs in rural communities of Ethiopia (Theory of Change depicted in Fig 3 below).

### **2.3 Project description and strategy**

The RETs project aims to reduce Ethiopia's energy-related CO<sub>2</sub> emissions by approximately 2 million tonnes CO<sub>2</sub>e through supporting access to and utilization of renewable energy and low GHG-producing technologies in rural communities of Ethiopia. The project envisages to enable 800000 additional households to access and use RETs appliances for domestic and productive purposes as an alternative to fossil fuels and non-sustainable biomass utilisation in the country. With a focus on rural household appliances for cooking, lighting and heating, the project interventions 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.

Designed under four components, the project is to be implemented over a period of five years under the auspices of UNDP in partnership with MoWIE, EFCCC, DBE, and UNCDF with financial support from GEF. Project implementation is anchored on a more private sector-driven and market-based approach with strong government involvement. The four components consist of a combination of de-risking instruments (Component 1) and market-enabling activities (Component 2 and Component 4) that are innovatively combined together with a financial support mechanism (Component 3) to help transform the market for off-grid renewable energy technologies in rural communities.

The project targets to enable approximately 800,000 additional households (4 million people) to invest in approximately 200,000 small-scale solar PV products (about 2.5 MWp total capacity) and approximately 600,000 improved cook-stoves. These are envisaged to save about 35.5 million megajoules of energy hence contributing to the reduction of GHG emissions in the country.

### **2.4 Project implementation arrangements**

The RETs project implementation essentially follows National Implementation Modality (NIM) although for some specific project activities Direct Implementation Modality (DIM) is practised when financial transactions are directly handled by UNDP following written advice by MoWIE as well as when the funding of the TA to DBE for component 3 activities is directly handled by UNCDF. Under NIM, the responsibility of project implementation rests upon the MoWIE particularly through the Alternative Energy Technology Development and Promotion Directorate (AETDPD). Other key national stakeholders are; the DBE, Regional Energy Bureaus of all the nine participating regions<sup>10</sup>, EFCCC, Federal Government Institutions such as FeMSEDA, and the Association of Ethiopian MFIs (AEMFI).

Whereas the GEF Funds for project implementation (component 1,2, and 4) are provided to the Implementing Partner (MoWIE) through UNDP, Co-funding finances for component 3 are provided

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<sup>10</sup> Afar, Amhara, Benishangul-Gumuz, Gambela, Harari, Oromia, Somali, SNNP, and Tigray.

through UNCDF. Besides the financial resources provided by the development partners (GEF, UNDP, and UNCDF), project implementation is also supported by in-kind contributions from the Ethiopian government as well the private sector (see co-financing arrangements in sub section 3.3.3).

The project implementation structures and their respective roles are well articulated in the project document. The Project Steering Committee (PSC) comprising of the major stakeholders: UNDP, EFCCC, MoFEC, EEA, DBE, UNCDF and MoWIE is the executive decision-making body charged with the following responsibilities;

- Review and approve annual plans and reports
- Provide advice on project implementation strategies based on review findings
- Monitor and evaluate progress
- Mobilize government and development partners' support for project implementation.

The day to day activity implementation is undertaken by a project office under the leadership of the Project Manager assisted by AETDPD (MoWIE) experts. The work of the project staff is well articulated in the ToR for their respective positions but the major role of the project office is to ensure that the project is implemented in an efficient and effective manner with particular focus on achieving the results set-forth in the project document. More specifically, the project office is charged with the responsibility of preparing workplans and reports for approval by the PSC as well as coordinating the inputs of all project stakeholders. The project office is housed at the premises of AETDPD (MoWIE) and project work is executed by the staff of the directorate with guidance from project manager who reports to the National Project Director for the quality, timeliness, and effectiveness of the implemented activities.

UNDP is solely accountable for the GEF funding. It provides the overall monitoring function and technical support for the project where necessary. Working in close collaboration with the MoWIE, the UNDP Country Office provides support services to the project particularly regarding procurement, contracting service providers, human resource management as well as financial management, and reporting. The overall UNDP role in project implementation is articulated in the Letter of Agreement with the Implementing Partner<sup>11</sup>.

UNCDF according to the ProDoc is responsible for:

- Initial capital contribution and raising additional funding to cover the costs of implementing the CleanStar Ethiopia business plan
- Risk capital grants to FSPs to cover upfront costs for product development
- Canalizing liquidity support to FSPs
- Technical assistance for financing activities

Particularly concerning component 3 UNCDF is tasked for:

- Fund management
- Technical oversight and quality assurance
- Program implementation and management
- Monitoring and Evaluation

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<sup>11</sup> Annex 8 to the project document

Based on the partnership arrangement between UNCDF and UNDP (so called UN to UN Agreement) the finances for the UNCDF activities are channelled through UNDP. UNCDF discharges its responsibilities through partnering with DBE who is responsible to provide wholesale funds, credit risk guarantees, and assist in selection of participating FSPs and technical assistance for clean energy lending.

The actual activity implementation is overseen by the Guarantee Fund Management Committee comprising of UNCDF CleanStart, DBE, MoWIE, MoFEC, EEA, EFCCC and UNDP. The committee among others approves all lenders (Commercial banks and MFIs), conducting periodic audits and reviews, review and approval of all claims.

At regional level, project implementation is a responsibility of the Regional Energy Bureaus. Although at the design stage there was consideration of hiring Resident Capacity Builders/Coordinators at regional level, this was later reconsidered in favour of using government technical experts designated as focal persons. The MTR noted that this implementation arrangement has had both efficiency gains and shortfalls as discussed under adaptive management sub section.

It is apparent that the project implementation was fairly thought through to ensure effectiveness and efficiency. Most importantly, the implementation design is flexible and can thus be modified to achieve enhanced effectiveness and efficiency. The instituted implementation structures are notably functional, adequately committed to activity implementation though some challenges mostly relating to capacity gaps and insecurity are observed.

## **2.5 Project timing and milestones**

According to the Project Document, project implementation was envisaged to commence in April 2016 and end in June 2020. Project implementation is well guided by clear milestones in tandem with UNDP-GEF cherished project cycle. Actual project implementation was however delayed with more delays mostly witnessed under component 3. But, since commencement, project implementation is being fast track to compensate for the lost time. The project's results framework clearly sets out key milestones to be achieved by the end of the project duration. On the basis of the achievements hitherto, the MTR is convinced that all the project's key milestones can be achieved should the current project implementation momentum be maintained and/or scaled up.

## **2.6 Main stakeholders**

By its nature and design, the RETs project is being implemented under a multi-stakeholder approach. Project implementation responsibility is vested in various stakeholders whose roles and responsibilities are explicitly stated in the project document. The MTR team established satisfactory adherence to the stakeholder arrangement stipulated in the project document with slight modifications as discussed in the project's adaptive management. A number of stakeholders at all levels of project implementation (national and regional) were identified during the design phase and satisfactory efforts to achieve their effective involvement were undertaken. As a result, several stakeholders have made commitments to support the project; a factor on which the project's sustainability potential hinges. The project's key stakeholders and their respective roles are summarized in table 4 below.

Table 4: Key project stakeholders

Name of stakeholder
Ministry of Water, Irrigation and Energy (MoWIE)
Development Bank of Ethiopia
Environment and Forest and Climate Change Commission (EFCCC) - National Improved Cook-Stove Programme
National Biogas programme Ethiopia, Phase II
Rural Electrification Fund
CRGE Facility
UNCDF CleanStart
Regional Governments
World Bank Credit Line for Renewable Energy Technologies
Micro-Finance Institutions
Association of Ethiopian Micro-finance Institutions (AEMFIs)
RET Enterprises
Women-Led Business in Ethiopia
End-Consumers
Ethiopian Energy Authority
Lighting Africa: Ethiopia
Entrepreneurship Development Centre (EDC)
Commercial Banks such as OIB, Zemen, Enat, etc.
Energy Coordination office of GIZ
Development partners
Fana Broadcasting Corporation

## 3.0 Findings

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### 3.1 Project Strategy

The ToR required a critical review of the project strategy with particular focus on the project design and results framework/logframe. This was intended to vividly bring out the gaps on which corrective measures in the next implementation phase would base.

#### 3.1.1 Project Design

The RETs project set out to address the problem of poor access to renewable energy appliances in the rural communities of Ethiopia which had caused the population's over reliance on inefficient sources of energy. At project baseline, over 15 million inefficient cook-stoves and kerosene lamps were being used leading to over 35 Mt of CO<sub>2</sub>e GHG emission annually. Despite some notable successes registered in the years preceding the project in the distribution of RETs, the inherent supply and demand side bottlenecks caused the RETs distribution rate in rural areas to sharply fall short of the increasing population hence worsening the population's over dependence on inefficient energy sources particularly fuel-wood and kerosene.

Whilst the project's ultimate goal was to sustainably expand market-based distribution of and eventual ease of accessibility to RETs in the rural communities of Ethiopia, the path taken by the project was to address the identified barriers that would hinder the achievement of the desired project outcomes. In accordance with the project design, the achievement of this objective is built on successful removal of the identified barriers.

The MTR found the project design adequate as it rightly responds to the key barriers to RETs accessibility and utilization in the rural communities of Ethiopia. The project's logic is sound and was well informed by a number of studies in the energy sector as well as the national socio-economic and political development of the country. As a result, the problem which the project was designed to address was precisely identified and the interventions (project components and outputs) are adequate to deliver the desired outcomes as stated in the results framework. The project design is illustrated in the figure 3 below.

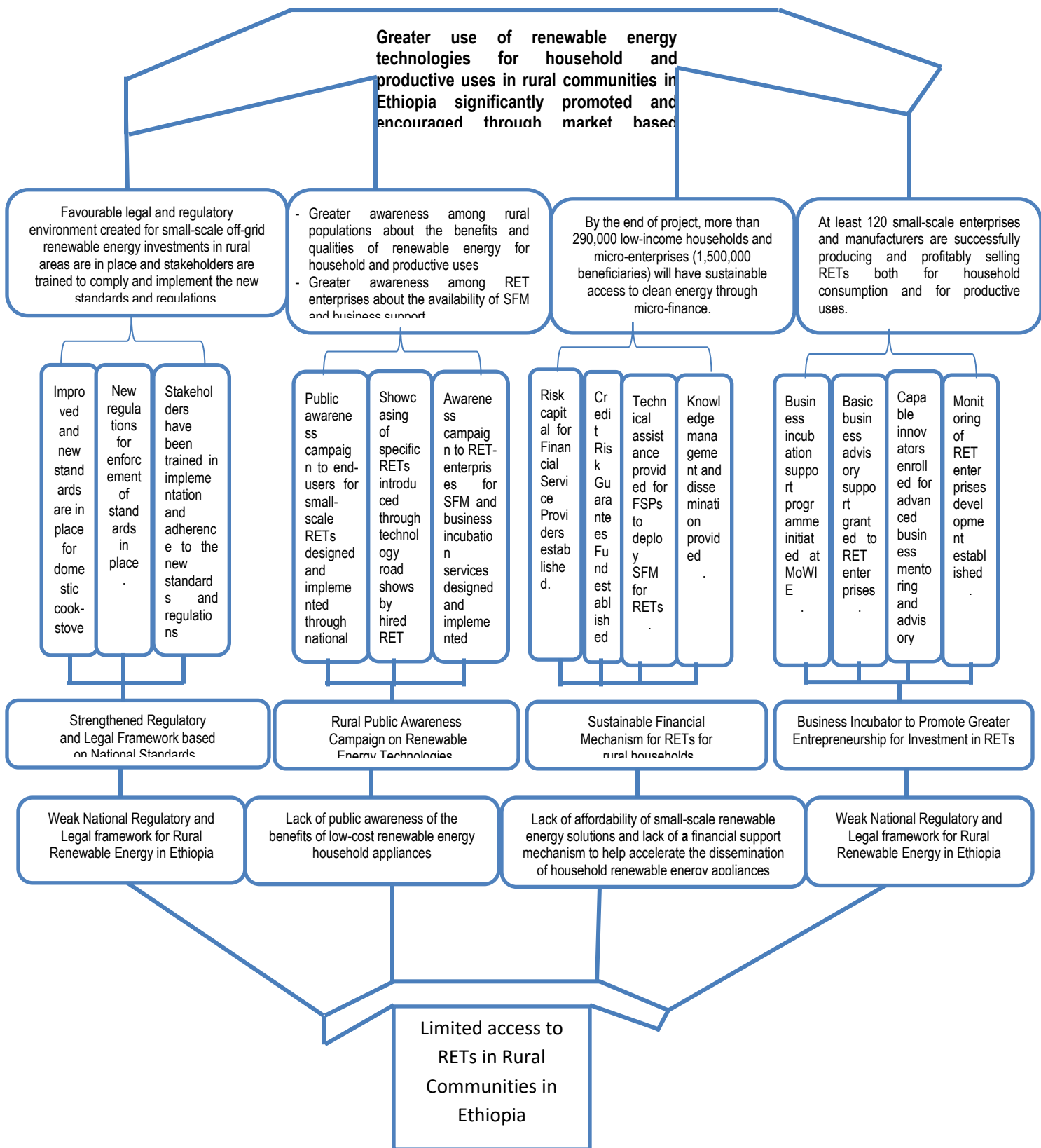


Figure 3: Project design at glance



The project integrated lessons from the previous and even on-going projects particularly the Rural Electrification Fund, the Climate-Resilient Green Economy strategy (CRGE) initiative, Lighting Africa among others and there was deliberate effort to overcome the design gaps in these projects. As such, the project is well linked with the current and past energy initiatives that gave it a strong foundation for greater impact and enhanced sustainability.

Furthermore, the project is consistent with national development priorities of the country as enshrined in the GTP I & II and recognises access to clean energy as a key vehicle for national transformation<sup>12</sup>. It is however noted that national efforts, prior to the RETs project, had been disproportionately directed at power generation (grid) capacity despite the heavy capital investments required. Thus, the project is designed to contribute to the enhanced capacity especially for the rural population to access RETs appliances that will provide a more feasible solution to the country's need for expanded power generation capacity. Given the greater RETs project alignment with national priorities, country ownership is sufficient as evidenced by the fact that much of the project budget is provided by the national government.

More country ownership of the project is reflected in the decision-making processes of the project in which both the national and regional governments are key stakeholders (see project management structure). The National Implementation Modality (NIM) upon which the project is mainly implemented provides a solid platform for national stakeholders to directly participate in decision-making at different levels of the project management. However, analysis of the responses from the filled self-assessment collected from the regional energy bureaus showed limited platforms for involving the direct beneficiaries in the decision-making processes which is acknowledged by the majority of the regions. In spite of this recognized gap, the established decision-making process is sufficient to promote national ownership of the project.

In respect to gender, it is apparent that the project addresses mostly the practical gender needs (enabling women to effectively deliver on their socially assigned roles) but with no deliberate effort directed towards addressing their strategic needs (changing the existing gender inequalities). There is also emphasis on gender disaggregated data in project reporting which also signifies that gender issues are given consideration in the project design. However, the lack of deliberate effort throughout the project design to set gender specific targets makes the gender related gains of the project rather incidental than by design.

Much as the situational analysis that informed project design contained gender analysis, the appropriation of project results appears to provide less emphasis to gender. Although the project has been able to reach out to different gender categories (women, men, and youths) and addresses their clean energy needs through the promotion of RETs, the lack of a clear cut out strategy for gender

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<sup>12</sup> Growth and Transformation Plan II (pp 38)

mainstreaming in the project is a gross oversight given the global emphasis on gender mainstreaming in development programs.

Despite some gaps identified in the project design as discussed above, the gaps are remediable and to that extent, the MTR finds the project design satisfactory. More gaps in relation to the project design are presented under results framework/logframe in the next sub section.

### **3.1.2 Results Framework / Logframe**

The project Results Framework/Logframe is clear; portraying a logical linkage among the key project variables/performance measures (outcomes, indicators, baseline values, and targets). It is indeed a critical tool to see the gaps against which the overall tracking of the project performance is based. Analysis of the results' indicators and their corresponding targets fairly conform to the SMART criteria. Indeed, the results framework provides a clear guide to the overall monitoring and evaluation framework of the project with greater emphasis on results.

The MTR team is satisfied that the logframe addresses the challenges identified in the problem definition, outlines the strategies with time-bound targets as well as the key risks and assumptions. However, some indicator baseline values are not resonating well with the indicator targets which may hinder accurate measurement of the results.

Under the project objective, three performance indicators were set but with only one baseline value. Whereas the baseline value can provide the basis for measuring indicators No 1 &2, it is inadequate to guide the measurement of indicator No.3 "Number of households benefiting from the project-supported access to RETs". The number of households with access to RETs at baseline should have been a better benchmark for progress tracking.

The baseline value for outcome 4 indicator "At least 120 enterprises in Ethiopia are unable to launch improved business due to lack of capital and business expertise" may be quite misleading in terms of target setting and performance measurement in future as it does not explicitly bring out the RETs enterprises at baseline. The number of RETs enterprises existent at the project baseline would have been a better baseline value for this indicator.

While commendable efforts were undertaken to establish the project's baseline values, the source of the quoted statistics is not indicated in the Results Matrix although these sources would have been the best means of verification. The source of verification presented in the results framework only reflects places where data to verify performance are located but does not specify the actual source. As such, the method for collecting the required data is not implicitly indicated.

The results framework does not indicate midline targets which is essential for proper sequencing of the overall targets. Lack of midline targets hampers more accurate measurement of achievements of the project at different key points in the M&E plan. Setting indicators at midline is important for timely detection and correction of any performance variations.

Cognizant of the nine regions in which the project is being implemented, indeed, the target mainly the number of technology products to be disseminated in the respective regions by the intervention of this project is proportionally distributed as was also done for the budget. Although efforts to capture gender desegregated data are visible in the projects M&E reporting, achievement in gender equity becomes incidental if specific gender is not embedded in the result targeting at the design stage of the project.

The MTR team believes that it is important to address the above shortfalls immediately. Once the shortfalls are corrected, the tracking of project performance can be significantly enhanced to capture the results.

### **3.2 Progress towards Results**

Project results are well articulated in the project document both at outcome and output level. The level of results achievement especially at outcome level formed a central part of the MTR in order to inform the projection of the likelihood of attaining full results by the closure of the project. Assessment of the progress towards results has been organised under the 10 objective and outcome level indicators as described in the following.

#### **3.2.1 Progress towards Project Objective**

The overall objective of the RETs project is to promote and encourage significantly greater use of energy efficient RETs for household and productive uses in rural communities in Ethiopia. This is hoped to support the reduction of the country's GHG emissions by increasing the lifetime energy saved as a result of adopting energy efficient products. The adopted project strategy was to address the key barriers that would hinder the achievement of this objective. In effect, four barriers were identified as well as their redress measures as contained in the project components. Three indicators were identified to provide a benchmark for assessing the achievement of the project objective as analysed hereunder;

##### **i) Lifetime energy saved**

At baseline, over 15 million inefficient cook-stoves and kerosene lamps were being used leading to over 35 Mt CO<sub>2</sub>e GHG emission annually. Against this backdrop, the RETs project sets out to promote and encourage greater use of energy efficient RETs for household and productive uses in the rural communities of Ethiopia. Barriers to the achievement of the project objective were identified (see section 2.2) and specific interventions under the project's four components are being delivered.

This MTR has taken note of great activity implementation momentum with strong potential of supporting output level target achievement. However, following a results chain analysis, the central part of the MTR was to ascertain project progress towards outcome indicators achieved. The review established that a total of 29,995 RETs<sup>13</sup> have been distributed until this MTR hence creating the potential of saving 2,024,662 mega-joules of energy. In view of endline target (saving 35.5 million mega-joules of energy), the achievement hitherto constitutes 5.7% of the endline target.

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<sup>13</sup> Indicator performance Tracking Table (October, 2018).

On average, each distributed RET supports the saving of 67.5 mega-joules of energy per annum implying that the project still requires to distribute extra 495931 RET products if it is to achieve its endline target. The low performance registered under this indicator as understood by the MTR team is due to the delayed start of the project implementation. However, given the current activity implementation momentum, the MTR team has confidence in that it is possible that the lost time can be compensated hence positioning the project to achieve its endline target under this indicator.

The pre-MTR project implementation period has mostly focussed on putting systems and processes in place to favour delivery of enhanced results. The work that has been done at output level is impressive and has the potential to propel the attainment of the outcome indicators should the implementation momentum be maintained and/or stepped up in the remaining project time. Popularizing the usage of RETs through public awareness campaign especially media and Roadshows coupled with strengthened capacity to acquire these products are strategic actions that would potentially favour the attainment of the desired results at full implementation.

#### **ii) Tons of CO<sub>2</sub> equivalent avoided**

The project's situational analysis indicates that at baseline, over 15 million inefficient cook-stoves and kerosene lamps that were being used accounted for 34 Mt CO<sub>2</sub>e GHG emissions annually. The adoption of efficient cook-stoves to the set levels (project targets) are envisaged to support the avoidance of the GHG emissions. At midline, a total of 101,210.34 tons of CO<sub>2</sub>e/a (ProDoc Annex 4, May 2018) are estimated to have been avoided through the distribution of RETs products so far. As seen in the previous sub section, progress has been made in the distribution of RET products with a potential to even be accelerated in the next implementation phase. The gains to be further registered in the distribution of the RET products would directly influence the attainment of this indicator.

Compared to the midline set (Annex 8), it is apparent that the indicator is on track although much behind the expected level due to the project performance in the other components that directly impact on the indicator performance. Nevertheless, with the spirited improvements noticeable in related components, there is hope for better indicator performance in the next implementation period. Intensification of project performance in the outputs that are directly connected to this indicator would obviously support its achievement over the project lifespan.

#### **iii) Number of households benefiting from project supported access to RETs**

The attainment of the first two project objective level indicators is rooted in the number of RETs products distributed and utilized. In effect, the project targets to enable 800,000 households to directly benefit from improved access to affordable RETs. The achievement of this target is a function of combined project interventions under all the four project components. In this MTR, focus was placed on ascertaining the progress so far made towards achieving the indicator target. Results indicate that 29,995 RET products have so far been distributed and the assumption is that these products have been purchased by households.

By implication, the number and types of technology products by the specific project support can be categorized as follows:

- 1,955 Improved biomass Stoves (ICS) in Oromia and Amhara Regional States and
- 2,530 Solar energy technologies in Oromia, Amhara, and SNNP Regional States
- From Roadshow 829 improved cook stoves and
- 178 solar home systems sold in Benishanguel-Gumuz and Gambella Regional States
- From training, market linkage and other related activities 19,153 improved biomass stoves and
- 5,528 solar energy technologies in Afar, Benishanguel-Gumuz, and Oromia Regional States

The MTR noted that indeed progress has been made towards indicator attainment although much is still desired in order to achieve the endline target. For example, the registered progress constitutes only 3.7% of the endline target. Nevertheless, the MTR experience reveals that the project has so far overcome most implementation bottlenecks and is therefore positioned to leapfrog in the next implementation phase to bridge the significant gap observed in this indicator. It is noteworthy that progress towards attainment of the objective level indicators is further reflected in the achievement registered under each of the four outcomes as discussed here below.

### **3.2.2 Progress towards outcome level results**

The project identified seven indicators against which progress on four project outcomes would be assessed. Although the project had not set midline indicator targets, progress made under each outcome indicators has been captured and later discussed in relation to the overall endline target in order to vividly articulate the project achievements hitherto as well as the task ahead as shown below. Discussion of the outcome level results has been organised under the four project components that resonate with the key barriers which the project seeks to address.

#### **Component 1: Strengthened regulatory and legal framework based on national standards**

Lack of a national regulatory and legislative framework for renewable energy for the rural sector coupled with lack of incentives to specifically promote and encourage the use of renewable energy for the rural populations are the core problems being addressed under this component. In effect, RET products quality were grossly compromised to the detriment of market development and customer satisfaction. It was against this backdrop that the project under this component set out to support the development of a favourable legal and regulatory environment for small-scale, off-grid renewable energy investments in the rural communities of Ethiopia.



Figure 4: Published Training Modules and ICS and Solar standards

Thus, the project inherited a situation where there was no regulatory basis to improve and control the quality of rural energy technologies. In response, the project set out to provide technical assistance for the development and implementation of technical standards and regulations for rural energy technologies. Two outcome level indicators to benchmark progress under this outcome were set and their midline progress is presented below.

**i) Status of development and enforcement of RET hardware standards by government of Ethiopia**

The MTR has established that National standards on three rural and renewable energy technologies have been developed, approved and endorsed by the Government<sup>14</sup>. These are on: i) improved baking stoves; ii) improved cooking stoves; and iii) solar home systems. However, the indicator target had not been quantitatively set to allow precise measurement of the progress made by midline. Nevertheless, a number of stakeholders whom the MTR team talked expressed optimism that the direction being set by the project will adequately address the inherent gaps in the regulatory framework of rural energy sector in Ethiopia.

Although progress towards development of standards is evident, there is slow progress towards the development of regulations to enforce the standards. At the time of this review, the only noticeable achievement in line with the development of new regulations for enforcement of the standards was the stakeholder consultative workshop. The slow progress in this output (1.2) continues to have a strong bearing on the overall indicator results.

<sup>14</sup> Project Implementation Review (PIR, 2018) report.

The MTR team was also informed that with the developed standards, there is no need for formulating regulations. All that is required is to put in place implementation procedures of the standards which have to be sanctioned by the respective Ministry through issuing directives. At the time of the MTR, the project had organised a Stakeholders Workshop aimed at coming up with Standards Implementation Strategy. Whereas this is a positive step it was ascertained that since the mandated Ministry is already having the regulation in the proclamation, at this time what was required was the development of Enforcement Procedures supported by the Ministry's Directive as well as a Strategy.

#### **ii) Number of participants benefiting from the trainings**

Popularizing the developed standards and regulations is a key pathway to achieving the project outcome under component 1. As a result, the project targeted to train over 500 individual stakeholders in order to facilitate smooth implementation of and adherence to the new standards and regulations. In respect to this indicator, the MTR established that 960 stakeholders<sup>15</sup> have so far been trained. Accordingly, Training of Trainers was given to 41 (38 males and 3 females) regional energy bureaus experts (24 solar energy technology experts and 17 improved biomass stove technology experts); Seven regions cascaded the training to 443 (339 males and 104 females) regional energy experts, and 476 RET enterprise members. It is apparent that already, the endline target has been achieved even at midline which according to several regional stakeholders is attributed to the robust strategies adopted.

The MTR further established that the developed standards and the training modules have been published and distributed to the regions thereby enabling them to cascade the trainings downwards. It is noteworthy that the project has laid a strong foundation upon which more results under this indicator will be significantly achieved overtime.

### **Component 2: Rural Public Awareness Campaign on renewable Energy Technologies**

Under this component, the project seeks to achieve: i) Greater awareness among rural populations about the benefits of renewable energy for household and productive use; and ii) Greater awareness among RET enterprises about the availability of SFM and business support. This is in response to lack of awareness among rural populations in Ethiopia about the possibilities of gaining access to renewable energy. The predicament of the rural communities in relation to access to vital information about RETs was fuelled by poor targeting of RETs promotional messages, inadequate communication infrastructure in rural areas as well as low preference for rural markets by the RET enterprises.

Informed by this baseline situation, the project supported: i) a mass media campaign through national and regional media; ii) showcasing of specific RETs through technology roadshows; and iii) targeted awareness campaign to RET-enterprises for SFM and business incubation services. Project progress under this component was designed to be measured with respect to three indicators namely: i) Type, item price, and estimated efficiency of technology sold directly at roadshows; ii) Number, size, and length of appearances of RET promotions in the media; and iii) Number of RET enterprises using SFM

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<sup>15</sup> Indicator Performance Tracking Table (October, 2018).

or applying for business incubation services. The progress made under these indicators is presented hereunder.

**i) Type, item price and estimated efficiency of technology sold directly at roadshows**

A total of 300,000 RET are envisaged to be sold directly at roadshows by the end of the project. By the time of this MTR, a number of accomplishments to support the realisation of this indicator target are noted. First, Technology Roadshow communication strategy document has been developed, endorsed and approved by MoWIE; second, pilot technology roadshows have been conducted in four Woredas in two regions while more roadshows were being planned in eight Woredas of four regions. If the planned roadshows are successfully implemented, this activity will have been implemented in 6 out of 9 regions that are covered by the project.

Results further indicated that a total of 1007 RET products have directly been sold at the conducted roadshow hitherto. Although this constitutes a very small fraction (0.3%) of the endline target, the awareness created during these events is potentially able to propel better results overtime. As revealed by several participants in FGDs, there is better awareness (than before) about a number of RET products that had not been brought to the rural communities before this project. Despite the seemingly miserable quantitative performance recorded under this indicator, the project implementation infrastructure that has been created is vital for supporting realisation of enhanced results in the next implementation phase. On this basis therefore, the MTR considers this indicator to be on-track although more efforts to propel results are critically required in the next project implementation phase.

**ii) Number, size and length of appearances of RET promotions in the media**

RET promotions had prior to this project been a domain of urban areas due to a myriad of communication barriers in rural areas. As a result, rural communities were confined to using inefficient energy sources and technologies hence contributing to enormous GHG emissions. In response, the RETs project targeted to have at least 1000 appearances of RET promotions in the media by the end of the project.



MTR results indicate that more than 550 of appearances of RET promotions of one minute long have featured in the media. In fact, 3 types of radio spot messages on the benefits of and access of RETs to rural public have been broadcast in seven languages at federal level. This constitutes 55% of the endline indicator target hence signifying that the indicator is on-track. However, there still need some time for the effects of such messages to start reflecting in the changing levels of demand for the RETs products in the project area and beyond.

Figure 5: RET roadshow promotion



### **iii) Number of RET enterprises using SFM or applying for business incubation services**

Discussions with the project team revealed that RET enterprises have been provided with information regarding the availability of SFM scheme. Indeed, at regional level, the project staff expressed optimism that a big number of RET enterprises have received this message and are getting themselves ready to apply for the scheme. In the PIR it is mentioned that the information is passed to all the participants of the training organized for RET enterprises particularly during the Entrepreneurship Skill Development Training conducted at federal level in Debre Zeit. Thus, it is possible to take the number of RET enterprises that got the messages by considering those who attended the training. It is also mentioned under paragraph 5 of the next page that RET suppliers have got the information about the facility. And this has also been witnessed by the RET producers contacted by the MTR team in the field and through phone conversation on their aggressive need of the loan.

The Indicator Performance Tracking Table (October, 2018) is the only source of quantitative data regarding the project performance under this indicator. It shows that 6 RET enterprises to be using SFM. Project staff further revealed that some RET enterprises had requested for technical support and clarifications from the regional energy bureaus and the project office particularly DBE. All these indicate that demand for SFM and business incubation services is being generated although not yet to satisfactory levels.

### **Component 3: Sustainable Financial Mechanism for RETs for rural households**

The need to enhance household affordability of RETs in the rural communities of Ethiopia coupled with expanded access to investment capital by RET enterprises are the key project aspirations under component 3. Thus, project interventions under this component are directed at overcoming the financial barriers by establishing a credit de-risking facility for DBE and micro-finance institutions (MFIs), as well as capacity-building for these FSPs to assess, develop, deploy and scale-up micro-finance products to finance sustainable rural energy technologies to low-income households and RET enterprises.

Limited access to financial resources was at baseline a major hindrance to both households and RET enterprises to afford RET appliances as well as engaging in RET trade respectively. Slow loan disbursements due to MFIs' apathy towards the renewable energy subsector paused a great challenge for these enterprises to access investment resources in the subsector. Against this background and supported by the project interventions under this component, the project envisages that by the time of completion, more than 290000 low-income households and micro-enterprises (1500000 beneficiaries) will have sustainable access to clean energy through micro-finance.

The volume of investments mobilized by FSPs participating in the project was the set outcome level indicator against which progress under this component is to be measured. With the support from financial mechanisms and awareness campaigns, investment and deployment of at least 200000 additional small-scale solar energy technologies and an additional 600,000 improved cook-stoves worth USD 15 million is envisaged to be mobilised by the end of the project.

**i) Volume of investment mobilized by FSPs participating in the project**

Despite the delayed establishment of project systems and structures that led to missed timing to access specific funding streams such as those under output 3.1 “Risk Capital for Financial Service Providers established” that states the provision of risk capital to at least five financial service providers (FSPs) to assess, develop, deploy and scale-up micro-finance products to finance sustainable RETs for low-income households and micro-enterprises”, progress on other outputs is impressive. For example, Credit Risk Guarantee Fund worth USD 1.4 Million has been established at DBE. This fund for the Credit Risk Guarantee Mechanism was directly disbursed from UNDP to NBE to fulfil the minimum requirement in opening a CRGF and also by the request of DBE. Although contrary to the original project design this measure by the PSC was vital to make up for the lost time due to the delay in implementing the activities under component 3. It was also reported during the PSC meeting (See Minutes from Third PSC meeting – September 14, 2016). Furthermore, a robust framework for the effective management of fund has also been established including inter alia; development, endorsement, and approval of CRGF operational manual, establishment of CRGFMC as well as selection of six financial service providers to provide energy loans amounting to 40 million ETB<sup>16</sup>. Other actions include signing of MoUs as well as establishment of partnerships mechanisms between different players. The MTR team found out that the budget planned for 2016 and 2017 was utilized to implement the activities mentioned above through hiring technical support to the preparation of operational manual, ToR development, hiring of consultant to support the day to day activities at DBE related to the project.

Energy loan agreements have been signed between three FIs and five RET suppliers leading to the disbursement of 6.5 million ETB energy loans to these suppliers using the 50% CRGF scheme. In order to increase uptake and effective management of availed energy loans, the project has supported capacity strengthening initiatives in the form of trainings and workshops in which 18 DBE staff have been trained while 23 staff of FIs, 30 RET suppliers as well as 9 regional energy bureau focal persons participated in awareness creation workshop about the fund.

The MTR further found out that the derisking financing mechanisms set up by the project has enabled the RETs enterprises to scale up their production capacity. This confirms that supporting increased production alongside enabling households to afford the acquiring of RETs is a valid pathway to achieve enhanced RETs utilization in the households. Asegid Dejene the proprietor of Abdi Bale Enterprise that produces ICS in Goba, Bale Zone (Oromia) testified to this (See Case study 2). Under this project component, the project portrays great potential to positively impact on the supply and demand for RETs; a factor that confirms the innovativeness of Risk Credit Guarantee Fund.

It suffices that the delivery infrastructure that has been established for this component is potentially able to support the recovery of the lost implementation time and enable the project to achieve its set targets. Discussions with project staff revealed that RET lending landscape has been streamlined while the on-going awareness campaign is ably generating demand for the available energy loans. This is

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<sup>16</sup> Template for Monitoring and Evaluation Specialist and IPs.

potentially able to scale up the distribution and purchase of energy appliances in the rural communities of Ethiopia.

#### **Component 4: Business Incubation to promote greater entrepreneurship for investments in RETs**

This component responds to the lack of enterprises that are involved in supplying renewable energy technologies to rural communities in Ethiopia. The situational analysis done prior to the RET project design revealed a number of dis-incentives for engagement in RET trade in rural areas. They included inter alia; the lucrative RET business in urban areas, lower economies of scale for operating RET business in rural areas, poor business skills as well as philanthropic interferences with the market by supplying RETs freely.

Supporting local enterprises to develop successful small-scale renewable energy business is the primary focus of this component. Therefore, the number of enterprises that launch micro-businesses to sell either small-scale solar technologies or improved cook-stoves or both was the set indicator against which progress under this component is to be assessed. The project core outcome is that at least 120 small-scale enterprises and manufacturers are successfully producing and profitably selling RETs both for household and productive uses.

The MTR recognised that 14 enterprises have so far launched micro-businesses to sell RETs. This has been favoured by a number of project accomplishments that include; a 13-day business development service advisors training in which 75 experts from nine regions were trained, a 6-day entrepreneurship skills development training that benefited 51 members of enterprises as well as a two-day customised training for the 96 members of cook stove producers. Furthermore, the project successfully conducted round one of innovative RET ideas competition in which 14 selected winners were given small grant awards. The awards were granted through screening applications of 36 Enterprises in multiple processes that include the application by the enterprises for innovation award; first stage screening of the innovation; and ground level verification of the innovation and committee decision for selecting the final awardees.

There was general consensus among the stakeholders consulted during this MTR that despite the decimal performance in respect to indicator target achievement, the activities so far undertaken under this component set a solid ground that would ably support the realisation of the project endline targets. Consultations with the project team revealed that in the period under review much attention has been paid to laying a strong foundation for enhanced project performance in the subsequent implementation phase.

From the analysis, it is apparent that the project has made spectacular performance but mostly at activity implementation and outputs. Much of the project achievements hitherto are more vivid in terms of the delivery structures and systems that have been established under each of the four project components. This provides a solid foundation for the project to achieve its targets both at output and

outcome levels. However, despite of the observed progress towards results presented here above, the MTR noted a number of persisting barriers that require deliberate redress measures.

### 3.2.3 Remaining Barriers to Achieving Project Objectives

**Energy Policy:** The Energy Policy is a very important document that would guide the entire Energy sector within Ethiopia. The MTR team was however surprised that the process of reviewing the old Energy policy stalled for a number of years from around 2013. This not only pauses a threat to the policy direction of the sector but also has got an effect on institutional arrangements and coordination mechanisms as well as the resource mobilization requirements for the sector.

**Delayed project start and implementation:** Whereas the project document was endorsed in July 2015 and the Project Inception workshop took place end of October 2016 which is approximately 1.5 years of delayed start and actual implementation. Following this commencement delay there was late constitution of project structures and systems like establishment of the project management team, office, and the related facilities since it is normally a bureaucratic process that must be in place given the partnership with government. Due to the above administrative and management factor, the delayed kick off of the project has had significant effects on realising the required and earmarked funding notwithstanding the reduction of some amounts from key funding partners. For instance, UNDP GEF had some reductions in committed funds as well as the missed timing to access the UNCDF Global funds amounting to USD 750,000 with USD 150,000 per FSP towards the realization of Output 3.1

**Performance Based Risk Capital for Financial service providers established:** This was an opportune moment to secure Risk capital funds to at least 5 Financial Service Providers (FSP) to assess, develop, deploy, and scale up micro finance products to finance sustainable RETs for low-income households and micro enterprises. It means this will jeopardize Ethiopia chances of FSPs capacities as well as the country's opportunities to explore other innovative financing models such as Asset Financing and Pay as You Go models if the right opportunities and environment are favourable within the country that have also been tested by CleanStart model in other countries successfully. Despite the above missed timing the MTR team learned that UNCDF is still committed in working with UNDP GEF and other Development Partners in order to find ways and means of plugging this gap in the spirit of strengthening partnership.

In a related matter, the lack of substantive National Coordinator for the UNCDF CleanStart within Ethiopia is also likely to cause further decision and implementation delays in the components where UNCDF is more involved like component 3 of the project thus affecting progress of other components of the project holistically. However, while conducting the MTR, the team learned that the recruitment process for the CleanStart was started.

**Strategic policy alignment of the RETs Project:** It should be noted that the project was designed and initiated based on the previous UNDAF which ended in 2016 while the project actually commenced during the start of the new UNDAF 2016 – 2020 cycle. Whereas both policy documents address issues related to energy the statements within the project document ought to be aligned to the new UNDAF as

well as reporting on the realization of the global objective. Short of this alignment the project might at its termination be faced with challenges in measuring its targeted fulfilment of objectives.

**Political Transition and Governance:** Ethiopia is currently undergoing a transition period in its political and governance portfolios both at the Federal as well as at the Regional level and other governance systems and structures within the country. Whereas there is relative stability and peace in the vast majority of regions and the national level, it was noted during the evaluation that some regions have been facing some political instability and insecurity. For instance, in Benishangul-Gumuz Region, one of the woredas (Mao Komo) has up to today been seriously affected as the project activity implementation has been on halt for six months. Further to this the general atmosphere creates uncertainties and poses threats among the population and project management. This instability in different parts of the country has consequently resulted in poor or very limited staff movement for different project activities at all levels

**Monopoly by some MFIs:** As the project's approach is to also work through partnerships with some selected Commercial Banks as well as Micro Finance Institutions, it was noted from various national and field stakeholder interviews and consultations that some of these institutions are still not flexible in their lending requirements and prescriptions despite the initial project commitments due to their monopoly in some regions. A case in point is for example one of the MFIs in Amhara Region which actually dominates in the region but is still not willing to accommodate SMEs as it is mostly targeting and focusing on bigger enterprises despite their initial commitment to partner and collaborate with the project. This has severely caused the SMEs within the region to continue suffering from lack of access to finance and capital which was found out to be their biggest challenge especially those in Improved Cook Stoves (ICS) businesses. Coupled with the above issue, the MTR team also was faced with numerous complaints from RET enterprises relating to the **High Interest Rates including flat rate** charged by the CBs and MFIs which ranged from 15% to 18% which was noted to be a prohibitive factor in RETs business expansion and replication or growth. Interrelated to this factor also was the issue of collateral security which was reported to be undervalued and low as compared to other Banks that are not partnering with the project. Some participating MFIs were also reported to be lacking in **Management Information Systems** especially the Core Banking Information System which is an important tool especially with such big sized MFIs.

**Ethiopia's Financial Sector Policy and Regulatory Framework:** While the Ethiopia's economic growth trajectory is tremendously increasing with its current infrastructural diversification, it should be noted that it's still operating a closed economy with attendant financial sector restrictions. Some of the challenges reported by RETs enterprises as well as Financial Institutions partnering with the project include:

- a) Lack of Foreign Exchange and its easy access due to restrictive Central Bank monetary policy hinders foreign currency supply to support importers of RETs
- b) The cumbersome Customs procedures and extra costs (import duties) were also reported to be another prohibitive factor to RETs enterprise in maximizing their business potential

- c) The 16% Credit Cap laid down by the National Bank Ethiopia (NBE) which is the Central Bank was also reported to be hindering the FSPs in maximizing their size of Loans for the Energy sector and this unfavourably affects the RETs enterprise too under this project.
- d) The high Interest Rates from Commercial Banks and MFIs was also noted to be another burning issue affecting the RETs project as this could also be emanating from the 3 above stated factors coupled with non-compliant FSPs as per partnership arrangements with RETs project.
- e) The various RETs enterprises especially those in solar business noted the lengthy procedures of the Credit Fund Guarantee whereby after going through the rigorous Commercial Bank's procedures, they are again subjected to equally the same rigors from the Development Bank of Ethiopia (DBE) a process which was estimated to take around 2 months.
- f) The conventional collateral security requirements in form of assets etc are also reported to be a hindrance for those RETs enterprise especially SMEs who may not necessarily be having the forms of collateral that is often required by FSPs which hence calls for revision of collateral requirements to accommodate those other non-conventional collateral forms such as farm gardens, solidarity groups etc since rural small enterprises especially in ICS and solar systems may lack such established conventional collateral

**Delayed production of Regulations under Output 1.2:** As stipulated during the project design under output 1.2 its stated that “**New Regulations for enforcement of Standards put in place**” accordingly the various Solar and ICS Standards have been put in place and published but at the time of the evaluation the required Regulations were not in place. The Project Document outlined specifically the options for the new rules and regulations for enforcement of the RET Standards to include amongst others:

- Enforcement of products standards need rules for independent testing and product certification schemes
- Independent quality and performance labelling of products on the market
- Tax breaks for the small-scale producers of solar technologies and improved cook stoves in adherence with the standards
- Regulations to provide subsidies to certified products and services

Based on the above the MoWIE together with the Ethiopian Energy Authority, MoFEC, EFCCC and Ethiopian Conformity Assessment Enterprise, and Lighting Africa Ethiopia would develop the new rules and regulations based on the Standards as well as international best practices<sup>17</sup>. At the time of the MTR, it should be noted that the above clearly stated tasks were not yet in place. It was however, noted that so far, some stakeholders' workshops have already taken place to agree on the Standards Enforcement Strategy; however, the MTR still construed the planned and envisaged strategy to be good if both the Standards as well as Enforcement Procedures are in place in order to be operationalized with the envisaged developed Strategy.

**Inadequate Regional Government staffing, project logistics and lack of incentives:** first and foremost, it should be noted that the RETs project is designed to be implemented in all the 9 Regions

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<sup>17</sup> RETs Project Document: page 42 and 43

of Ethiopia. Due to the vast geographical dispersion of the project and its related activities it calls for adequate resources and logistics such as transport as well as equipped Project and Regional offices as well as adequate facilitation of all teams at the various levels of project implementation. The MTR Team however, noted that the project lacks at both national and regional levels sufficient logistics such as Transport and also the Federal and Regional governments staff seconded to work on the project often lacked tools such as computers, printers, communication equipment or air time for their mobile phones as well as incentives. This has led to the demotivation of project team to properly execute their tasks and hence delay of financial utilization report from regions, knowledge and skill gap of regional energy bureaus' finance officers in the handling of finance documents properly as well as turnover of staff in regional energy bureaus. It was also noted that most regions are understaffed especially in the Energy bureaus and others are not well trained and capacitated with adequate energy related matters. A case in point on staffing is Oromia Regional Energy Bureau which has a planned staffing capacity of 18 but the actual filled positions filled at the time of the evaluation were only 9 experts which represent a gap of 50%.

**Continuous reorganization and restructuring of government Ministries, Departments, and Agencies:** The recent changes and restructuring of the government has paused a coordination challenge in management of this project despite the joint meetings that are often held as there is noted lack of clarity of the responsibilities in some aspects of the project which overlap between different Directorates. For instance, the issues related to Improved Cook Stoves and Biomass technologies are vested to Environment, Forest and Climate Change Commission. While issues related to Solar technologies vested on the Ministry of Water, Irrigation and Energy, issues of Bio-fuels in the Ministry of Petroleum and Natural Gas as well as issues in relation to financial mechanisms are mainly vested to DBE.

**Inadequate RETs Distribution mechanism and infrastructure:** Ethiopia being a vast country geographically and most of it being rural in nature calls for a robust infrastructure in order to have a great impact realized from the project implementation. During the evaluation however, the MTR team noted and observed that there was inadequate distribution mechanism of the RETs and products which was also re-echoed by the enterprises as they were finding it hard to maintain grassroots based presence. This is more so affecting the solar technology suppliers and enterprises who end up having high distribution margins that are not competitive and end up not making business sense in such rural setups. This was also confirmed from those previously supplied solar systems by the Regional Energy bureaus to be dysfunctional at the time of our field visit in some cases due to the lack of area based trained technical personnel to provide follow ups as well as maintenance support services (Case study 1). The BDS training was provided to the regional energy bureaus, the RET enterprises got entrepreneurship skill development training which is called Entrepreneurship Training Workshop by EDC.

**Effect of Ethiopia's porous Borders:** As already indicated Ethiopia being a vast country geographically, it's often faced with porous borders which often leads to some unscrupulous business people smuggling into the country some counterfeit products such as solar home systems which

compromise the standards within the country and lead to exploitation of the end users who in some cases are unable to differentiate between the standard and counterfeits.

**Project visibility, knowledge management and profiling:** whereas the project during its short implementation period has made tremendous progress in realizing its targets, it was noted that it still needs to invest more in its visibility at both national and regional levels despite the various awareness activities so far undertaken. This will assist the project in measuring attribution as opposed to other initiatives for example the GIZ similar activities since at the regional and lower levels the MTR team did not notice or observe any publication such as Posters or Brochures or Leaflets generally about the project which compromises its visibility and attribution in the future even though some project activities have already been undertaken in most of the areas visited by the MTR team.

**Lack of the exit strategy:** It is true that there is strong ownership by the Government. However, the project document doesn't provide for any specific exit strategy which would have helped in envisioning the way forward by the government should the Development Partners stop supporting such projects yet there is still a need for addressing the barriers in disseminating Rural Energy Technologies. Whereas this is partly embedded within the sustainability section lack of clearly laid out exit strategy may have some impact on results.

### 3.3 Project Implementation and Adaptive Management

The project's ability to adapt to changing circumstances and contexts during implementation is critical for its success. The MTR analysis focused on how project implementation has been modified to suit the changing circumstances. Therefore, key areas for analysis were; Management Arrangements, Work Planning, Finance and co-finance, Project-level Monitoring and Evaluation Systems, Stakeholder Engagement, Reporting and Communications as discussed in the next sub sections.

#### 3.3.1 Management Arrangements

The project management is functional with a project office at MoWIE, AETDPD. The project has employed 3 full time experts (Project Manager, M & E expert, and an accountant) at the federal level and they are based at the AETDPD, MoWIE. The Director of AETDPD is designated as the National Project Director. The project office operates as an entity, with responsibilities for the day-to-day management, monitoring and evaluation of project activities as in the agreed project work plan. UNDP and UNCDF have also recruited a full-time consultant who seats at DBE to support the implementation of DBE activities related to the project. UNCDF is supporting the project by deploying an international consultant for technical assistance and capacity building slated under component 3. The project manager closely works with the national project director and representatives of other implementing partners MEFCO, DBE, UNDP and UNCDF. Above this is a PSC comprised of key implementing partners (MoWIE, EFCCC, DBE, EEA, UNCDF, UNDP and the project office) which conducts its meeting biannually. CRGFMC comprised of concerned institutions to deal with issues in relation with the Credit Risk Guarantee Fund under component 3. This committee reports to the PSC.

The project has four components. The components 1,2, and 4 are implemented by MoWIE (Solar technologies) and EFCCC (ICS technologies). The DBE is mainly responsible for the implementation of



component 3 of the project in collaboration with UNCDF. The role of UNDP is to maintain the oversight on the project implementation, manage the overall project budget and human resources, procure all services required, monitor the project implementation, and report on the project performance to the GEF. The roles and responsibilities of all project partners have been identified from the beginning and outlined in the project design. The management style is results based.

In general, the project uses the existing government system, structures, and experts to implement its activities in the 9 regional states. The Regional Energy offices are responsible to manage/coordinate the activities at all levels of their respective regions. The project objectives address the major barriers to the wide dissemination of renewable energy that are also in the strategic documents (CRGE, GTP) and policies of the government. Implementing partners have a good understanding of the project's overall objectives, outcomes, impacts envisaged. The number of staff at the federal level seems to be adequate to coordinate all activities. The regions are working with a focal person instead of putting a dedicated capacity builder/coordinator as envisaged in the project document. The focal persons in the regions have taken this task in addition to the tasks they have been assigned by their respective bureaus. In the regions where the MTR team visited (BGZ, Amhara, Oromia), it was told by the experts that they have no logistical support to execute their tasks as required by the project. We also found out from UNDP that there is no as such any logistical support that can be claimed by the regions. However, the MTR team has witnessed the lack of transport as a critical barrier for the movement of experts in the regions. This was attested during the field visit in BGZ regional state where the focal person told us that he came to the kebele for the first time with us although the work requires him to be there frequently.

Although it is very good to involve government staff for the sustainability of the project it may be necessary to at least arrange some kind of closer technical support in the interest of enhancing the capacity of the regional energy bureaus in promotion, BDS, and market linkage of the local RETs. The planned recruitment of CleanStart program coordinator in this regard is also a plus. In spite of the delay in recruiting project staff and the security problems since the inception of the project that prevented the movement of experts to do their job in some regions (e.g. Oromia), the work is progressing very well since the Project Manager, M&E officer, and the DBE consultant became in place. Activities are implemented based on the plan as indicated in the log-frame. In general, the project staff and the focal persons in the regions have adequate awareness and understanding of the project objective and could provide a broader picture of how different outputs are inter-related in order to contribute to the relevant outcomes and hence overall project objectives.

The Communication between the project office and focal persons in the regions is mainly done through e-mail and telephone, which proved to be adequate. However, it is vital for the project manager and M&E expert to have physical presence regularly to monitor if things are going as per the report by the focal persons. The Project has also PSC which conducts its meeting biannually. It is an executive decision-making body that approves annual plans, follows the implementation of the plan, and provides general guidance. From the minutes the MTR has seen so far, the PSC has conducted 7 meetings and decided on very important issues that help to track the progress of the project implementation in all

components. However, the team suggests that the minutes from the meeting need to be improved to clearly state the actions, responsibilities, and implementation of the actions to facilitate tracking of achievements. The project has also a CRGFMC housed at the DBE with committee members that are also PSC members. The committee reports to the project steering committee. The major Government IPs i.e. MoWIE, MEFCC, and DBE share some resources such as vehicle for executing their tasks as there is only one vehicle allocated for serving the project at the federal level.

The financial services for EFCCC activities are handled by MoWIE because of technical problems at EFCCC to open a separate account for the project. This is felt by the accountants at MoWIE as an extra burden. The new arrangement of ministerial mandates is expected to reinstate the energy sector back to its original ministry “the MoWIE” If that happens it will have significant impact in the coordination of energy related activities from one Ministry. Although not much visible, the current arrangement (ICS under the EFCCC and Solar in MoWIE) may have some negative impact particularly in the coordination of project activities at a later stage. The project’s overall objective has significant contribution to the development of the energy sector in the country. The activities that are being implemented have national level relevance and impact. From the discussion the team had with government officials and experts at regional and federal level, it has observed that there is a firm commitment and sense of ownership to achieve the project objectives. The MTR team has also witnessed the motivation of all government and non-government stakeholders including the private sector (the commercial banks and MFIs currently engaged in the project) from woreda to the federal level who are doing their best to achieve the project objectives. The project management arrangements are illustrated in figure 6 below;

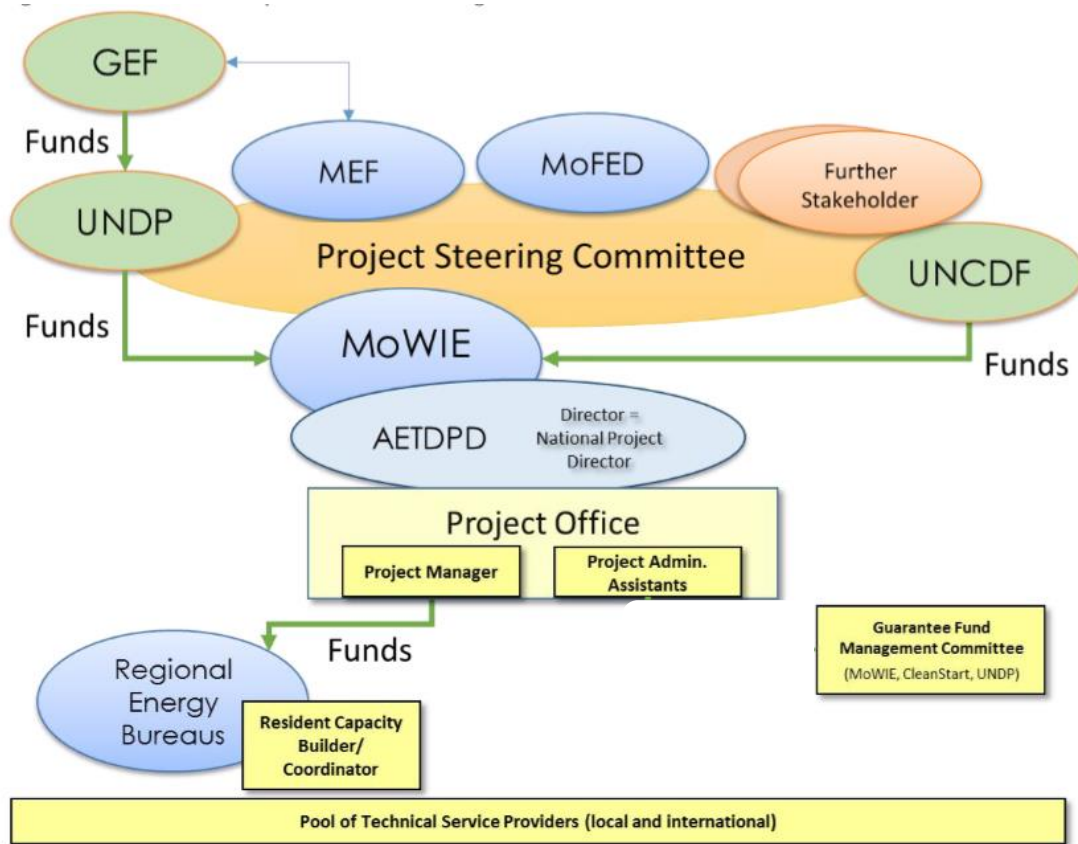


Figure 6: Project Management/Implementation arrangements. Source: Project Document

Despite the fairly streamlined management arrangements discussed in this section, the MTR established some challenges that may undermine the project's performance. They include the following;

- ✓ Insecurity within the country for the last 3.5 years hampered implementation in some regions e.g. Oromia, BGZ. The project commenced almost 2 years behind the schedule.
- ✓ Continuous government structural and institutional changes even to date, for example, MoWIE - Electricity to Energy, MEFCC downgraded to EFCC Commission.
- ✓ Inadequate funding especially for the UNCDF Component 3 De-Risking funds. UNCDF CleanStart National Coordinator delayed recruitment.
- ✓ The management arrangement in the project document had a Resident Coordinator at regional energy bureau level who will be in contact with the project office at MoWIE and closely support and follow-up activities at regional level. However, following the direction from the government bodies, there is no personnel in the position at regional level which in turn directly affects the performance of the project.
- ✓ The logistics are inadequate. The MTR noted that despite the increase in the workload of the responsible offices in charge of project, no consideration for additional support in terms of equipment has been done. As such, the project is implemented using shared equipment such as vehicles which sometimes causes delays in activity implementation.

- ✓ Lack of motivation for government staff.
- ✓ Lack of commitment and flexibility by key partners e.g. MFIs Regional support is not strongly visible in BDS and market linkage support by the regional focal persons.
- ✓ Transport is mentioned as a main barrier for this. In Amhara there is a good coordination in terms of using resources for promotion by combining with other RET initiatives.

### 3.3.2 Work Planning

Working plan clearly defined the roles and responsibilities for the execution of project activities, including monitoring and evaluation. However, it does not provide milestones for deliverables and outputs bounded with a timeframe. The project already was delayed for almost 2 years before its inception. The delay was caused due to prolonged discussion with the government implementing partners and the arrangement of the financial modality with the commercial banks and MFIs. This delay has costed the project the UNCDF CleanStart Program support, which was stated under output 3.1 of component 3.

The risk capital grants were meant to underwrite the costs associated with designing, developing, launching, and scaling up a new loan program so that FSPs can diversify their loan portfolios while also creating a specific socio-economic and environmental benefit to borrowers and the country as a whole. After the launching of the program in mid-2016, the outputs 3.2 and 3.3 were also delayed for another 1.5 years. Hence, the earnest implementation of component 3 was started by DBE after the recruitment of a consultant by UNDP in November 2017.

Moreover, some activities in this component among others the designing of the establishment of CGRMFC, the development and approval of operational manual for the credit guarantee fund management were already accomplished through the support of UNDP. Currently the implementation of the activities under the outputs 3.2 and 3.3. is going very well thanks to the DBE responsible Directorate and the consultant who are tirelessly pushing the project to compensate for the lost time. After the consultant's arrival the DBE has provided guarantee letter for 1 MFI and 2 banks within a few months. As a result, two ICS enterprises in Bale and Arsi Zones of Oromia and one ICS enterprise in Amhara have benefited from the credit to expand their businesses and outreaches in their respective regions. Also two Solar Companies (Tigist Tadesse Solar Woman and Green Hope) have secured substantial loans from Commercial Banks (OIB and Zemen Bank) and PEACE MFI.

### 3.3.3 Adaptive Management

The project has introduced adaptive management measures in the course of implementation as evidenced by the following changes that have been enacted along project implementation course.

- The introduction of a hybrid NIM/DIM as opposed to the original plan to use NIM. The DIM management framework was introduced in order to facilitate greater and more effective intervention.
- The recruitment of the M&E officer that was not originally in the plan has helped to enhance the RBM and M&E systems.

- Adopting an Indicator Performance Tracking Table as well as development of Sub indicators are among the adjustments made by the M&E plan.
- FUNDS management decision making vested in DBE due to policy contrary to initial arrangement of CRGFMC. Use of budget of 2016, and 2017 for implementing some planned activities of component 3 helped to make up for the delay in the launch of the Risk Guarantee Fund. Project benchmarking with technical studies such as Technology Needs Assessment has helped to have choice of appropriate RETs.
- The project also established the CRGF by frontloading the entire resource allocated for the facility. This fund for the Credit Risk Guarantee Mechanism was directly disbursed from UNDP to NBE to fulfil the minimum requirement in opening a CRGF and also by the request of DBE. Although contrary to the original project design this measure by the PSC was vital to make up for the lost time due to the delay in implementing the activities under component 3. The MTR team is aware that there is a plan to organize a technical skills capacity building training for RET Enterprises and the regional energy experts. The technical needs assessment was being done while we were conducting the MTR and now the team has finalized its field assessment and also finalizing the report.
- The operational manual for Risk Guarantee Fund Management is revised to address the following issues:
  - The clause on 'Participating financial institutions (PFIs) must have experience in energy lending' is now removed to include all interested PFIs.
  - The clause on 'PFIs must have at least 20,000 clients' is now replaced by 10,000
  - The Grant Award Scheme is adjusted to also consider prototype innovations not only registered ones but also RET enterprises and individuals not registered.

### 3.3.4 Finance and Co-finance

The project's ability to successfully and timely mobilize all the planned resources as well as utilizing them economically is a key indicator of the likelihood of its overall success. The ToR required the assessment of: i) project's financial management to ascertain the cost-effectiveness of the interventions; ii) appropriateness and relevance of fund allocations; iii) existence of appropriate financial controls and their effect on the financial health of the project; and iv) the efficacy of the project's co-financing arrangement.

#### a) Financial management

The financial management of the project is governed by UNDP's financial rules and regulations for NIM and there is also project implementation manual for all UN assisted projects/ programmes in Ethiopia. The review indeed noted satisfactory adherence to these regulations being facilitated by the financial accountability tools (FACE) provided by UNDP to streamline and track the utilization of the project resources. The finance offices of both UNDP and the Implementing Partners have played a pivotal role in building a financial management system of the project with adequate emphasis on ensuring cost-effectiveness of the project.

Project expenditure is adequately tagged to the approved workplans and executed upon acquisition of all the necessary approvals and authorisations. Quarterly and annual project reviews also capture financial data and are key tools employed to timely detect and correct variations in the project financial management. In respect to the results-based management framework that underpin the entire project implementation, the linkage between project expenditure and results attainment is satisfactorily emphasized across project implementation continuum with the purpose of ensuring value for money and overall efficiency. The project budget is appropriately allocated to project outcomes as seen in the next sub section.

**b) Appropriateness and relevance of fund allocations**

The overall project budget amounts to USD 73,137,676 involving cash and in-kind contributions as well as a loan from different partners. Analysis of the project budget indicates that cash contributions constitute 12% while in-kind and loan constituting 61% and 27% respectively as shown in figure 3.2 below.

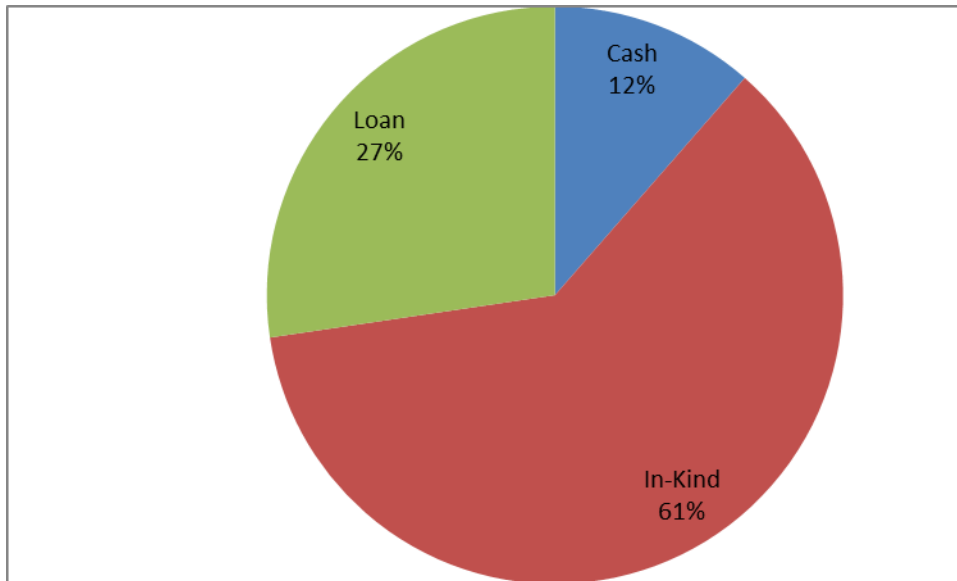


Figure 7: Project budget by type of source

The project budget is further allocated across the five years of project implementation as well as in respect to project outcomes. Annual budget allocations shown relative balance with annual allocations ranging between 19.3 to 20.6%. This implies that the activity implementation momentum across the project years is fairly uniform with almost the same level of effort as seen in figure 3.3 below.

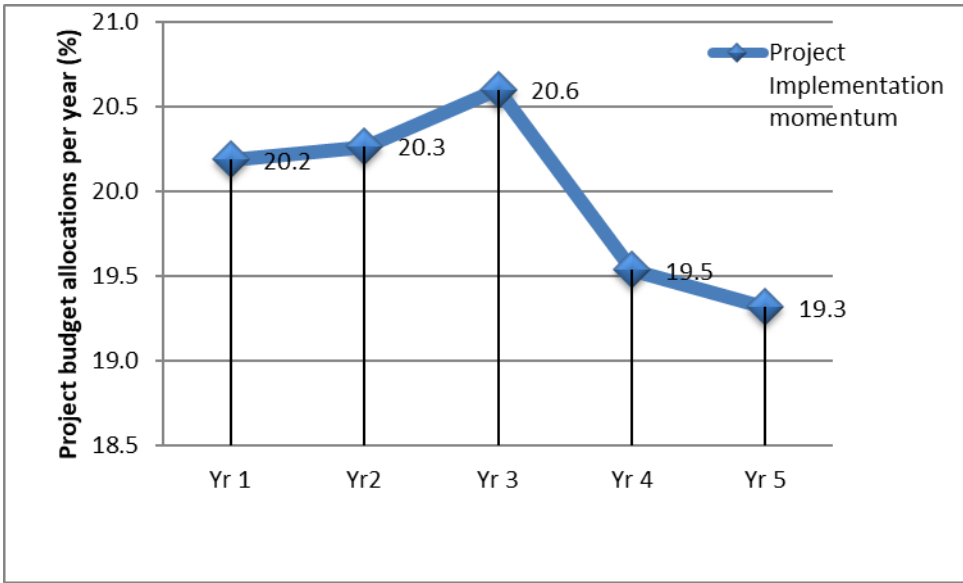


Figure 8: Project budget allocation by year

As indicated in the figure above, there is lower activity implementation momentum at the project start (first and second year) and towards the end (4<sup>th</sup> and 5<sup>th</sup> years) while in year three, accelerated activity implementation is noticeable. This depicts a good representation of the project signifying enhanced alignment between level of project activity implementation and financial resource utilization. By impression, the review finds the resource allocation across the project lifespan relevant and appropriate only that the delayed start of the project has adversely affected these annual allocations.

Besides the annual allocations, the project budget has also been allocated to specific project outcomes with some relative variations on the account of the intensity of activity implementation as seen in figure 3.4 below.

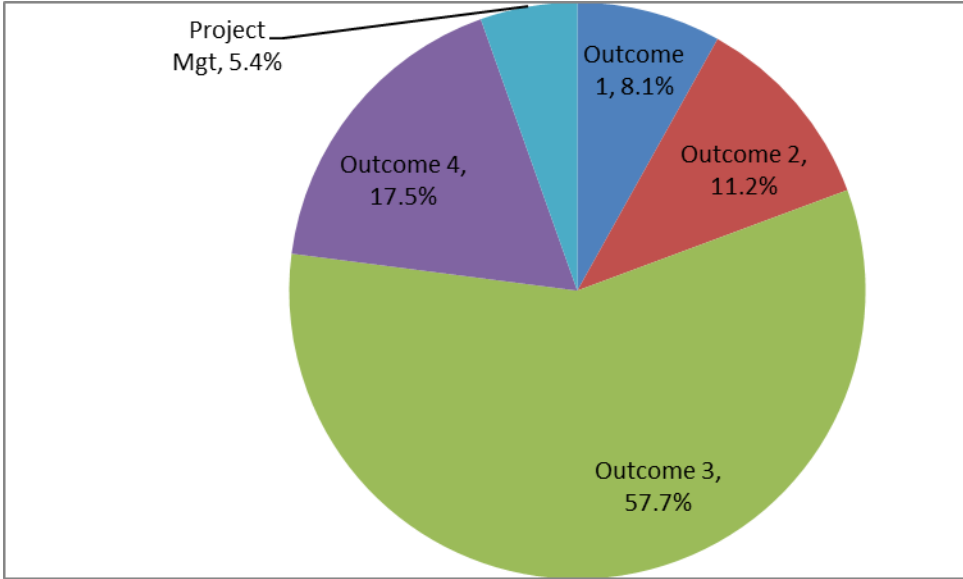


Figure 9: Budget allocation by outcome

In addition to outcome and annual allocations of the budget, there was also geographical distribution of the budget in respect to the regional population densities. A population-based rate was applied to proportionately allocate the project budget to different regions in which the project is implemented. This enabled the regions with the highest population to receive the highest budget as in figure 3.5 below.

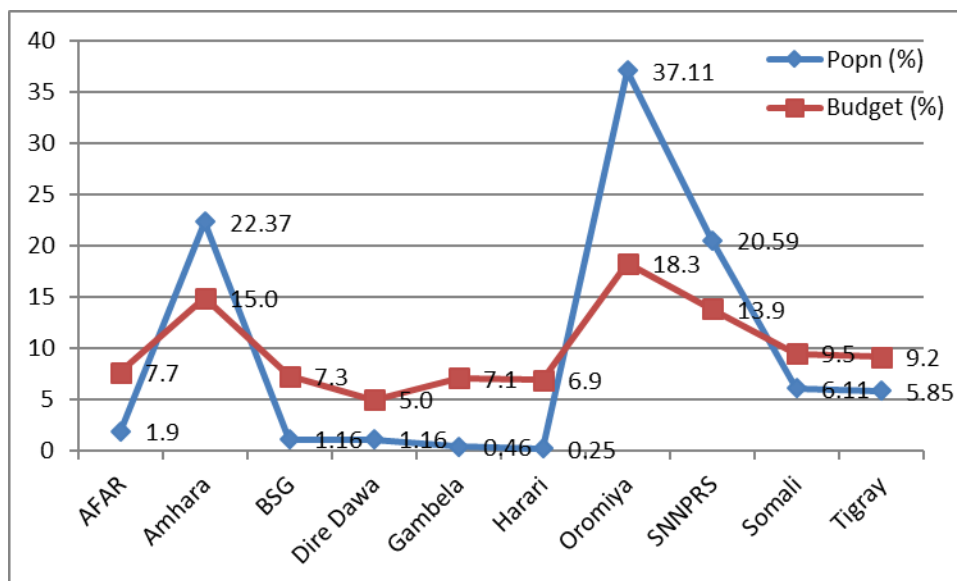


Figure 10: Budget allocation by regions

Whereas the regional distribution of the budget using the population factor was indeed relevant to ensure appropriateness, the MTR notes that the consideration should have gone beyond the population factor alone to consider other socio-economic and demographic factors such as the poverty status and degree of vulnerability to climate changes.

These gaps notwithstanding, the MTR finds that budget allocations were fairly appropriate in respect to both the outcomes and geographical considerations. However, it is still critical to consider other factors in addition to population in order to achieve enhanced appropriateness of the budget allocations to different regions.

### c) The efficacy of the project's co-financing arrangements

The financing of the project is anchored on a co-financing arrangement with both cash and in-kind contributions from different project partners as in Table 5 below;

Table 5:: Stakeholders contributions to project budget

Project Partners	Yr 1	Yr2	Yr 3	Yr 4	Yr 5	Total	% contribution
GEF	848806	911748	1078565	760831	491831	4091781	6
UNDP (Cash & In-Kind)	152000	165000	215000	94000	202000	900000	1



UNCDF (Co-financing)	330000	310000	340000	0	0	980000	1
MoWIE (In-Kind)	3537733	3537733	3537733	3537733	3537733	17688665	24
RET Enterprises (In-Kind & Cash)	1160000	1160000	1160000	1160000	1160000	5800000	8
MoFEC	2298257	2298257	2298257	2298257	2298257	11491285	16
DBE (Loan)	4000000	4000000	4000000	4000000	4000000	20000000	27
FeMSEDA/EDP (In-kind)	1200000	1200000	1200000	1200000	1200000	6000000	8
HIVOS	1237189	1237189	1237189	1237189	1237189	6185945	9
Total	14763985	14819927	15066744	14288010	14127010	73137676	

In aggregation, cash contribution constitutes 12% while in-kind and loan constitute 61% and 27% respectively which makes the national government and the private sector the largest contributors to the project budget. This rhymes well with the project components in respect to de-risking instruments, market enabling activities, and financial support mechanism and therefore provides a strong base for enhanced sustainability potential.

Out of the USD 5,569,781 cash contribution (excluding RET enterprises' contribution), GEF grant forms the largest proportion (49%) while UNCDF and UNDP grants constitute 12% and 6% respectively as seen in figure 3.6 below. It was also envisaged that RET enterprises will contribute 33% particularly through investments in the energy sector.

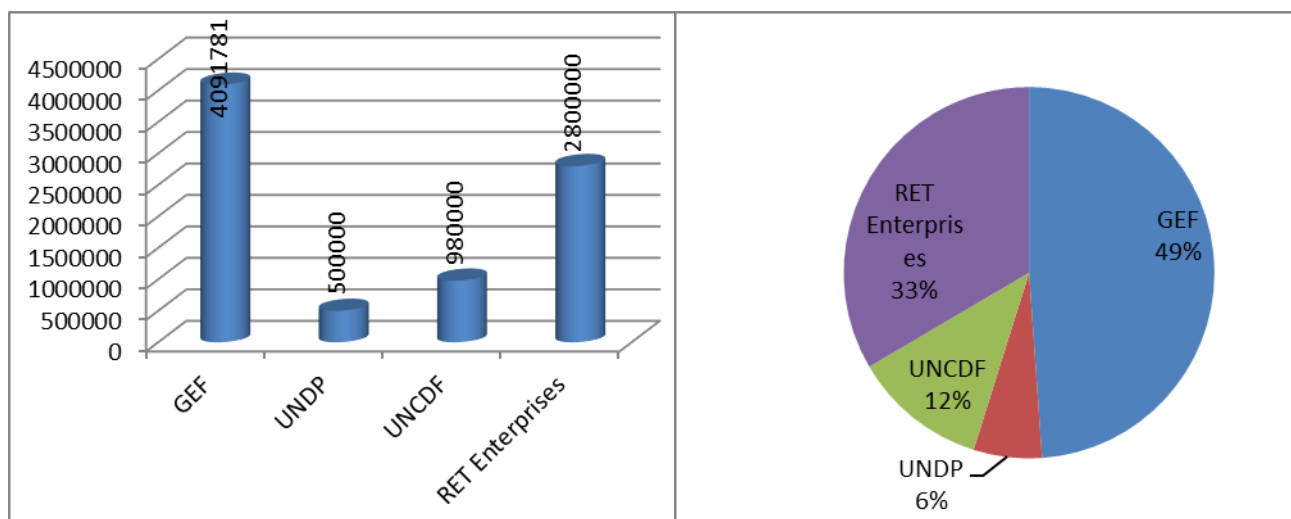


Figure 11: Sources of the project cash budget

The MTR noted that the delayed start of the project affected project resource mobilization under the co-financing arrangement to an extent that UNCDF grant for the year 1 project activities was not realised. However, at the time of the MTR, component 3 activities especially in respect to output 3.2, 3.3 had commenced and implementation was going on well.

According to the 2016 project audit report, budget absorption rate was reported at 100%<sup>18</sup>. Given the output and outcome-based budgeting that is being used for the project, the level of budget utilization rate resonates with the level of activity implementation. The project has indeed established robust internal control that safeguards the effective resource mobilization. Significantly, financial spot checks are periodically conducted and this facilitates timely detection and correction of variances in tandem with Harmonised Approach to Cash Transfer (HACT).

It is apparent that the project has established a clear and solid financial management system that is able to support effective resource utilization. This achievement notwithstanding, concerns over the small project budget and delays in disbursement were noted among the stakeholders.

### **3.3.5 Project-level Monitoring and Evaluation Systems**

The monitoring and evaluation framework is adequately laid out in the project document. Several financial and technical monitoring mechanisms are in place that includes the monitoring tools and processes (Quarterly Reports, PIR, APR, M&E). The project has M&E plan that is enhanced by the recruited M&E Officer. The M&E plan includes two components addressing the target indicators in the project log-frame: i.e. monitoring of the project performance and evaluation of the project impact. The M&E plan outlines specific M&E activities, responsible parties, data flow chart, the project log-frame, the annual work plans as well as detailed progress and activity reports. It also uses Indicator Performance Tracking Table and a template for collecting information from the field to track progress.

Using the M& E plan, the IPTT is prepared basing on the information collected from regions to continuously update the table. UNDP does on spot checks to assess first-hand project progress and this feeds into the project narrative and financial Progress reports as per GEF guidelines. The Project Monitoring and Evaluation (M & E) plan is prepared by incorporating all the major project indicators as well as sub-indicators that are derived from the major indicators. The plan also includes budgets for a mid-term evaluation and a final project evaluation. In all the reporting, the use of the project's results framework/ log-frame as a management tool is evident. However, the changes made (e.g. adjustment of operational manual, UNCDF withdrawal of the activities under output 3.1,) needs to be included in the log-frame. Furthermore, the project's innovative contribution towards e-waste management must be included in the log-frame.

At this stage, it is too early to comment on monitoring of long-term changes as the project is still in the process of implementing the foundation components. There is extreme ownership of the project by various stakeholders including the Government of Ethiopia through MoWIE and EFCCC and the regional Energy Bureaus. The government policy and other strategic documents (CRGE, GTP) also demonstrate the right direction in which the project is moving towards embedding renewable energy as part of the national transformation strategy.

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<sup>18</sup> Project audited report 2016.

The key gap noted in the M&E framework of the project is the inadequate funding for the M&E function. Flowing from the project financial analysis in the previous section, budget allocation for programme management (including M&E) stands at 5.4% (see fig 3.4 above). Although on the whole project implementation is also anchored on the in-kind contributions from the responsible government agencies with the possibility of mainstreaming M&E costs, the noted poor facilitation of the government offices handling the project causes some worries over the effectiveness of the M&E functions. As a result, late submission of M&E reports from the regional bureaus prominently featured among the M&E challenges underlying project implementation majorly attributed to inadequate personnel and poor facilitation as well as capacity gaps in understanding the application of M&E tools.

### **3.3.6 Stakeholder Engagement**

Generally, there is a very high level of stakeholder involvement in the project which is attributed to the established good connections with diverse stakeholders during the course of its activities' implementation. At the launching workshop, all relevant stakeholders from government, development partners, financial institutions, NGOs, and private sector representatives were effectively mobilized and indeed they attended the workshop. A thorough stakeholder analysis was conducted at the design stage of the project and has rightfully informed strategies for effective involvement of relevant stakeholders at several levels within the Project. At federal level the project executive decision body, the Project Steering Committee (PSC), which is established to provide strategic guidance on the project implementation and facilitation of the coordination of various Government authorities is vibrant. It brings together strategic stakeholders such as MoWIE, EFCCC, MoFEC, UNDP, DBE, UNCDF, EEA, with the Project Manager serving the committee as secretary which ably facilitates smooth project implementation. The same organizations serve as members of the CGFMC which is also another Federal level committee.

Other Stakeholders such as the Ethiopian Standards Authority including resource person from IFC, EEA, The Ethiopian Customs Authority, the Ministry of Trade were engaged in the development of standards for ICS and Solar technologies. The project has also been engaged with GIZ (ICS, Solar) and with SNV – RE program on strengthening the enabling environment for clean cooking sector. There is also a strong partnership engagement between government, FSPs, and RET enterprises. It has also organized a meeting at the MoWIE with donor group partners. It is currently discussing with IFC on possible cooperation and coordination of its capacity building and awareness creation of the RET enterprises, and the enforcement of solar standards.

The project has also been engaged with National Solar Associations, Regional Improved Cookstove Producers Association, and the Association of Micro Finance Institution, and Village Solar User Association. The project has also outreach and public awareness activities through mass media (Local FM Radios in 7 languages) and roadshows involving regional energy bureaus/offices, RET Enterprises, etc. During our interaction with many of the stakeholders including the user community there is positive feedback for this project, as it contributes to the improvement of the quality of the product standards and the environment. The overall stakeholder engagement framework is illustrated in figure 3.7 below;

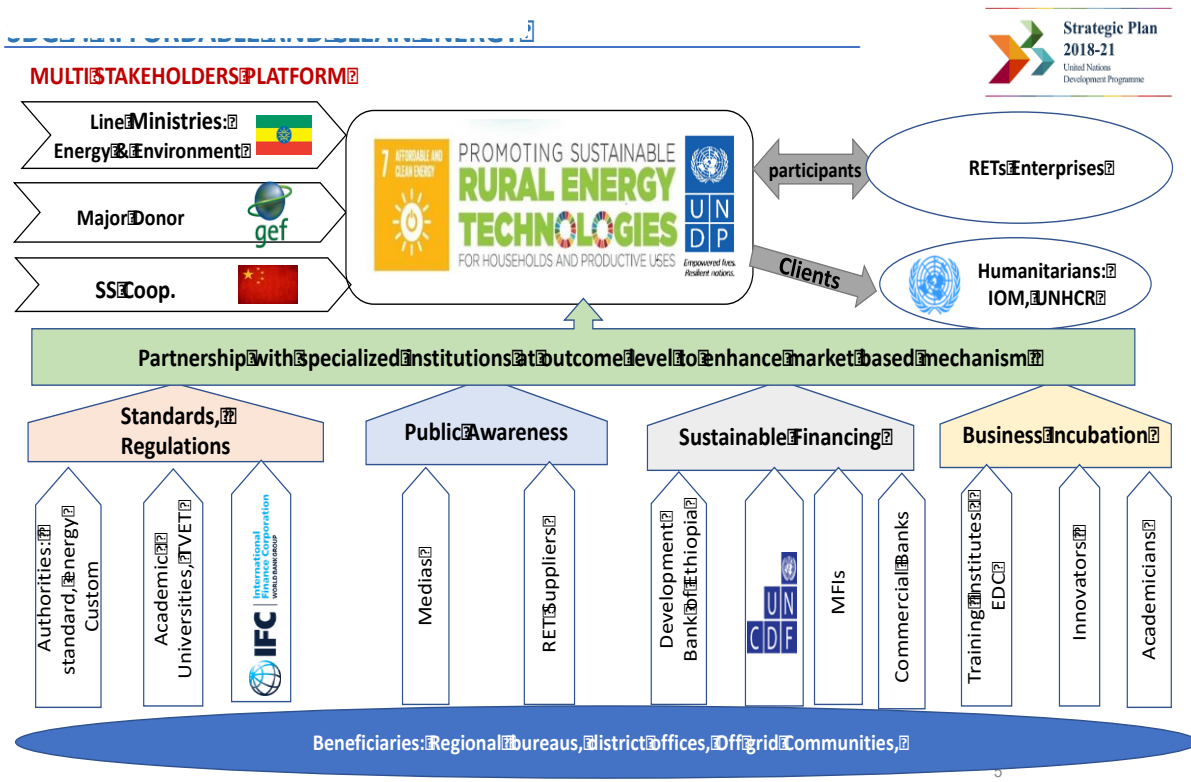


Figure 12: Stakeholders engagement framework Source: UNDP Ethiopia

### 3.3.7 Reporting

The project uses different kinds of reports (PIR, Quarterly Reports, Annual Reports, Periodic Site Monitoring Reports), the Project Steering Committee and Credit Guarantee Fund Committee minutes to monitor the progress of implementation. These reports and Minutes are written following the UNDP-GEF template. Implementing partners meet reporting and M&E requirements timely and the reports are presented with a fairly good analysis and are adequate to inform the implementation progress and the challenges faced and the measures taken to overcome the challenges. However, there is a need to further enhance the report to show the connection of activities undertaken during the quarter. Moreover, the minutes of the steering committee require to be adjusted to include action points, responsibilities, and the implementation progress in order to help track progress. The MTR team has noted that activities reports are documented systematically at the project level. In the regions the MTR team visited (BGZ and Oromia) it was not able to witness this practice and hence recommend to provide closer attention.

### 3.4 Sustainability

The ability of the project benefits to continue even beyond the project implementation period is a critical yardstick to judge its success. Project sustainability is planned for at the design stage and systematically integrated in the entire implementation processes. The MTR sought to understand and bring to the attention of project stakeholders the potential risks that would bedevil the sustainability of the RETs project. Thus, focus of the analysis was placed on; financial, socio-economic, institutional

and governance as well as environmental risks to sustainability as presented hereunder. The extent to which the four pillars of sustainability i.e., participation, ownership, contribution, and capacity building have been integrated in the project design and implementation were used as yardstick to ascertain the sustainability potential of RETs project.

#### **3.4.1 Financial Risks to Sustainability**

Right from its design, the RETs project is a catalytic of a number of government initiatives to expand access to energy. As such, the external resources (grant) constitute only 12% of the total project budget while non-cash contribution mostly from the government constitute 61% (see fig ...above). With such huge in-kind contribution to the project by the government which includes the use of pool of government technical staff at various levels who are already salaried has significant contribution to the financial sustainability. Discussions with the project management team revealed a plan of mainstreaming some of the project activities in the Federal, Regional and Zonal work plan which in itself promotes sustainability. The promotion of innovations for incubation enterprises through Grant Award Scheme and incomes and profits generated through sales of RETs motivates the enterprises to expand their business. The use of private sector market-based mechanism model relying on market forces coupled with investment loans to RET enterprises will help to expand their businesses. Use of FSPs like commercial banks and MFIs is a big step in alleviating the financial bottleneck that existed for long in the sector.

#### **3.4.2 Socioeconomic Risks to Sustainability**

There are no socioeconomic risks of the project. Project stakeholders, including government officials, renewable energy companies, and the broader public, have developed a strong sense of ownership of the project's interventions. The project has used a very broad media coverage, and brought a real societal change by integrating renewable energy in the everyday life for the citizens of Ethiopia. Diversification of alternative income sources to RET enterprises (e.g. women involved in ICS, Enterprises involved in project activities and employing number of people directly and indirectly, alternative IGAs as result of gains from RET project). Awareness creation and sensitization of the population on RETs (over 550 spot messages with a length of one minute in 7 languages broadcasted) has increased the demand for RETs and thereby innovation for productive use and businesses. Creation of jobs in RET enterprises (e.g. ICS enterprises in Bale and Arsi Zones of Oromia) has benefited many young people.

#### **3.4.3 Institutional Framework and Governance Risks to Sustainability**

The legal frameworks, policies, and governance structures and processes within which the project operates is supportive to the sustainability of project benefits. The NIM modality ensures government ownership. Mainstreaming the project within the government systems from the Federal, Regional, Zones, Woreda, and to the Kebele level is already happening in all regional states. The project follows a Multi Stakeholder engagement approach that includes the private sector. The project is guided with national and international policy frameworks (CRGE, Climate Change Initiatives). Capacity building initiatives that include business skills training have been undertaken at various levels to FSPs, RET enterprises, and Government officials. This strengthens the management and outreach potential of the

project. Formulation of Standards and regulations are vital to enhance the quality of RET technologies. Anchoring in use of FSPs such as Commercial Banks and MFIs enhances the wide reach of RET technologies in remote rural households. There is also a scaling up of project activities to other villages (Beekeeping, IGAs, etc.). Technical Training and equipping of Laboratories at MoWIE will enhance the implementation of the quality standards.

#### **3.4.4 Environmental Risks to Sustainability**

In Annex 6 of the project document the risks related to environment are identified. The possible environmental risks identified that are associated with the project are the risks from disposable solar components (e.g. solar panels, Lead batteries) due to the large dissemination of particularly solar technology. . Hence, all components of the project have been designed to properly address the mitigation measures for these risks. Cooking & baking account for 74% of rural energy demand in which 88 % is covered from fuelwood. Using ICS and Solar lighting contributes also to the reduction of CO<sub>2</sub> and GHG Emission. The project addresses environmental sustainability directly through dissemination of 200,000 solar technologies and 600,000 ICS and gender equality indirectly through the reduced biomass energy needs and reduced indoor air pollution. The use of locally available materials especially in the production of ICS made from clay (Gonzie, Laketch and Tikikl stove internal lining) reduces environmentally harmful waste. Reduction in deforestation as result of reducing wood-fuel use which accounts to the deforestation rate of 85,000 ha/a of which 50% is attributed to fuel-wood consumption is also realized.

#### **3.4.5 Threats to sustainability**

The competition for finances from other sectors may not attract commercial banks and businesses looking into quick profits. Regional monopoly of parastatal MFIs can distort the RET market through unaffordable interest rates and payback periods. Other threats to sustainability include insecurity in the regions and villages, noncompliance and limited uptake of the Standards and Regulations. Furthermore, lack of clear exit strategy, inadequate knowledge development and management and profiling especially about Renewable energy aspects on the side of FSPs and lack of continuous forums and platforms bringing together both governments and the RETs private sector enterprises could be obstacles in achieving the project's objectives.

### **4.0 Conclusions and Recommendations**

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#### **4.1 Conclusions**

Despite the delayed start, the RETs project has progressed well in its first implementation phase (pre-MTR) with much of the achievements being registered in setting up a robust project delivery landscape. Vital structures and systems have successfully been set up; forming a very strong foundation for the project's enhanced results delivery in the next implementing phase. Much as the outcome indicator targets still fell short of the expectation, the established implementation landscape in terms of structures and processes are paramount for accelerating achievement of the results.

Project consistency with the national development priorities especially in the energy sector has been a strong factor behind the registered achievements hitherto and also sets the stage for the attainment of

better results at full implementation. The project has successfully and effectively mobilized all relevant stakeholders whose participation in, ownership of and contribution towards the project form a strong foundation for enhanced project sustainability.

Internally, the project has established sound implementation systems that are informed by a well thought through and realistic project intervention logic/theory of change. There is adequate consciousness about results which forms the driving force behind activity planning and budget execution. With a clear M&E plan that has been established, project progress is being systematically tracked which enables timely identification and correction of variances. It is apparent that the implementation and management framework established for the project is sound and provides assurance for success although some gaps are observed. On the basis of the project strengths and gaps presented in various sections of this report, the MTR team drew a number of lessons and best practices which further inform the evidence-based recommendations are also presented in this section.

#### 4.1.1 Lessons learnt

A number of lessons have been picked from the design, management and implementation of the project and these include:-The development of RET Standards; Signing of MoUs crucial at the design stage; UNDP comparative advantage; RETs Standards domestication; Building strong multi-stakeholder partnerships and Collective engagements; enhancing Coordination and Joint planning mechanism; project implementation through Capacity Building of Federal and Regional government structures and systems; Potential SME investment growth; and strengthening market-based mechanism are among the few lessons worth mentioning.

1. Signing of Memoranda of Understanding is crucial at the design stage especially for the funders and other key implementing partners.
2. The development of RET Standards has already demonstrated enthusiasm amongst the RET enterprises
3. UNDP comparative advantage has demonstrated the value of its convening power in bringing together the various stakeholders in addressing the critical rural energy technology needs in Ethiopia.
4. **RETs Standards domestication:** The production as well as publicizing of the standards have been found to be going to have positive uptake as most RET enterprises are aware of the them and are already applying them to enhance their business opportunities. In Woreta Town in Amhara Region for example, an Enterprise owned by a lady who trains others was quoted as having an edge on the share market due to her quality Cook and baking stoves as compared to others.
5. **Building strong multi-stakeholder partnerships and Collective engagements:** As already indicated as one of the best practices, it has been noted that building strong multi-stakeholder engagements and partnerships not only creates sense of ownership but it also leads to full participation of stakeholders in driving the agenda of the need for the rural energy technologies in Ethiopia. The project has demonstrated that the communities that are considered poor can actually liberate themselves with little external assistance once they are well mobilized for instance the Rural Solar Associations which brings together various households at the village level. The

involvement of both federal and regional government leadership facilitates the process and fuels the success of community-based RET initiatives (E.g. Involvement of District Commissioners and Regional Commissioners). Synergies have also been strengthened through strategic engagements with key players such as the private sector Enterprises and companies, Federal and Regional government, Development Partners which have culminated into enormous efficiency gains in the execution and implementation of project by enhancing synergies and networks

6. **Enhancing Coordination and Joint planning mechanism:** In order for the multi stakeholders' approach to work smoothly and effectively in support of project objective, there is need for strengthened coordination between the different stakeholders as well as well-defined definition of the roles and responsibilities for each party. Further still, joint planning especially at the Regional levels between Regional Energy Bureaus and the Private sector is very critical for the success of the project
7. **Project implementation through Capacity Building of Federal and Regional government structures and systems:** Notwithstanding the positive contribution of the in-kind co-funding, the integration of the project implementation systems and structures under NIM modality through Federal and Regional governments has been noted as one of the avenues for minimizing administrative costs relating to staffing and use of government facilities which not only enhance government capacities but also ensure sustainability of the project results as well as integrating the RET project initiatives into the national, federal and regional policy development arena as they are already conversant with the strategic service delivery systems and mechanisms.
8. **Potential SME investment growth:** With the RETs project's overarching approach which is private sector oriented and market based, the active involvement and investment by SMEs in the promotion of RETs has a positive correlation with their levels of investment growth resulting from their business enterprise.
9. **Strengthening market-based mechanism:** For the market-based mechanism to yield potential growth there is a need to provide conducive policy and regulatory support so that there is a striking balance between the forces of Demand and Supply.

#### 4.1.2 Best practices

The project in general is a show case that managed to leverage private financing (the own credit line which is used by the FSPs) in the development sector specifically energy sector. Several practices as result of the design, management, implementation as well as specific activities have been identified which will enhance the project sustainability. In this regard, the adoption of the DIM/NIM hybrid modality; the Private Sector oriented and market-based approach; the development of RET Standards; the innovative Grantee Award Scheme; the Multi-Stakeholder Platform engagement; the Credit Risk Guarantee Fund Scheme; The Risk Capital for FSPs; the RET Roadshows; the enhanced RBM using Indicator Performance Tracking Table (IPTT); Electronic Waste (E-Waste) mainstreaming are among the notable best practices that is worth mentioning.

1. **The adoption of the DIM/NIM hybrid modality:** Although at the design stage of the project, it was planned to be implemented by adopting and conforming to the NIM modality this was enhanced during the actual implementation by having a hybrid of both NIM and DIM modality whereby by



some activities were directly managed under UNDP. In all the project components MoWIE would delegate UNDP to handle some activities for example procurement of laboratory instruments. In this, the implementing partners are the ones which provide all the necessary ground work activities through the project office as UNDP will only be involved in the international procurement. Second example: in providing small grant award activity. The implementing partners through the project office are the ones which handle all the ground work (announcing the call, receiving application, coordinating the evaluation process at desk review and ground level, and selecting the award winner and presenting that for endorsement). In this activity UNDP support is in recruiting short term technical specialist to the development of the grant award application package. And provide the grant award as per the payment authorization letter from the implementing partner (MoWIE). UNDP also supports in arranging workshop facilities (venue, lunch and refreshment) for different trainings and workshops as per official request from the implementing partner. This hybrid modality has leveraged efficiency gains as well as effective implementation of activities in frugal manner.

2. **Private Sector oriented and market-based approach:** The overall strategy underpinning the implementation of the RETs project was designed and implemented using the private sector oriented and market-based approaches which is key in ensuring the scaling up of investments in small scale renewable energy solutions as well as providing opportunities for Business Development Services which would eventually support the development of RETs.
3. **Development of RET Standards:** Ethiopia should be hailed for pioneering the development of standards and regulations within the region hence is considered as a pace setter in this aspect. This will go a long way in regulating the RETs environment as well as addressing issues of substandard products and counterfeits within the Solar Home Systems and Improved Cooking and Baking Stoves.
4. **Innovative Grantee Award Scheme:** The MTR team also found out that the established Grantee Award scheme under the project especially in component 4 is a good practice as it will enhance Quality and Standards as well as encourage healthy competition amongst SME RETs and those upcoming and aspiring RET enterprises.
5. **Multi-Stakeholder Platform engagement.** The RETs project as noted from its design and implementation as well as management arrangements has been found out to be using a multi-stakeholder approach which ensures that all relevant stakeholders at different levels in the country have got a role to play in ensuring the project's objective in promotion of Rural energy Technologies and these range from Donors, Federal and Regional Governments, Private sector, Financial Service Providers together with their various intermediaries. The RETs project for this reason was benchmarked and showcased in Africa as a model for appropriately using the multi-stakeholder engagement and partnerships during the unveiling of the new UNDP Global Corporate Strategic Plan in 2018.
6. **Credit Risk Guarantee Fund:** Under the project, a Loan (Credit Risk) Guarantee Fund was established to provide up to 50% partial credit risk guarantees for loans to Commercial Banks

lending to larger RET enterprises with a national and regional outreach as well as loans to MFIs lending to small and medium local RET enterprises all geared towards easy access and availability of credit to RET enterprises and service providers at national, regional and local levels. This practice has been found out to be a good practice despite some of the few short comings.

7. **RET Road Shows:** The adoption of innovative ways to promote awareness as well as market the RET products using Road shows has also been hailed as a good practice as its not only creating awareness but also marketing and selling RET products directly such as Improved Cooking and Baking Stoves as well as Solar Home Systems.
8. **Enhanced RBM using Indicator Performance Tracking Table (IPTT):** The project management office has adopted to the reporting by capturing sub indicators in addition to the broader indicators using the indicator performance tracking table which is a very impressive way in capturing and measuring the performance indicators.
9. **Electronic Waste (E-Waste) mainstreaming:** Another interesting best practice is that the RETs project has mainstreamed measures of ensuring that E-waste issues are addressed within all the 4 components of the project. For instance, in Standards it is provided rules and criteria that lead to reduction of dangerous inputs are taken care of. In component 2 it ensures that e-waste awareness is incorporated as well as in all trainings. Component 3 of sustainable financial mechanism can only lend if the enterprises commit to the clause of taking back used systems and components to the existing recycling collectors and lastly for RET enterprise Innovation is when they provide concept for the aftersales services including waste collection and safe disposal or recycling.

#### 4.2 Recommendations

1. In terms of **project management and governance**, the current hybrid of DIM/NIM as a governance structure, coordination and management has demonstrated good results even within the short period of the project implementation. Other actions that can be worked on include the following: -
  - a) As already indicated in the barriers section, the project should strategically align itself within the ambits of the new UNDAF 2016 to 2020 even in its reporting mechanism and systems in order to enable its absolute measurement in realizing its global objective in tandem with new UNDAF cycle.
  - b) There is need for developing a robust multimedia communication strategy which will enhance the already existing technology roadshow strategy as well as link with the DBE financial publicity strategy that is in process. This also calls for producing professional Video Documentary, which captures all aspects of the project processes, systems as well as strategies and best practices. Issues of **Project visibility** as indicated in barriers can also be addressed within strategy as well as proper branding and labelling of project

activities. There is still further need for continuous sensitization and awareness about the various critical components of the project especially component 1,3 and 4.

- c) At design stage there was no clear exit strategy laid out. The project management should start developing an exit plan and integrating those activities that would ensure effective project decommissioning while ensuring continuity of the project activities and benefits under the framework articulated in the exit strategy.
- d) In order to compensate for the time lost during the initial stages of the project as well as challenging environmental and identified barriers and the enormous work that is still required for component 1, 3 and 4 to be grounded and widely rooted and publicized, UNDP and its key partners should explore the possibility of considering a No Cost extension.
- e) The M&E mechanisms need to be linked to actual milestones that can be monitored every six months. Regions must be monitored on their quality of documentation of the project activities and results. There is also a need to introduce GPS/GIS Mapping to coordinate recording in the reporting of technologies purchased by households. This will help the verification of the number and type of disseminated RET technologies attributable to the project. There is a need to have a directly hired Regional Coordinator to be in charge of project delivery at regional level. There is a need for better alignment of indicators, baselines and targets. For a project where much time elapses between the design and implementation phases, it is necessary that risk management matrices be reviewed and adjusted during the inception phase to reflect realities on the ground. It is still needed to be adjusted after this MTR.

**2. Improving programmatic achievements, Management and coordination:** The alignment of project interventions with the national development priorities coupled with the use of Federal and Regional government structures and systems were able to promote project relevance, effectiveness, efficiency, and sustainability. The project has satisfactorily adhered to the OECD/DAC evaluation criteria and it is possible in future to deliver much more if it strictly adheres to the principles of UNDP programming. The following key actions may also be looked into during the next phase of implementation in order to strengthen effective management and coordination:

- a) Notwithstanding the smooth partnership and collaboration of the project management and Regional governments save for the few challenges, there is need to have a directly hired Regional Coordinator to be in charge of project delivery at regional level. This is important for better working and coordination with the relevant sectoral and technical committees at that level. The government focal Persons can only be maintained at the zonal and woreda levels.

- b) UNCDF should also in the same breath fast track the recruitment of the National Coordinator for the CleanStart within Ethiopia which would enhance the component 3 management and implementation in addition to already existing Technical Advisor. UNCDF also needs to advise and guide the project on how to work on resources mobilization to fill the gap that is lost due to the cancelling of funding for Risk Capital Financing.
  - c) The project activities planning should consider differentiated support to the regional states following the level of performance and the context on the ground.
- 3. Explore alternative financing sources:** It is clear that without Output 3.1 on **Risk Capital for Financial Service Providers** in place it will have a significant effect on the overall project realization as per its intended objectives which include capacity building of the FSPs as well as its de-risking effect. The MTR therefore recommends that UNDP/GEF and Government should explore other sources of funding in order to mitigate against the effects of the non-implementation of this key aspect of the project.
- 4. Lobbying for the review of Ethiopia's Financial Sector Policy and Regulatory Framework:** Whereas this is ultimately beyond the limits of the project, the FSPs as well as RET enterprises through their umbrella organizations such as AMFI together with those Commercial Bank platforms and associations and for the Enterprises should coordinate and collaborate in lobbying the government to review and enact conducive policies that address the identified barriers such as the lack of foreign exchange, the issue of Credit Cap as well as the Customs and duties and the rest in order to promote financial inclusiveness.
- 5. RETs knowledge management and profiling:** Under this aspect the project should establish the following:
- a) The project management as well as the participating FSPs should start developing and profiling RET knowledge management products since RET is an important product to the banking and financial service providers and its growing tremendously within Ethiopia due to importance and need.
  - b) The project should in its remaining life undertake exchange visits and benchmark the successful innovative financing models such as Asset Financing and Pay as You Go modality. This would in turn help it to be flexible in its current approach should CleanStart manage to raise additional funding or the project succeeds in attracting alternative sources of funding to fill the gap left with the UNCDF global financing for the Performance based Risk Capital Grants which can be also a good mixed approach for Ethiopia in promotion of RETs in future.
- 6. Enhanced Capacity Building and Skills Development:** As already pointed out despite several trainings and capacity building initiatives that have been carried out so far by the

project, there is still need for continuous training, coaching, and skills development to especially RET enterprises and their value chain distribution infrastructure as well as Regional government teams. For instance, the Finance officers at regional bureaus are case in point. Further still, The MTR team also recommends to design RET specific technical skills capacity building for RET enterprises in addition to the already implemented BDS.

7. **Inadequate access to financial resources and sizes of Loans:** CBs and MFIs have continued to express limited size of Loans they can disburse and access. This is also the case with RET enterprises who not only yearn for sufficient financial capital but even those that access it complain of the small size loans, etc. The MTR therefore suggests the following steps to address the above issues:
  - Line of credit for Banks portfolio should be increased through other co-funding options such as World Bank.
  - Continue and strengthen the existing in-kind co-financing arrangement with the government and work closely with regional energy bureaus to build their capacity so that they can provide in-kind support as much as possible.
  - The project should explore financial decentralization from the Regions to the Zones as the Regional Energy Bureaus can assume the supervisory role
  - Regional Bureaus should have flexibility within the Component budget instead of the current Activity Based Budgeting
  - FSPs should review their conventional collateral security procedures in order to accommodate other non-asset based collateral securities.
  - Adjusting the design to include end users of the RETs so as to enable them access energy loan for instance some regions have got Village Solar Associations who are end users from amalgamated households.
  
8. **Regional Stakeholder Platforms:** As the Regional Energy Bureaus are key and strategic in the implementation of this project yet its more anchored on the Private sector oriented and market-based approach, it is very important for the regional governments to create constant interfacing with various stakeholders at regional level for strategic planning, re-assessment and reflections on the way to push forward the RET agenda. Developing projects and enhance networking with other development partners. This can take the form of **organizing Energy Day** as was quoted to be in pipeline in Amhara region. Regional Stakeholder Platforms for enhanced planning & proper coordination with emphasis on effective stakeholder participation, ownership and contribution. Synergy with likeminded projects (e.g. IFC, SNV)
  
9. **Risk Matrix revision:** At the project design a number of risks were identified together with their mitigation measures but since the project delayed and a lot of changes have so far taken place especially the volatile political and security situation as well as the need to align with the new UNDAF 2016-20 cycle and non-realization of some committed resources like the UNCDF funds

for De-risking the 5 FSPs, calls for a revision of the Risk Matrix to align it with the current prevailing situation.

10. **No-Cost Extension:** Due to the late start of the project as well as the outstanding issues within component 3 coupled with the political and security challenges that had punctuated some regions within Ethiopia affected the project significantly, the MTR team would therefore advise that the UNDP/GEF should keep reviewing the situation within the remaining phase of the project so that a No Cost Extension can be considered.

## 5.0 Annexes

### Annex 1: MTR Itinerary and List of Persons Interviewed

No.	Activity	Date and Time	Venue	Responsible /Facilitator	Remark
1	Share project documents to the MTR Team	Sept. 10-14, 2018		UNDP Team and Project office	
2	Meeting with UNDP Country Director and UNDP team	Oct. 01, 2018	UNDP	Project Office and UNDP Team	Yared and Kidanua
3	Conduct stakeholder meetings at different level	Oct. 02 – Oct. 12, 2018			
3.1	Conduct interview and discussion with Mr. Yiheyis Eshetu, MoWIE AETDPD Director (RET Project National Project Director)	Oct. 02, 2018 09:00 – 11:30 AM	MoWIE	MTR Team /Project office	
3.2	Conduct interview and discussion with Mr. Yimeslal, *MoEFCC FUTDD Director	Oct. 02, 2018 02:00 – 04:30 PM	MoEFCC	MTR Team /Project office	
3.3	Conduct interview and discussion with Dr. Behailu, *ECGF Directorate Director at DBE	Oct. 03, 2018 09:00 – 11:30 AM	DBE	MTR Team /Project office	
3.4	Conduct discussion with Oromia regional Energy Bureau Head	Oct. 04, 2018 02:00 – 03:30 PM	Oromia REB	MTR Team /Project office	
3.5	Conduct meeting with selected Financial intermediaries (1 MFI and 1 CB) working with the project	Oct. 05, 2018 (full day)	Selected MFI and CB Office	MTR Team /Project office	Mr. Desalegn Senbeta will communicate and arrange the meeting
3.6	Conduct meeting with energy service providers (1 RET enterprise and 1 solar technology importer) working with the project in relation to SFM	Oct. 08, 2018 (full day)	Office of selected Energy service providers	MTR Team /Project office	>>
3.7	Conduct interview and meeting with Benishanguel-Gumuz regional energy bureau (REB) representative	Oct. 09, 2018 08:30 – 09:30 AM	BGRs REB	MTR Team /Project office and REB	One of the region where the pilot technology

No.	Activity	Date and Time	Venue	Responsible /Facilitator	Remark
					roadshow conducted
3.7.1	Travelling to Benishanguel-Gumuz Regional State (BGRS)	Oct. 09, 2018 08:30 – 09:30 AM		Project office and UNDP Team	
3.7.2	Meeting with BGRS REB project focal person and process owner	Oct. 09, 2018 10:30 AM – 12:30 PM	BGRS REB	MTR Team /Project office and REB	
3.7.3	Perform field visit to pilot technology roadshow site in BGRS and interview 2 RET enterprises participated in the roadshow, beneficiaries and woreda experts (Assosa Woreda)	Oct. 09, 2018 02:00 – 04:30 PM Oct. 10, 2018 09:00 AM – 12:30 PM	Assosa Zuria and Amba – 2	MTR Team /Project office and REB	Assosa Zuria and Amba – 2 (15 km from Assosa town)
3.7.4	Conduct wrap-up meeting with REB project focal person and process owner	Oct. 10, 2018 02:00 – 03:30 PM	BGRS REB	MTR Team /Project office and REB	
3.7.5	Travel back to Addis Ababa	Oct. 11, 2018 08:30 – 09:30 AM		Project Office	
3.7.6	Travelling to Amhara Regional State	Oct. 11, 2018 11:30 AM – 12:30 PM		Project Office	
3.7.7	Meeting with Amhara REB project focal person and process owner	Oct. 11, 2018 02:00 – 04:30 PM	Amhara REB	MTR Team /Project office and REB	
3.7.8	Perform field visit to selected RET enterprises, beneficiaries and woreda experts	Oct. 12, 2018 08:30 AM – 12:30 PM	South Gonder zone	MTR Team /Project office and REB	
3.7.9	Continue the field visit to selected RET enterprises, beneficiaries and woreda experts	Oct. 12, 2018 02:00 – 03:30 PM	Awi zone	MTR Team /Project office and REB	
3.7.10	Conduct wrap-up meeting with the REB project focal person and process owner	Oct. 13, 2018 08:30 – 09:30 AM	Amhara REB	MTR Team /Project office and REB	
3.7.11	Travel back to Addis Ababa	Oct. 13, 2018 11:00 AM – 12:00 PM		Project Office	



No.	Activity	Date and Time	Venue	Responsible /Facilitator	Remark
3.7.12	Conduct discussion with Mr. Asres Woldegiorgis, Higher Energy Advisor to The Minister (previous Director of AETDPD), MoWIE	Oct. 15, 2018 02:00 – 03:30 PM	MoWIE	MTR Team /Project office and REB	
4	Conduct field visit and interviews with stakeholders including beneficiaries				
4.1	Perform site visits on the first round RET innovative ideas competition award winners in Addis Ababa and conduct interview (Gogle energy Saving Stoves and Engineering P.L.C., Winsol Green Power Engineering P.L.C. and Admas fuel saving stove producer P.L.C.)	Oct. 15 – Oct. 16, 2018	Addis Ababa Selected award winners manufacturing places	MTR Team /Project office	at least three RET enterprises working on Improved biomass stoves and solar energy technologies
5	Conduct discussion with the project office (Project Manager and Project M & E Officer)	Oct. 17, 2018 09:30 AM – 12:00 PM	MoWIE	MTR Team /Project office	
6	Conduct discussion with GEF Technical Advisor	Oct. 17, 2018 02:30 – 04:00 PM	MoWIE	MTR Team /Project office	
7	Conduct discussion with UNDP Country Director (Mission concluding discussion)	Oct. 18, 2018	UNDP	MTR Team / Project office and UNDP Team	
8	Organize a meeting and present the initial findings	Oct. 20, 2018	UNDP	MTR Team / Project office and UNDP Team	

#### List of persons interviewed

Name	Organization	Designation	e-mail	Telephone
Louise Chamberlline	UNDP-CP	Country Director		
Gizachew Sisay	UNDP		<a href="mailto:louise.chamberline@undp.org">louise.chamberline@undp.org</a>	
Berhanu Alemu	UNDP	M&E expert	<a href="mailto:berhanu.alemu@undp.org">berhanu.alemu@undp.org</a>	
Wubua	UNDP			

Kidanua Abera	UNDP	Energy & low Carbon Development Analyst	<a href="mailto:kidanua.abera@und.org">kidanua.abera@und.org</a>	
Libanos Seyoum	MoWIE/UNDP	M&E expert	<a href="mailto:libanos.seyoum@yahoo.com">libanos.seyoum@yahoo.com</a>	911349449
Yared Shumete	MoWIE/UNDP	Manager	<a href="mailto:yared.shumete@undp.org">yared.shumete@undp.org</a>	913042702
Ato Tesfaye Alemayehu	AETPD/MOIE	SeRep Director	<a href="mailto:talemayehu21@gmail.com">talemayehu21@gmail.com</a>	912007250
Ato Yimeslal Tefera	MEFCC	Fuelwood utilization technology dissemination Director	<a href="mailto:yimeslalt81@gmail.com">yimeslalt81@gmail.com</a>	929184058
Dr Behilu Kassaye	DBE	Directorate credit and credit management	<a href="mailto:behilu17@gmail.com">behilu17@gmail.com</a>	911707912
Ato Desalegn Senbeta	DBE/UNDP	Consultant for credit Financial Mechanism	<a href="mailto:desalegn2011@gmail.com">desalegn2011@gmail.com</a>	911865284
Ato Amensisa Tsegaye	Oromia Water, Mineral and Energy bureau	Director for RE Study, Development and Supervision	<a href="mailto:atech@yahoo.com">atech@yahoo.com</a>	911842140
Ato Tesfaye Deresa	OIB/Director Credit Mangemnet	Directorate credit and credit management	<a href="mailto:tesfayefh@yahoo.com">tesfayefh@yahoo.com</a>	966269373
Ato Asnake H/Michael	PEACE Micro Finance	Operations Manager	<a href="mailto:asnake@pecemfi.org">asnake@pecemfi.org</a>	0911048775/0912818182
Ato Tezera Kebede	PEACE Micro Finance	General Manger/CEO	<a href="mailto:tezera@peacemfi.org">tezera@peacemfi.org</a>	911219506/0912600816
Ato Adane W/Michael	Managing Director	Tigist Tadesse Solar Woman	<a href="mailto:adane201199@yahoo.com">adane201199@yahoo.com</a>	911459037
Ato Melaku Meaza	General Manger	Green Hope	<a href="mailto:meazamelaku321@yahoo.com">meazamelaku321@yahoo.com</a>	911490202
Ato Melkamu Takele	Bureau of WIE/Focal Person	Senior Energy Expert	<a href="mailto:melkamutak@gmail.com">melkamutak@gmail.com</a>	912153428
Ato Asamani Hassan	WIEresources Devt. Bureau	Energy Directorate Director	<a href="mailto:AsamaniHassan@gmail.com">AsamaniHassan@gmail.com</a>	928588619
Ato Sintayehu Mohammed	Nigat Solar Users Association	Chair		922227745
Ato Seid Ibrahim	Nigat Solar Users Association	Accountant		917172300
Ato Mohammed Biru	Nigat Solar Users Association	Deputy Chair		917172141
Ato Belay Biset	Nigat Solar Users Association	Member		9177104433
W/o Hagerneh Alemu	Nigat Solar Users Association	Member		
Ato Sisay Mekonnen	Asossa Amba 2 Kebele	Manger		932946008

Jemal Mohammed	Bambasi Woreda WIE office	Energy Expert		964236545
W/O Jemanesh Yimam	Assosa town	Cookstove producer		935094912
Mr Besselink	UNCDF	International Consultant		
Mr. Vinicent Wierda	UNCDF			
Ato Wondu Abegaz	Amhara/ Enjibara	Cookstove producer		918803279
Ato Wondimu Berihun	Amhara/Bioenergy resources technology development	Director		918095185
Ato Wondie Tassew	Amhara/ Bioenergy resources technology development	Promotion expert/Focal person	<a href="mailto:wondietassew@gmail.com">wondietassew@gmail.com</a>	918181434
W/o Genete Tadesse	Amhara/Bahir Dar	Cookstove producer		918704998
W/o Abaynesh	Amhara/Fogera	Cookstove producer		0918073430/0918062645
Ato Mekonnen Yelewwosen	Amhara/ACSI	CEO		
Ato Wodaje Getahun	Amhara/ACSI	Operations Manger		
Ato Yilma Mengstu	Ethiopian Standards Authority	Director Standards Development		911161807
Ato Zewge Worku	Ethiopian Energy Authority	Deputy Director/ Energy Efficiency		911794007
Ato Teshme Kebede	AEMFI	Executive Director	<a href="mailto:mathias_tech@yahoo.com">mathias_tech@yahoo.com</a>	903182968
Ato Asres W/Giorgis	MoWIE	Chief Advisor/Minister	<a href="mailto:w.asress@gmail.com">w.asress@gmail.com</a>	913734997
Ato Nigussie Feysa	Addis Ababa/Admas ICS Manufacturing and Metal Works	Manging Director	<a href="mailto:nfeysa@qmai.com">nfeysa@qmai.com</a>	911345973
Ato Addisu Sime	Addis Ababa/Gogle Energy Saving Stove and Engineering	Deputy manger	<a href="mailto:gstove2002@yahoo.com">gstove2002@yahoo.com</a>	911868159
Ato Biniyam Tesfaye	Addis Ababa/WinSol	Manager	<a href="mailto:biniyam2015@gmail.com">biniyam2015@gmail.com</a>	929248498
Ato Yiheyis Eshetu	MoWIE	Director AETDPD	<a href="mailto:yiheisesa@yahoo.com">yiheisesa@yahoo.com</a>	
Dawit Tibebu	MEFCC	Expert	<a href="mailto:dtibebu@gmail.com">dtibebu@gmail.com</a>	
Asegid Dejene	Abdi-Bale Enterprise (ICS) -	Manger		912400779

	Goba Bale Zone			
Wondwesen Ketema	Wondwesen Ketema plc - Dodola West Arsi Zone	Manager		913185555
Ayal Nigussie	Ayal Nigussie plc (ICS) - Lumame East Gojam	Manager		963806015

### Annex 2: List of Documents Reviewed

- ✓ 4<sup>th</sup> Ethiopian Economic Update (July, 2015)
- ✓ RETs Project Document
- ✓ Growth and Transformation Plan II (GTP II) (2015/16-2019/20)
- ✓ Rural Electrification Strategy (2002)
- ✓ Welfare Monitoring Survey (2012).
- ✓ Indicator performance Tracking Table (October, 2018).
- ✓ Project Implementation Review (PIR, 2018) report.
- ✓ Template for Monitoring and Evaluation Specialist and IPs.
- ✓ Project audited report 2016.
- ✓ UNDAF 2012/16, 2016/20
- ✓ Project Annual Reports
- ✓ CRGFM Operation Manual

### Annex 3: Evaluation Matrix

MTR Scope	Specific information required	Source of data	Data collection/ Analysis methods	Expected results
<b>Project Strategy: Project design</b>				
<ul style="list-style-type: none"> <li>• Review the problem addressed by the project and the underlying assumptions.</li> <li>• Review the effect of any incorrect</li> </ul>	<ul style="list-style-type: none"> <li>• Problem identification and analysis procedures</li> <li>• Linkages between the identified and</li> </ul>	<ul style="list-style-type: none"> <li>• Project document</li> <li>• Research studies that informed project</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul>	<ul style="list-style-type: none"> <li>• Gaps in the problem identification and analysis procedure and how it has/is affected/affecting the project</li> </ul>

<p>assumptions or changes to the context to achieving the project results as outlined in the Project Document.</p>	<p>analysed problem with the project logic</p> <ul style="list-style-type: none"> <li>• Stakeholder perceptions on project relevance in addressing the problem</li> <li>• Key assumptions underlying the project intervention logic</li> <li>• Specific changes in the project context and their possible effects on the success of the project</li> </ul>	<p>conception and design</p> <ul style="list-style-type: none"> <li>• Sampled project stakeholders (project staff, gov't counterparts etc)</li> </ul>	<p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Action plans for addressing both design and implementation challenges resulting from gaps in problem identification and analysis</li> </ul>
<ul style="list-style-type: none"> <li>• Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results.</li> <li>• Were lessons from other relevant projects properly incorporated into the project design?</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities and challenges for the project inputs, processes and outputs in delivering the desired outcomes</li> <li>• Factors responsible for the observed linkage between the project ends and means</li> <li>• Relevant projects whose lessons were/are vital to inform the project under review</li> <li>• Evidence that lessons from such projects were properly incorporated in the project design.</li> </ul>	<ul style="list-style-type: none"> <li>• Project reports, minutes of planning meetings etc</li> <li>• Project staff</li> <li>• Selected project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Possible and/or actual effect of the project strategy on its success</li> <li>• Action plans to address both design and implementation gaps</li> </ul>
<ul style="list-style-type: none"> <li>• Review how the project addresses country priorities. Review country ownership.</li> <li>• Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?</li> </ul>	<ul style="list-style-type: none"> <li>• Linkage between the envisaged project results and country priorities</li> <li>• Specific strategies undertaken at design stage and during implementation to enhance project alignment with country priorities</li> </ul>	<ul style="list-style-type: none"> <li>• Key country development documents</li> <li>• Government Officials</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Convergences and divergences between project results and country priorities</li> <li>• Strengths &amp; weaknesses of the adopted project relevance enhancement strategies</li> <li>• Lessons learnt and best practices</li> <li>• Policy and strategic recommendations for achieving better alignment.</li> </ul>
<ul style="list-style-type: none"> <li>• Review decision-making processes: were perspectives of those who would be affected by project decisions, those who</li> </ul>	<ul style="list-style-type: none"> <li>• Evidence of key stakeholder involvement in the decision-making processes</li> </ul>	<ul style="list-style-type: none"> <li>• Project reports, Minutes of management</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder mapping and analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Effect of observed level of stakeholder involvement in decision making processes on the</li> </ul>

could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?	<ul style="list-style-type: none"> <li>Facilitators and inhibitors for effective stakeholder involvement in decision making processes.</li> </ul>	<ul style="list-style-type: none"> <li>meetings</li> <li>Project staff</li> <li>Selected stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>possible success of the project.</li> <li>Strengths, weaknesses and gaps in the available avenues to promote stakeholder involvement in decision making processes</li> </ul>
<ul style="list-style-type: none"> <li>Review the extent to which relevant gender issues were raised in the project design in accordance with Annex 9 of <i>Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects</i>.</li> </ul>	<ul style="list-style-type: none"> <li>Specific ways in which gender specific issues were identified and incorporated in the project design</li> <li>Level of involvement in the project implementation by men, women and youths</li> <li>Apportioning of project benefits to gender categories</li> </ul>	<ul style="list-style-type: none"> <li>Project document</li> <li>Project staff</li> <li>M&amp;E reports</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Contribution of the project towards gender equity</li> <li>facilitators and inhibitors for effective incorporation of gender in project design and implementation</li> <li>Key lessons learnt and best practices</li> </ul>
<b>Results Framework/Logframe</b>				
<ul style="list-style-type: none"> <li>Undertake a critical analysis of the project's logframe indicators and targets, assess how "SMART" the midterm and end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Any challenges faced in measuring project performance using these indicators</li> <li>Basis for target setting</li> </ul>	<ul style="list-style-type: none"> <li>Results framework</li> <li>Baseline reports</li> <li>Project staff</li> <li>M&amp;E Reports</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Weaknesses and gaps in project intervention logic</li> <li>Proposed amendments</li> </ul>
<ul style="list-style-type: none"> <li>Are the project's objectives and outcomes or components clear, practical, and feasible within its time frame?</li> </ul>	<ul style="list-style-type: none"> <li>Midline achievement versus Endline targets</li> <li>Factors underlying outcome achievements</li> </ul>	<ul style="list-style-type: none"> <li>Results framework</li> <li>Baseline reports</li> <li>Project staff</li> <li>M&amp;E Reports</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Proposed amendments</li> </ul>
<ul style="list-style-type: none"> <li>Examine if progress so far has led to, or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual</li> </ul>	<ul style="list-style-type: none"> <li>Linkage between project intervention and the observed results in these variables</li> </ul>	<ul style="list-style-type: none"> <li>Results framework</li> <li>Baseline reports</li> <li>Project staff</li> <li>M&amp;E Reports</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Other indicators worth including the results framework for continuous monitoring.</li> </ul>

basis.				
<ul style="list-style-type: none"> <li>Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART ‘development’ indicators, including sex-disaggregated indicators and indicators that capture development benefits.</li> </ul>	<ul style="list-style-type: none"> <li>Extent to which the monitoring tools capture these indicators</li> <li>Possible challenges for capturing data on these indicators.</li> </ul>	<ul style="list-style-type: none"> <li>Country development documents</li> <li>Project document</li> <li>Project staff</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Observed gaps in project indicator tracking</li> <li>Strategic recommendations for improvement.</li> </ul>
<b>Progress Towards Results</b>				
<ul style="list-style-type: none"> <li>Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix and following the <i>Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects</i>; colour code progress in a “traffic light system” based on the level of progress achieved; assign a rating on progress for each outcome; make recommendations from the areas marked as “Not on target to be achieved” (red).</li> </ul>	<ul style="list-style-type: none"> <li>Intended results achieved so far</li> <li>Unintended results so far</li> <li>Variation between the midline targets and actual results to date</li> <li>Facilitators and inhibitors for performance.</li> <li></li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Results framework</li> <li>Project reports</li> <li>Project staff</li> <li>GEF Tracking tools at baseline and midline</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Corrective measures for improved performance</li> <li>Lessons learnt and best practices.</li> <li>Recommendations for upscaling project benefits</li> </ul>
<b>Project Implementation and Adaptive Management</b>				
Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.	<ul style="list-style-type: none"> <li>The roles of the project management structures</li> <li>The efficiency and effective gains of the project management arrangements</li> <li>The inclusiveness of decision-making processes</li> <li>Changes made in the project mgt. arrangement since conception.</li> </ul>	<ul style="list-style-type: none"> <li>Project document</li> <li>Minutes of management meetings</li> <li>Selected key stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>Strengths, weakness and gaps in project management arrangements</li> <li>Best practices and lessons learnt</li> <li>Recommendations for improvement</li> </ul>
Review the quality of execution of the Executing Agency/Implementing Partner(s)	<ul style="list-style-type: none"> <li>Institutional capacity of implementing partners</li> </ul>	<ul style="list-style-type: none"> <li>OCA</li> <li>Key stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant</li> </ul>	<ul style="list-style-type: none"> <li>Recommendations for institutional capacity strengthening.</li> </ul>

and recommend areas for improvement.	<ul style="list-style-type: none"> <li>• Effect of the IP's institutional capacity on project effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• OCA reports</li> </ul>	<p>interviews</p> <p><b>Thematic &amp; content analysis</b></p>	
Review the quality of support provided by the GEF Partner Agency (UNDP) and recommend areas for improvement.	<ul style="list-style-type: none"> <li>• Specific support provided by UNDP and its contribution to project success</li> <li>• Weaknesses and gaps in the design and delivery of UNDP project support</li> </ul>	<ul style="list-style-type: none"> <li>• Project document</li> <li>• Project reports</li> <li>• Project staff</li> <li>• Implementing partners</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Required improvements in the design and delivery of UNDP support to the project.</li> </ul>
Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.	<ul style="list-style-type: none"> <li>• Degree of adherence to activity implementation timelines</li> <li>• Causes for variations in activity implementation timelines</li> </ul>	<ul style="list-style-type: none"> <li>• Project workplans</li> <li>• Project document</li> <li>• PIR</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Effect of implementation delays on the success of the project</li> <li>• Recommendations for improvement</li> </ul>
Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?	<ul style="list-style-type: none"> <li>• Evidence for the adoption and mainstreaming of results-based management</li> <li>• Effectiveness &amp; efficiency gains of adopting RB</li> </ul>	<ul style="list-style-type: none"> <li>• Results framework</li> <li>• Work plans</li> <li>• Project staff</li> <li>• Key Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Successes and challenges of mainstreaming RBM in the project</li> <li>• Recommendations for improvements</li> </ul>
Examine the use of the project's results framework/ log-frame as a management tool and review any changes made to it since project start.	<ul style="list-style-type: none"> <li>• Degree of alignment between the log-frame and activity workplans as well as M&amp;E reports</li> <li>• Changes made to the results framework: their causes and effects</li> </ul>	<ul style="list-style-type: none"> <li>• Results framework</li> <li>• Workplans</li> <li>• Project staff</li> <li>• Key stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content analysis</b></p>	<ul style="list-style-type: none"> <li>• Greater alignment between the results framework and management processes, decisions and outcomes.</li> </ul>
<b>Finance and co-finance:</b>				
Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.	<ul style="list-style-type: none"> <li>• The financial management arrangement</li> <li>• Budget performance Vs activity implementation</li> <li>• Degree of adherence to financial mgt.</li> </ul>	<ul style="list-style-type: none"> <li>• Financial management guidelines</li> <li>• Project document</li> <li>• Audit reports</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> </ul> <p><b>Thematic &amp; content</b></p>	<ul style="list-style-type: none"> <li>• Strengths, weaknesses and gaps of the project financial management</li> <li>• Effect of financial management system on the overall success of</li> </ul>



	<p>guidelines of the funding and implementing agencies</p> <ul style="list-style-type: none"> <li>Challenges in project financial Mgt. system</li> </ul>	<ul style="list-style-type: none"> <li>Minutes of mgt. meetings</li> </ul>	<b>analysis</b>	<p>the project</p> <ul style="list-style-type: none"> <li>Recommended measures for strengthening project financial management</li> </ul>
Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.	<ul style="list-style-type: none"> <li>Specific revisions effected in fund allocations</li> <li>Justifications for the revisions</li> <li>Effect of the revisions in the fund allocation on the project effectiveness and efficiency</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> <li><b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>Appropriateness and relevance of the changes to fund allocations</li> <li>Lessons learnt and best practices</li> <li>Recommendations</li> </ul>
Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?	<ul style="list-style-type: none"> <li>Financial controls governing the project financial management</li> <li>Degree of adherence to these controls</li> <li>Efficiency gains of the controls as regards timely flow of funds</li> </ul>	<ul style="list-style-type: none"> <li>Financial mgt. manual/guidelines</li> <li>Project staff</li> <li>Selected stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> <li><b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>Lessons learnt</li> <li>Best practices</li> <li>Recommendations</li> </ul>
Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans?	<ul style="list-style-type: none"> <li>Practicability of the co-financing arrangement</li> <li>Achievements of the co-financing arrangement</li> <li>Opportunities and challenges underlying the co-financing arrangements of the project,</li> </ul>	<ul style="list-style-type: none"> <li>Co-financing Monitoring table</li> <li>Project document</li> <li>MoUs</li> <li>Project reports</li> <li>Minutes of meetings</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> <li><b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>Efficacy of the co-financing arrangements for the project</li> <li>Weaknesses and gaps underlying co-financing arrangements</li> <li>Lessons learnt &amp; Best practices</li> <li>Recommendations for improvement</li> </ul>
<b>Project-level Monitoring and Evaluation Systems:</b>				
Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?	<ul style="list-style-type: none"> <li>Comprehensiveness of the monitoring tools being used</li> <li>Gaps and weaknesses in the monitoring tools being used.</li> </ul>	<ul style="list-style-type: none"> <li>M&amp;E Unit</li> <li>Key project partners</li> <li>Project reports</li> <li>Results framework</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Key informant interviews</li> <li><b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>Level of adequacy of monitoring tools</li> <li>Key modifications required</li> </ul>
Examine the financial management of the	<ul style="list-style-type: none"> <li>Proportion of the budget allocated to</li> </ul>	<ul style="list-style-type: none"> <li>Project Budget and</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>	<ul style="list-style-type: none"> <li>Adequacy of the monitoring budget</li> </ul>

project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?	<p>monitoring</p> <ul style="list-style-type: none"> <li>• Financial related challenges facing the Monitoring Unit &amp; their effect on the execution of the M&amp;E function.</li> <li>• Basis of monitoring &amp; Evaluation budget</li> </ul>	<p>expenditure frameworks</p> <ul style="list-style-type: none"> <li>• Project staff in M&amp;E unit</li> <li>• Project document</li> <li>• Selected key stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<p>and its effect on the effectiveness of the monitoring function of the project</p> <ul style="list-style-type: none"> <li>• Recommendations to address any identified gaps.</li> </ul>
<b>Stakeholder Engagement:</b>				
Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?	<ul style="list-style-type: none"> <li>• Stakeholder engagement strategies</li> <li>• Specific gains emanating from stakeholder engagements</li> <li>• Barriers and/or facilitators for effective stakeholder engagements and involvement</li> </ul>	<ul style="list-style-type: none"> <li>• Partnership strategies</li> <li>• MoUs</li> <li>• Project document</li> <li>• Project reports</li> <li>• Selected stakeholders</li> <li>• Project staff</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Strengths, weaknesses, gaps and contribution of the stakeholder engagement strategies used by the project</li> <li>• Lessons learnt and best practices</li> <li>• Recommendations for improvements</li> </ul>
Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?	<ul style="list-style-type: none"> <li>• Perceptions of government stakeholders on the objectives of the project</li> <li>• Specific role being played by government stakeholders in project implementation &amp; management</li> <li>• Strategies employed to promote participation and country-driven processes.</li> <li>• Facilitators/inhibitors for enhanced participation of gov't stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Selected government stakeholders</li> <li>• Project staff</li> <li>• Project reports</li> <li>• Project document</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Effect of government stakeholders' project support on its likelihood for success</li> <li>• Strengths weaknesses and gaps in the strategies employed to promote participation and country-driven processes</li> <li>• Lessons learnt &amp; Best practices</li> <li>• Recommendations for improvement</li> </ul>
<b>• Reporting</b>				
Assess how adaptive management changes have been reported by the project management and shared with the Project Board.	<ul style="list-style-type: none"> <li>• Processes for reporting and sharing changes in project management</li> <li>• Level of inclusiveness and transparency of such processes</li> </ul>	<ul style="list-style-type: none"> <li>• Project staff</li> <li>• Project board members</li> <li>• Minutes of management /board meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Strengths, weaknesses and gaps</li> <li>• Lessons learnt &amp; Best practices</li> <li>• Recommendations for improvement</li> </ul>

Assess how well the Project Team and partners undertake and fulfil GEF reporting requirements (i.e. how have they addressed poorly-rated PIRs, if applicable?)	<ul style="list-style-type: none"> <li>• Specific GEF reporting requirements to be complied with</li> <li>• Level of compliance with the requirements</li> <li>• Facilitators and inhibitors for reporting compliance</li> </ul>	<ul style="list-style-type: none"> <li>• GEF reporting guidelines</li> <li>• Project reporting frameworks</li> <li>• GEF Technical Advisor</li> <li>• Project staff</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Level of variation between GEF reporting requirements and project reporting system</li> <li>• Lessons learnt and best practices</li> <li>• Recommendations for enhanced reporting compliance</li> </ul>
Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.	<ul style="list-style-type: none"> <li>• Mechanisms for integrating lessons learnt in the management framework of the project</li> <li>• Facilitators/barriers to effective integration of lessons learnt</li> </ul>	<ul style="list-style-type: none"> <li>• Lesson learnt reports</li> <li>• Project staff</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Best practices</li> <li>• Recommendations</li> </ul>
<b>• Communications:</b>				
Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?	<ul style="list-style-type: none"> <li>• Frequency and communication mode with stakeholders</li> <li>• Effect of the communication strategy on the overall project success</li> <li>• Barriers to effective communication with stakeholders</li> <li>• Stakeholder perceptions on the project's communication strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Circulars, Memos, minutes of meetings</li> <li>• Reports</li> <li>• Correspondences</li> <li>• Selected stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Gaps in the communication strategy</li> <li>• Lessons learnt &amp; Best practices</li> <li>• Recommendations for improvement</li> </ul>
Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)	<ul style="list-style-type: none"> <li>• Frequency and communication mode targeting external stakeholders</li> <li>• Effect of the communication strategy on the overall project success</li> <li>• Barriers to effective communication with stakeholders</li> <li>• Stakeholder perceptions on the project's communication strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Reports on public campaigns</li> <li>• Project Website and other online communication fora</li> <li>• Project staff</li> <li>• Selected stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Gaps in the communication strategy targeting external stakeholders</li> <li>• Lessons learnt &amp; Best practices</li> <li>• Recommendations for improvement</li> </ul>
<b>• Sustainability</b>				
Validate whether the risks identified in the Project Document, Annual Project	<ul style="list-style-type: none"> <li>• Risk analysis methodology that was applied</li> </ul>	<ul style="list-style-type: none"> <li>• Project document</li> <li>• PIRs</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensiveness of the risk register</li> </ul>

<p>Review/PIRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why</p>	<ul style="list-style-type: none"> <li>• The basis of the risk rating</li> <li>• Stakeholder perceptions on the identified risks</li> <li>• Possible effect of the risks on the project in the event of their occurrence</li> </ul>	<ul style="list-style-type: none"> <li>• ATLAS Risk Mgt. module</li> <li>• Project staff</li> <li>• Selected stakeholders</li> </ul>	<p>interviews</p> <ul style="list-style-type: none"> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Updated risk register</li> <li>• Recommendations to smart the occurrence of the identified risks</li> </ul>
<p>What is the likelihood of financial and economic resources not being available once the GEF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?</p>	<ul style="list-style-type: none"> <li>• Potential sources of resources to sustain the project beyond GEF funding</li> <li>• Ability and willingness of different stakeholders to mobilize/contribute financial resources for the sustenance of the project beyond GEF funding</li> <li>• Opportunities and challenges to financial sustainability of the project beyond GEF funding</li> </ul>	<ul style="list-style-type: none"> <li>• Project sustainability plan</li> <li>• Selected stakeholders</li> <li>• Stakeholder commitments</li> <li>• Other programmes that may mainstream all or few project activities</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Potential for financial sustainability of the project</li> <li>• Action plans for enhanced sustainability of the project.</li> <li>• Lessons learnt and Best practices</li> </ul>
<p>Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?</p>	<ul style="list-style-type: none"> <li>• Level of stakeholder ownership of the project</li> <li>• Stakeholder willingness to contribute resources towards sustenance of the project</li> <li>• Extent of stakeholder participation in the project implementation</li> <li>• Strategies employed to promote stakeholder ownership of the project.</li> </ul>	<ul style="list-style-type: none"> <li>• Project sustainability plan</li> <li>• Selected stakeholders</li> <li>• Stakeholder commitments</li> <li>• Other programmes that may mainstream all or few project activities</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Potential for social sustainability of the project</li> <li>• Opportunities and threats to enhanced social sustainability of the project.</li> <li>• Recommendations for enhanced social sustainability of the project</li> </ul>

Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.	<ul style="list-style-type: none"> <li>• Favourable/unfavourable laws, policies and governance structures for enhanced sustenance of the project.</li> <li>• Accountability, transparency and technical knowledge transfer requirements</li> <li>• Availability of the above requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant laws &amp; policies</li> <li>• Government stakeholders</li> <li>• Project staff</li> <li>• Risk register</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities and threats presented by the regulatory framework for the sustainability of the project deliverables</li> <li>• Recommendations for enhanced sustainability of the project.</li> </ul>
Are there any environmental risks that may jeopardize sustenance of project outcomes?	<ul style="list-style-type: none"> <li>• Environment concerns underlying project design and implementation</li> <li>• Perceptions of key stakeholders on the effects of the project on the environment.</li> </ul>	<ul style="list-style-type: none"> <li>• EIA reports if available</li> <li>• Environmental protection bodies (state &amp; non-state)</li> </ul>	<ul style="list-style-type: none"> <li>• Desk review</li> <li>• Key informant interviews</li> <li>• <b>Thematic &amp; content analysis</b></li> </ul>	<ul style="list-style-type: none"> <li>• Potential for environmental sustainability of the project</li> <li>• Recommendations to strength environmental safeguards</li> </ul>

#### Annex 4: Progress in Delivering Outputs

Outputs	Achievements Reported by IP	MTR Comment
Project Objective: To promote and encourage significantly greater use of energy efficient and renewable energy technologies for household and productive uses in rural communities in Ethiopia.		
Outcome 1: Favourable legal and regulatory environment created for small-scale, off-grid renewable energy investments in rural areas are in place and stakeholders are trained to comply and implement the new standards and regulations.		
Output 1.1 Improved and new standards are in place for domestic cook-stoves and solar lighting products	<ul style="list-style-type: none"> <li>▪ Three (for Cook Stoves, Solar Home Systems, &amp; Biomass) National Standards for Rural Energy Technologies has been prepared and approved.</li> </ul>	<ul style="list-style-type: none"> <li>▪ MTR Team indeed noted the standards were published and in place</li> </ul>
Output 1.2: New regulations for enforcement of standards in place.	<ul style="list-style-type: none"> <li>▪ Clauses are selected from the National Standards to make them mandatory;</li> <li>▪ Stakeholder consultation has been carried out on how to enforce the formulated National Standards.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enforcement procedures supported by mandated Ministry's directive was yet to be put in place. However, the Enforcement strategy</li> </ul>

Outputs	Achievements Reported by IP	MTR Comment
		was underway
Output 1.3: Stakeholders have been trained in implementation and adherence to the new standards and regulations	<ul style="list-style-type: none"> <li>▪ More than 800 regional energy experts, members of enterprises and other stakeholders have taken part in training in the implementation and adherence of the new standards both at Federal and Regional level.</li> </ul>	<ul style="list-style-type: none"> <li>▪ MTR Team indeed was able to meet many stakeholders at different levels that participated in trainings including regional energy bureaus and RET Enterprises</li> </ul>
<p>Outcome 2.1: Greater awareness among rural populations about the benefits and qualities of renewable energy for household and productive uses</p> <p>Outcome 2.2: Greater awareness among RET enterprises about the availability of SFM and business support</p>		
Output 2.1: Public awareness campaign to end-users for small-scale RETs designed and implemented through national and regional media	<ul style="list-style-type: none"> <li>▪ So far, more than 550 public awareness campaign to end-users for small-scale RETs carried out through national and regional media in at least seven languages.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reviewed documents and reports as well as national and regional consultations by MTR Team indeed revealed that there was significant amount of awareness using different ways although it was not guided by a robust multimedia communication strategy save for the Road Show strategy</li> </ul>
Output 2.2: Showcasing of specific RETs introduced through technology roadshows by hired RET enterprises	<ul style="list-style-type: none"> <li>▪ First round or pilot roadshows on RETs carried out in four Woreda of BGZ and Gambella regions and around 829 ICS and 178 Solar home systems has been sold;</li> <li>▪ Second round technology road show is on the preparation stage, eight Woreda selected and promotion company recruited;</li> </ul>	<ul style="list-style-type: none"> <li>▪ Road shows were found out to have had some significant impact in creating awareness as well as introducing and marketing ICS and SHS to the rural population</li> </ul>

Outputs	Achievements Reported by IP	MTR Comment
Output 2.3: Awareness campaign to RET-enterprises for SFM and business incubation services designed and implemented	<ul style="list-style-type: none"> <li>▪ RET Enterprises are well aware about the access of SFM with Development Bank of Ethiopia through Financial Service Providers (Micro Finances)</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>
Outcome 3: By the end of project, more than 290,000 low-income households and micro-enterprises (1,500,000 beneficiaries) will have sustainable access to clean energy through micro-finance.		
Output 3.1: Risk Capital for Financial Service Providers established: provision of risk capital to at least five financial service providers (FSPs) to assess, develop, deploy and scale-up micro-finance products to finance sustainable RETs for low-income households and micro-enterprises.	<ul style="list-style-type: none"> <li>▪ This Risk capital was established, but it was taken away harshly to another UNCDF CleanStart project country as the project was delayed to be signed in Ethiopia.</li> <li>▪ Implementing this activity is paramount importance as it capacitates FSP (MFIs). Because, MFIs have higher branch networking to penetrate the rural off-grid areas than commercial banks and the financial service MFIs provide for the local RET manufacturing /producing enterprises is more sustainable and viable than commercial banks. It is continuous, sustainable and stops no time,</li> <li>▪ Hence, I suggest that since Project component 3 (Sustainable Financial Mechanism) started very lately; still it is not high time to implement this activity. This day, most of the activities are ahead. I think the same fund can be secured if UNCDF's effort is in place again as previously done by the same.</li> <li>▪ This achievement can also be realized if UN-UN thorough discussion and effort (UNDP and UNCDF) (cooperation) (e.g. from the revised project budget – even from other components) is in place as the activity/the section is quite important. Because, implementing this component fully, has great impact on the remaining project components in achieving their respective targets.</li> </ul>	<ul style="list-style-type: none"> <li>▪ UNCDF CleanStart De-Risking funds relocated to another country due to late start of RET project. However, UNDP is proactively engaged in discussions with other possible funders to fill the gap and has also so far contributed from its own coffers US\$50,000 towards the US\$750,000 financial gap left. It should be noted that without this fund the project is likely to be significantly affected especially in the Capacity Building as well as De-Risking areas of FSPs.</li> </ul>
Output 3.2: Credit Risk Guarantees to the Development Bank of Ethiopia (DBE) and FSPs to leverage credit from DBE and FSPs to sustainable RET enterprises and	<ul style="list-style-type: none"> <li>▪ CRGF was established which amounts to 1.4Million USD.</li> <li>▪ Six FSP were selected and signed guarantee agreement with DBE to provide energy loan amounting to 40 million ETB by obtaining CRGF 50 % (partial</li> </ul>	<ul style="list-style-type: none"> <li>▪ On course as reported by IP</li> </ul>

Outputs	Achievements Reported by IP	MTR Comment
service providers.	<p>guarantee) amounting to 20 million ETB from DBE.</p> <ul style="list-style-type: none"> <li>▪ Energy loan Agreements were signed between three FIs and five RET suppliers 6.5 million ETB energy loan was disbursed by three FIs for five RET suppliers by using the 50 % CRGF scheme (3.25 million) ETB (Guarantee letter value)</li> </ul>	
Output 3.3: Technical Assistance to FSPs, DBE, RET enterprises, MoWIE and other Government institutions to eliminate knowledge and capacity barriers for micro-finance for RETs; support for advocacy and developing partnerships.	<ul style="list-style-type: none"> <li>▪ Trainings were provided to 18 DBE staff on What of CRGF and the OM of the scheme.</li> <li>▪ Workshops were conducted and 23 FIs (16 MFIs and 7 Commercial banks) and 30 RET suppliers (8 Solar energy companies, 22 ICS enterprises) were participated and 9 regional energy bureau focal persons</li> <li>▪ Again, awareness creating orientation was provided to 18 participants (MFIs, Regional Energy bureau staffs and RET suppliers)</li> </ul>	<ul style="list-style-type: none"> <li>▪ On course as reported by IP</li> </ul>
Output 3.4: Knowledge Management and Dissemination to promote awareness and understanding of the potential for micro-finance to stimulate adoption of clean energy and generate investor interest through demonstration effects.	<ul style="list-style-type: none"> <li>▪ Workshops were conducted to increase the awareness and understanding of the potential microfinance (CRGF and Energy loan</li> <li>▪ The information gathered from the workshops were uploaded to the web site of DBE.</li> <li>▪ Documents for promotion of the CRGF was prepared and under process to promote the scheme and availability of Energy loan.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Significant progress noted however, the MTR Team feels there was still need to develop specific energy related packages as this is a new sub sector for FSPs lending and loaning scheme</li> </ul>
Outcome 4: At least 120 small-scale enterprises and manufacturers are successfully producing and profitably selling RETs both for household consumption and for productive uses.		
Output 4.1: Business incubation support programme initiated at MoWIE	<ul style="list-style-type: none"> <li>▪ First round competition on RET Business undertaken and 14 RET enterprises awarded;</li> </ul>	<ul style="list-style-type: none"> <li>▪ In progress as noted by IP though still very few</li> </ul>
Output 4.1.1: Linking activities with the Entrepreneurship	<ul style="list-style-type: none"> <li>▪ In collaboration with the Ethiopian Entrepreneurship Development Centre, a Six days Entrepreneurial Training has been given to Members of RET enterprises;</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted as per IP</li> </ul>



Outputs	Achievements Reported by IP	MTR Comment
Development Programme		
Output 4.2: Basic business advisory support granted to RET enterprises	<ul style="list-style-type: none"> <li>▪ 13 days Business Development Service Advisers training conducted to 75 experts from nine regions;</li> </ul>	<ul style="list-style-type: none"> <li>▪ Noted as per IP</li> </ul>
Output 4.3: Capable innovators enrolled for advanced business mentoring and advisory service	<ul style="list-style-type: none"> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>
Output 4.4. Monitoring of RET enterprises development established	<ul style="list-style-type: none"> <li>▪ Monitoring and evaluation activities are undertaking through developing comprehensive M&amp;E Plan for the project;</li> <li>▪ From awarded 14 RET enterprises, three have been monitored their performance are found in good progresses;</li> </ul>	<ul style="list-style-type: none"> <li>▪ M&amp;E plan in place although MTR Team noted that there were inadequate resources to carry out effective monitoring and supervisory roles given the vast geographical coverage of Ethiopia</li> </ul>

## Annex 5: Progress towards Results

**Green:** Achieved

**Yellow:** On target to be achieved

**Red:** Not on target to be achieved

Extracted from project document (IP indicates if there have been approved changes)			IP to fill out this column with text on achievement and colour code [MTR will reassess colour code during review]	MTR team	MTR team fills out ...
Indicator	Baseline	End of Project target	2018 Midterm Level & Assessment	Achievement Rating	Justification for Rating
<b>Objective:</b> To promote and encourage significantly greater use of energy efficient and renewable energy technologies for household and productive uses in rural communities in Ethiopia.					
1. Lifetime energy saved.	The use of over 15 million inefficient cook-stoves and over 15 million kerosene lamps leads to over 35 Mt CO <sub>2</sub> e annually.	35.5 million mega-Joules of energy saved.	On target to be achieved	Yellow	Data is being collected and all foundation has been put in place by the project to save energy in long ran
2. Tonnes of CO <sub>2</sub> equivalent avoided.		The total direct incremental GHG emission reductions from solar products will 0.04 Mt of CO <sub>2</sub> e over their lifetime of 3 years; the additional ICS will avoid 2 Mt of CO <sub>2</sub> e over their lifetime of 3 years.	On target to be achieved		Same as above
3. Number of households benefiting from project-supported access to RETs.		800,000 households are direct beneficiaries from improved access to affordable RETs.	On target to be achieved		Through Road shows and RET enterprises by accessing loans are able to import and distribute

Extracted from project document (IP indicates if there have been approved changes)			IP to fill out this column with text on achievement and colour code [MTR will reassess colour code during review]	MTR team	MTR team fills out ...
Indicator	Baseline	End of Project target	2018 Midterm Level & Assessment	Achievement Rating	Justification for Rating
					affordable RETs
<b>Outcome 1:</b> Favourable legal and regulatory environment created for small-scale, off-grid renewable energy investments in rural areas are in place and stakeholders are trained to comply and implement the new standards and regulations.					
1.1: Status of development and enforcement of RET hardware standards by Government of Ethiopia.  Number of participants benefiting from trainings (gender-disaggregated)	No regulatory basis to improve and control the quality of rural energy technologies for Ethiopia.	New regulations for enforcement of standards in place. Over 500 individual stakeholders have been trained in implementation and adherence with the new standards and regulations.	On target to be achieved		Standards already in place and achieved although an Enforcement Procedure and strategy is in progress
<b>Outcome 2:</b> Greater awareness among rural populations about the benefits of renewable energy for household and productive uses. Greater awareness among RET enterprises about the availability of SFM and business support					
Type, item price and estimated efficiency of technology sold directly at roadshows	Lack of public awareness in rural communities about the benefits of improved energy technologies for lighting and cooking.	300,000 RET items sold directly at roadshows	On target to be achieved		Road shows successfully piloted in Two regions and soon to be replicated in other regions
Number, size and length of appearances of promotions in media.	The use of over 15 million inefficient cook-stoves and over 15 million kerosene lamps leads to 51 Mt CO <sub>2e</sub> emissions annually.	At least 1000 appearances of promotions in media.	On target to be achieved		Media promotions undertaken
Number of RET enterprises using SFM or applying for business incubation services.	Lack of public awareness about the availability of financial products to purchase rural energy	200 RET enterprises using SFM. 500 RET enterprises applying for business incubation services.	On target to be achieved		RET Enterprises benefited from BDS skills however there is still need to be

Extracted from project document (IP indicates if there have been approved changes)			IP to fill out this column with text on achievement and colour code [MTR will reassess colour code during review]	MTR team	MTR team fills out ...
Indicator	Baseline	End of Project target	2018 Midterm Level & Assessment	Achievement Rating	Justification for Rating
	technologies.				skilled in Energy technical skills
<p><b>Outcome 3:</b> By the end of project, more than 290,000 low-income households and micro-enterprises (1,500,000 beneficiaries) will have sustainable access to clean energy through micro-finance. It is envisaged that CleanStart, in partnership with the UNDP-implemented, GEF-financed project, will create a replicable business model for wider scale-up across other developing countries by adopting an integrated approach to addressing demand and supply-side barriers.</p>					
Volume of investment mobilised by FSPs participating in the project.	<p>No lending on RETs by MFIs; slow disbursement of an available World Bank loan for the sector of USD 40 million (15% disbursement rate as of April 2014)</p> <p>The use of over 15 million inefficient cook-stoves and over 15 million kerosene lamps leads to 51 Mt CO<sub>2</sub>e of emissions annually.</p>	<p>With support from financial mechanism and awareness campaigns, investment and deployment of at least 200,000 additional small-scale solar energy technologies and of an additional 600,000 improved cook-stoves, worth USD 15 million, have been mobilized.</p>	<p>On target to be achieved</p> <p>With the help of the energy loan obtained by the CRGF facility offered to the FIs:</p> <ul style="list-style-type: none"> <li>▪ <b>2,530 Small Scale Solar Energy</b> Technologies were disseminated.</li> <li>▪ <b>1,955 Improved Cooking Stove</b> Technologies were disseminated</li> <li>▪ <b>4,485 off-grid households</b> have got access to renewable energy technologies</li> </ul>		<p>Despite late start there was still significant progress on this component with major activities already undertaken as well as laying firm ground and infrastructure for SFM using FSPs. Only setback was the loss of De-Risking funds to the 5 FSPs that was hitherto supposed to be provided by Cleanstart UNCDF Global. This will indeed have a negative impact if there are no other alternative funds mobilised to fill the gap much as UNDP is proactively trying to</p>

Extracted from project document (IP indicates if there have been approved changes)			IP to fill out this column with text on achievement and colour code [MTR will reassess colour code during review]	MTR team	MTR team fills out ...
Indicator	Baseline	End of Project target	2018 Midterm Level & Assessment	Achievement Rating	Justification for Rating
					undertake resource mobilisation
<b>Outcome 4: At least 120 small-scale enterprises and manufacturers are successfully producing and profitably selling RETs both for household consumption and for productive uses.</b>					
Number of enterprises that launch micro-businesses to sell either small-scale solar technologies or improved cook-stoves (or both)	At least 120 enterprises in Ethiopia are unable to launch improved businesses due to lack of capital and business expertise.	120 enterprises launch micro-businesses to sell either small-scale solar technologies or improved cook-stoves (or both) with at least a 25% success rate (i.e. still in business and profitable after 12 months).	On target to be achieved		Although few RET Enterprises would benefit from this as many as 14 awardees there was significant progress still as capacity building and training as well as awareness creation had been done. Further still relaxing criteria to accommodate other certified prototype innovations will see this number increase significantly to hit the target
		12 enterprises develop their business based on innovative RETs further due to investment grants and training received.	On target to be achieved		As indicated above there has been significant amount of training especially in BDS however more is still required in

Extracted from project document (IP indicates if there have been approved changes)			IP to fill out this column with text on achievement and colour code [MTR will reassess colour code during review]	MTR team	MTR team fills out ...
<b>Indicator</b>	<b>Baseline</b>	<b>End of Project target</b>	<b>2018 Midterm Level &amp; Assessment</b>	<b>Achievement Rating</b>	<b>Justification for Rating</b>
					specialised Energy related trainings

#### Annex 6: Co-financing Table

Annex 6: Co-financing Table							
Sources of Cofinancing <sup>1</sup>	Name of Co-financer	Description of Actual Co-financing Contributed at Stage of Midterm Review	Type of Cofinancing <sup>2</sup>	Amount Confirmed at CEO Endorsement USD	Actual Amount Contributed at Stage of MTR USD	Expected Amount by Project Closure USD	Actual % of Expected Amount USD
GEF Partner Agency	UNDP	Direct Annual Budget support	Grant	500,000	275,000		
	UNCDF	Direct Annual Budget support	Grant	980,000	...	...	
	DBE	Loan	Grant	20,000,000	...	...	
	Private Sector	Investing into energy technologies using the scheme under component three	Grant	2,800,000	...	...	
UNDP Grant, Sub-Total					\$0	\$0	0%
National	MoWIE	Project office, logistics and project staff / staff time from government employed	In-kind	17,688,667			

<b>Government</b>		experts					
	<b>MoEFCC</b>	Project staff/ staff time from government employed experts	In-Kind			...	
	<b>DBE</b>	Office space and project staff / staff time from government employed experts	In-Kind			...	
	<b>Private Sector</b>	Participating in public awareness raising activities and business incubation activities	In-Kind	3,000,000	<b>12,000</b>	...	
<b>Government In-Kind, Sub-Total</b>					<b>\$0</b>	<b>\$0</b>	<b>0%</b>
<b>National Government</b>	<b>MoFEC</b>		<b>Grant</b>				
		In land tax while importing one project vehicle and 8 motor bikes	Grant		115,376.45	...	
		...	Grant		...	...	
		...	Grant		...	...	
<b>Government Grant, Sub-Total</b>					<b>\$0</b>	<b>\$0</b>	<b>0%</b>
<b>Total</b>					<b>\$0</b>	<b>\$0</b>	<b>0%</b>

Notes:

1. Sources of Co-financing may include: Bilateral Aid Agency(ies), Foundation, GEF Partner Agency, Local Government, National Government, Civil Society Organization, Other Multi-lateral Agency(ies), Private Sector, Other

2. Type of Co-financing may include: Grant, Soft Loan, Hard Loan, Guarantee, In-Kind, Other


## Annex 7: Planned Budget and Actual Expenditures at Midterm

<b>Annex 5: Annual Work Plan Budgets and Actual Expenditures</b>						
<b>Outcome</b>	<b>2016 USD</b>	<b>2017 USD</b>	<b>2018 USD</b>	<b>2019 USD</b>	<b>2020 USD</b>	<b>Total USD</b>
<b>Indicative Breakdown of Project Budget in Project Document:</b>						
<b>Outcome 1</b>	38,700	48,917	92,633	154,350	116,200	450,800
<b>Outcome 2</b>	54,300	121,275	155,375	153,375	143,375	627,700
<b>Outcome 3</b>	903,850	789,000	909,000	374,000	239,150	3,215,000
<b>Outcome 4</b>	211,450	307,450	306,450	125,000	25,000	975,350
<b>Project Management</b>	42,506	40,106	90,107	40,106	90,106	302,931
<b>Total</b>	<b>1,250,806</b>	<b>1,306,748</b>	<b>1,553,565</b>	<b>846,831</b>	<b>613,831</b>	<b>5,571,781</b>
<b>Outcome</b>	<b>2016 USD</b>	<b>2017 USD</b>	<b>2018 USD</b>	<b>Cumulative Totals at Midterm 2016 – end Sept 2018 USD</b>		
<b>Annual Work Plan Budgets and Actual Expenditures Incurred through Midterm:</b>						
<b>Outcome 1:</b>						
Annual Work Plan	5,051.94	112,117	92,633	\$0		
Disbursed	5,051.94	47,000.85	92,387.27	\$0		
Balance (AWP-Disbursed)	\$0	\$0	\$0	\$0		
<b>Outcome 2:</b>						
Annual Work Plan	10,103.88	121,275	155,375	\$0		
Disbursed	10,103.88	127,086.58	90,181.59	\$0		
Balance (AWP-Disbursed)	\$0	\$0	\$0	\$0		
<b>Outcome 3:</b>						
Annual Work Plan		241,300	332,880	\$0		
Disbursed		0.00	0	\$0		
Balance (AWP-Disbursed)	\$0	\$0	\$0	\$0		



<b>Outcome 4:</b>				
Annual Work Plan	5,051.94	307,450	398,450	\$0
Disbursed	5,051.94	57,757.94	73,750.28	\$0
Balance (AWP-Disbursed)	\$0	\$0	\$0	\$0
<b>Project Management</b>				
Annual Work Plan	20,207.77	40,106	90,107	\$0
Disbursed		14,553.71	49,373.66	\$0
Balance (AWP-Disbursed)	\$0	\$0	\$0	\$0
<b>Grand totals</b>				
Annual Work Plan	\$0	\$0	\$0	\$0
<b>Total Disbursed</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Balance (AWP-Disbursed)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

### Annex 8: Tracking Tool for Climate Change Mitigation Projects (Midterm Evaluation)

 <b>Tracking Tool for Climate Change Mitigation Projects</b> <b>(For Mid-term Evaluation)</b>		
<b>Special Notes: reporting on lifetime emissions avoided</b>		
<b>Lifetime direct GHG emissions avoided:</b> Lifetime direct GHG emissions avoided are the emissions reductions attributable to the investments made <b>until the mid-term evaluation</b> , totaled over the respective lifetime of the investments. Please refer to the Manual for Calculating GHG Benefits of GEF Projects.		
<a href="#">Manual for Energy Efficiency and Renewable Energy Projects</a>		

<a href="#">Manual for Transportation Projects</a>		
For LULUCF projects, the definition of "lifetime direct" applies. Lifetime length is defined to be 20 years, unless a different number of years is deemed appropriate. For emission or removal factors (tonnes of CO2eq per hectare per year), use IPCC defaults or country specific factors.		
<b>General Data</b>	<b>Results at Mid-term Evaluation</b>	<b>Notes</b>
Project Title	Promoting Sustainable Rural Energy Technologies (RETs) for Household and Productive Uses	
GEF ID	5501	
Agency Project ID	5200	
Country	Ethiopia	
Region	AFR	
GEF Agency	UNDP	
Date of Council/CEO Approval	41529	Month DD, YYYY (e.g., May 12, 2010)
GEF Grant (US\$)	4191780	
Date of submission of the tracking tool		Month DD, YYYY (e.g., May 12, 2010)
Is the project consistent with the priorities identified in National Communications, Technology Needs Assessment, or other Enabling Activities under the UNFCCC?	1	Yes = 1, No = 0

	Is the project linked to carbon finance?	0	Yes = 1, No = 0
	Cumulative co-financing realized (US\$)		
	Cumulative additional resources mobilized (US\$)		additional resources mean beyond the co-financing committed at CEO endorsement
<b>Objective 2: Energy Efficiency</b>			
	<b>Please specify if the project targets any of the following areas</b>		
	Lighting	0	Yes = 1, No = 0
	Appliances (white goods)	0	Yes = 1, No = 0
	Equipment	0	Yes = 1, No = 0
	Cook stoves	1	Yes = 1, No = 0
	Existing building	0	Yes = 1, No = 0
	New building	0	Yes = 1, No = 0
	Industrial processes	0	Yes = 1, No = 0
	Synergy with phase-out of ozone depleting substances		Yes = 1, No = 0
	Other (please specify)		

	Policy and regulatory framework	2	0: not an objective/component 1: no policy/regulation/strategy in place 2: policy/regulation/strategy discussed and proposed 3: policy/regulation/strategy proposed but not adopted 4: policy/regulation/strategy adopted but not enforced 5: policy/regulation/strategy enforced
	Establishment of financial facilities (e.g., credit lines, risk guarantees, revolving funds)	5	0: not an objective/component 1: no facility in place 2: facilities discussed and proposed 3: facilities proposed but not operationalized/funded 4: facilities operationalized/funded but have no demand 5: facilities operationalized/funded and have sufficient demand
	Capacity building	4	0: not an objective/component 1: no capacity built 2: information disseminated/awareness raised 3: training delivered 4: institutional/human capacity strengthened 5: institutional/human capacity utilized and sustained

	Lifetime energy saved		MJ (Million Joule, IEA unit converter: <a href="http://www.iea.org/stats/unit.asp">http://www.iea.org/stats/unit.asp</a> ) Fuel savings should be converted to energy savings by using the net calorific value of the specific fuel. End-use electricity savings should be converted to energy savings by using the conversion factor for the specific supply and distribution system. These energy savings are then totaled over the respective lifetime of the investments.
	Lifetime direct GHG emissions avoided		tonnes CO2eq (see Special Notes above)
<b>Objective 3: Renewable Energy</b>			
	<b>Please specify if the project includes any of the following areas</b>		
	Heat/thermal energy production	1	Yes = 1, No = 0
	On-grid electricity production	0	Yes = 1, No = 0
	Off-grid electricity production	1	Yes = 1, No = 0

	Policy and regulatory framework	2	0: not an objective/component 1: no policy/regulation/strategy in place 2: policy/regulation/strategy discussed and proposed 3: policy/regulation/strategy proposed but not adopted 4: policy/regulation/strategy adopted but not enforced 5: policy/regulation/strategy enforced
	Establishment of financial facilities (e.g., credit lines, risk guarantees, revolving funds)	5	0: not an objective/component 1: no facility in place 2: facilities discussed and proposed 3: facilities proposed but not operationalized/funded 4: facilities operationalized/funded but have no demand 5: facilities operationalized/funded and have sufficient demand
	Capacity building	4	0: not an objective/component 1: no capacity built 2: information disseminated/awareness raised 3: training delivered 4: institutional/human capacity strengthened 5: institutional/human capacity utilized and sustained
	<b>Installed capacity per technology directly resulting from the project</b>		

Wind		MW
Biomass		MW el (for electricity production)
Biomass		MW th (for thermal energy production)
Geothermal		MW el (for electricity production)
Geothermal		MW th (for thermal energy production)
Hydro		MW
Photovoltaic (solar lighting included)	0.100725	MW (Calculated based on the ProDoc for 8058 solar technologies sold)
Solar thermal heat (heating, water, cooling, process)		MW th (for thermal energy production, 1m <sup>2</sup> = 0.7kW)
Solar thermal power		MW el (for electricity production)
Marine power (wave, tidal, marine current, osmotic, ocean thermal)		MW
<b>Lifetime energy production per technology directly resulting from the project (IEA unit converter: <a href="http://www.iea.org/stats/unit.asp">http://www.iea.org/stats/unit.asp</a>)</b>		
Wind		MWh
Biomass		MWh el (for electricity production)
Biomass		MWh th (for thermal energy production)
Geothermal		MWh el (for electricity production)

Geothermal		MWh th (for thermal energy production)
Hydro		MWh
Photovoltaic (solar lighting included)	441.1755	MWh (Calculated based on CEO total endorsement target for the project for 8058 solar technologies sold)
Solar thermal heat (heating, water, cooling, process)		MWh th (for thermal energy production)
Solar thermal power		MWh el (for electricity production)
Marine energy (wave, tidal, marine current, osmotic, ocean thermal)		MWh
Lifetime direct GHG emissions avoided	99883.35	tonnes CO2eq (see Special Notes above) Calculated based on ProDoC Annex 4 for 29995 ICS distributed



## Annex 9: Case studies

### **Case study1: Technology without support system is counterproductive - Focus Group Discussion with Nigat Solar Users Association members – Benishangul Gumuz, Bambasi**

*Nigat Solar Association was established by 29 households in 2016 after they were selected with a lottery system from 200 households to be beneficiaries of SHS initiated by the government. The association is chaired by Sintayehu Mohammed who was one of the key participants in the FGD. The Association is located in Bambasi woreda, Amba 2 kebele. According to the information we got from him the average household size is about 5-6 people. Prior to using SHS for lighting the households were using kerosene lamps for lighting their residential houses and were burning wood for lighting in their kitchen. Through this practice women and children were the major victims of the indoor air pollution particularly from the smoke used to light the kitchen. However, thanks to the government, since 2016 these households have become beneficiaries of SHS. These households were able to acquire the technology with upfront payment deposit of 5% of the cost to a special bank account opened by the Association and 7 years payment system arranged by the government to pay the balance which in total was ETB 14800. Apart from lighting those who have acquired the 60w were told that they can use their system for powering Radio, TV, mobile charging, and other productive uses such as for barber business. The SHS are in the range of 10w – 60w. They were also trained on the operation and simple maintenance of the system. However, after using for some time, except the lighting the other promised uses of powering Radio, TV, mobile charging, and other productive uses were no more available because of the failure of the adaptor provided particularly for the larger SHS. They were trying to get maintenance technicians to support them to fix their systems. However, no one including the regional energy bureau was not there to respond to their questions. Although there is still a big demand of 150 units some with cash payment and some with similar credit arrangement, addressing the challenges they faced is vital for the sustainability of the technology. Otherwise, it may be possible the farmers can default the payment they agreed to effect in 7 years and hereby can scare future private RET enterprises who would like to do business in such kind of localities*

**Case study 2:** *My name is Yayu Biru. I am living here in village 55, Bambasi woreda. I have really big desire to have Solar lighting technology for my house. I have been asking help to link me up to quality Solar Technology Suppliers for quite some time. Unfortunately, I was not around when people were selected by a lottery system to get SHS. I have bought 8 solar lanterns that are spoiled. The Solar lanterns we get from ordinary shops are sub-standard products. I need really quality SHS product. I will even pay in cash whatever it costs let alone the ETB 14,000 that my villagers paid. I have budgeted to buy the SHS this month (October). But I do not want to be cheated again by buying sub-standard product. I need your support to help me where to get quality product. If it is not available from your network please help me to link up to a supplier of quality products. I have heard information on Radio and Newspapers that there are suppliers of quality products. But I am not able to locate them. I will give you my phone number to provide me info on this. I am currently living in a dark house. My kids are not able to properly do their home works and study at night.*

**Case study 3:** *Asegid Dejene is the Owner of Abdi Bale Enterprise that produces ICS in Goba, Bale Zone (Oromia). He has been in the business since 2015 after he got entrepreneurship training from a known trainer in Addis Ababa. Since 2006 he has been a member of Nature Club Called 'YEBALE HIWOT'. This Club has also triggered his desire to start business that contributes to the Saving of the Dwindling precious forests in his area where the famous Bale Mountains are found. He produces MIRT Injera, Tikikil, and Lakech stoves that are approved standard ICS products. His products are distributed in all 220 kebeles of the Zone and beyond. He was producing on average 500 stoves per day mainly Mirt Injera stove before he was able to get loan from PEACE micro finance institution. The ETB 500000 loan from the MFI has helped him to expand his ICS production by three folds to 1500 per day. He has already started paying back his loan although he is not happy with the MFI policy that is not following a declining rate. He has 11 permanent employees. Besides his active promotional activities, the Women Affairs, Health Extension Workers, Mines and Energy experts, GIZ, and the DAs in all woredas and Kebeles support him in the promotion his products. The demand for ICS according to him is very high and is increasing. As a result, he has no problem selling his products. Although he has a plan to buy a small truck, his problem currently is transporting his products. He is a member of Oromia ICS Association that has 34 members in the region which he thinks is a very important platform for experience sharing, organizing training, coordinating regional data collection, provision of guarantee (2 years) for ICS products from member producers, and designing new standard products by soliciting support from government experts.*

## Annex 10: MTR Terms of Reference

# UNDP-GEF Midterm Review Terms of Reference

Standard Template 1: Formatted for attachment to [UNDP Procurement Website](#)

## 1. INTRODUCTION

This is the Terms of Reference (ToR) for the UNDP-GEF Midterm Review (MTR) of the full-sized sized project titled Promoting Sustainable Rural Energy Technology for Household and Productive Uses Project (PIMS 5200) implemented through the Ministry of Water, Irrigation and Electricity, which is to be undertaken in 2018. The project started on the 10<sup>th</sup> of June 2016 and is in its second year of implementation. In line with the UNDP-GEF Guidance on MTRs, this MTR process was initiated before the submission of the second Project Implementation Report (PIR). This ToR sets out the expectations for this MTR. The MTR process must follow the guidance outlined in the document *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* (<http://web.undp.org/evaluation/guidance.shtml#gef>).

**2. PROJECT BACKGROUND INFORMATION** Ethiopia is signatory to United Nations Framework Convention on Climate Change in 1992, the Kyoto Protocol which ratified in 2005 and more recently to the 2015 Paris Agreement. With the aim of implementing these agreements, the government of Ethiopia under its CRGE initiative, GTP and SDG, is determined to take measures towards providing the community with reliable, affordable, and clean energy services that are needed to enhance the livelihood of the people and to fuel the progress of economic growth. Promoting Sustainable Rural Energy Technologies (RETs) for Households and Productive Uses Project is a full-sized national project being implemented by the Ministry of Water, Irrigation and Electricity (MoWIE) under Alternative Energy Technologies Development and Promotion Directorate (AETDPD), and the Ministry of Environment, Forest and Climate Change (MoEFCC) under the Improved Cook Stoves Identification, Development and Promotion Directorate, Development Bank of Ethiopia, UN Capital Development fund in collaboration with UNDP through the financial support of the Global Environmental Facility (GEF), which contributes to the different initiatives of the government to provide alternative and clean energy sources to the rural communities.

The objective of the project is to promote significant use of energy efficient and renewable energy technologies for household and productive uses in rural communities in the country. The aspiration of the project is to reduce carbon emissions from deforestation and ensuring large scale adoption of clean cooking and lighting technologies through supporting the dissemination of 600,000 improved biomass stoves and 200,000 solar home systems in all over the country by the end of 2021 through a private sector driven and market based approach.

This GEF financed, UNDP and, MoWIE and MoEFCC implemented project complements the Ethiopian Energy Policy, the Ethiopian Climate Resilient Green Economy Strategy, the Initial National Communication of Ethiopia to the UNFCCC and the Sustainable Energy for All initiative. The project aims to reduce Ethiopia's energy-related CO<sub>2</sub> emissions by approximately 2 million tons of CO<sub>2</sub>e by promoting the use of renewable energy and low greenhouse gas (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 project consists of four components and is planned to be implemented over a period of five years. The four components are:

- Component 1: Strengthening Regulatory and Legal Framework based on National Standards
- Component 2: Rural Public Awareness Campaign on Renewable Energy Technologies
- Component 3: Sustainable Financial Mechanism for RETs for rural households
- Component 4: Business Incubator to Promote Greater Entrepreneurship for Investment in RETs

The overall goal of the project is creating enabling environment for the wide scale dissemination of quality rural energy technology products in off grid areas of the country. The project seeks to implement a more private sector-driven and market-based approach towards promoting renewable energy technologies in rural communities in Ethiopia. The four components consist 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) to help transform the market for off-grid renewable energy technologies in rural communities.

In line with the project components there are four outcomes listed below:

Outcome 1: Favorable legal and regulatory environment are designed for small-scale off-grid renewable energy investments in rural areas, and modalities for stakeholder training to comply with and implement the new standards and regulations are in place by 2018.

Outcome 2: Greater awareness among rural populations about the benefits and qualities of renewable energy for household and productive uses, as well as awareness among RET enterprises about the availability of Sustainable Financial Mechanism and business support created by 2018.

Outcome 3: By 2020, replicable business model for wider scale-up across other developing countries by adopting an integrated approach to addressing demand and supply-side barriers is created.

Outcome 4: By 2016 Business incubation support programme initiated at MoWIE

At the end of its life time, the project has anticipated to save 35.5 million mega-Joules of energy using improved cook stoves and solar energy technologies through benefiting about 800,000 households from project supported access to RETs. And it also intended to reduce 2 million tons of CO<sub>2e</sub> GHGs through sale and distribution of about 300,000 RETs technologies using technology road show events. Moreover, the project has also planned to provide volume of financial investment through Sustainable Financial Mechanism for about 200 RET Enterprises and promote business incubation process in the energy sector. It also aimed to set up legal frameworks that protect and promote the effective utilization of standardized RET products through the application of standards.

The project budget consists of USD 4,091,781 of GEF grant funding, USD 500,000 from UNDP, USD 980,000 co-financing from UNCDF CleanStart global programme, USD 300,000 in-kind contribution from UNDP and co-financing from the Government of Ethiopia (MoWIE, MoFECC, FeMSEDA/EDP) of USD

35,179,954 as well as further co-financing from the Development Bank of Ethiopia with a loan of USD 20 million, HIVOS, SNV, ABPP (in-kind) USD 6,185,945 and RET Enterprises (in-kind and cash) USD 6,000,000.

The project is being implemented over the off-grid areas of the nine regional states using the regional energy bureaus as focal points for the project at region level. The project is implemented by the Ministry of Water, Irrigation and Electricity (MoWIE), Ministry of Environment, Forest and Climate Change (MoEFCC), and Development Bank of Ethiopia (DBE) mainly responsible for the implementation of component 3 of the project in collaboration with the United Nations Capital Development Fund (UNCDF). The project has a project office in MoWIE under the Alternative Energy Technology Development and Promotion Directorate, the director being the National Project Director, with a Project Manager, Monitoring and Evaluation Officer and Project Accountant. At region level the project has focal persons assigned from the respective regional energy bureaus responsible for coordinating the project activities at region level in collaboration with the Ministries. The project also has a steering committee comprised of State Ministers' of the MoWIE, MoEFCC, Ministry of Finance and Economic Cooperation DBE, UNCDF and UNDP. The steering committee supervises the overall implementation and puts directions on issues concerning the implementation of the project. The project office reports physical and financial performance report to the national project director and UNDP, and UNDP reports to the donor, GEF, following its reporting requirements.

### **3. OBJECTIVES OF THE MTR**

The MTR will assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document, and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The MTR will also review the project's strategy, its risks to sustainability.

### **4. MTR APPROACH & METHODOLOGY**

The MTR must provide evidence based information that is credible, reliable and useful. The MTR team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Environmental & Social Safeguard Policy, the Project Document, project reports including Annual Project Review/PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review). The MTR team will review the baseline GEF focal area Tracking Tool submitted to the GEF at CEO endorsement, and the midterm GEF focal area Tracking Tool that must be completed before the MTR field mission begins.

The MTR team is expected to follow a collaborative and participatory approach<sup>19</sup> ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), the UNDP Country Office(s), UNDP-GEF Regional Technical Advisers, and other key stakeholders.

Engagement of stakeholders is vital to a successful MTR.<sup>20</sup> Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to Ministry of Water, Irrigation and Electricity, Ministry of Environment, Forest and Climate Change, Development Bank of Ethiopia,

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<sup>19</sup> For ideas on innovative and participatory Monitoring and Evaluation strategies and techniques, see [UNDP Discussion Paper: Innovations in Monitoring & Evaluating Results](#), 05 Nov 2013.

<sup>20</sup> For more stakeholder engagement in the M&E process, see the [UNDP Handbook on Planning, Monitoring and Evaluating for Development Results](#), Chapter 3, pg. 93.

United Nations Capital Development Fund, Ministry of Finance and Economic Cooperation; executing agencies, senior officials and task team/ component leaders, key experts and consultants in the subject area, Project Board, project stakeholders, academia, local government and CSOs, etc. Additionally, the MTR team is expected to conduct field missions to selected regions from the nine regional states, including the following project sites technology roadshow areas in Afar, Amhara, Benishanguel-Gumuz, Gambella, Somali and Tigray regional states.

In general, the approach and methodology will be

- Conduct desk review
- Collect primary data using appropriate tools in line with evaluation questions and log frame indicators
- KII with program stakeholders and FGD with communities
- Field visits to the implementation sites

Approach and methodology can be adjusted based on consultants' experience and on the details of the information required

The final MTR report should describe the full MTR approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the review.

## 5. DETAILED SCOPE OF THE MTR

The MTR team will assess the following four categories of project progress. See the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* for extended descriptions.

### i. Project Strategy

#### Project design:

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document.
- Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results. Were lessons from other relevant projects properly incorporated into the project design?
- Review how the project addresses country priorities. Review country ownership. Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?
- Review decision-making processes: were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?

- Review the extent to which relevant gender issues were raised in the project design. See Annex 9 of *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* for further guidelines.
- If there are major areas of concern, recommend areas for improvement.

Results Framework/Logframe:

- Undertake a critical analysis of the project’s logframe indicators and targets, assess how “SMART” the midterm and end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.
- Are the project’s objectives and outcomes or components clear, practical, and feasible within its time frame?
- Examine if progress so far has led to, or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women’s empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis.
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART ‘development’ indicators, including sex-disaggregated indicators and indicators that capture development benefits.

**ii. Progress Towards Results**

Progress Towards Outcomes Analysis:

- Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix and following the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects*; colour code progress in a “traffic light system” based on the level of progress achieved; assign a rating on progress for each outcome; make recommendations from the areas marked as “Not on target to be achieved” (red).

**Table. Progress Towards Results Matrix (Achievement of outcomes against End-of-project Targets)**

Project Strategy	Indicator <sup>21</sup>	Baseline Level <sup>22</sup>	Level in 1 <sup>st</sup> PIR (self-reported)	Midterm Target <sup>23</sup>	End-of-project Target	Midterm Level & Assessment <sup>24</sup>	Achievement Rating <sup>25</sup>	Justification for Rating
<b>Objective:</b>	Indicator (if applicable):							

<sup>21</sup> Populate with data from the Logframe and scorecards

<sup>22</sup> Populate with data from the Project Document

<sup>23</sup> If available

<sup>24</sup> Colour code this column only

<sup>25</sup> Use the 6 point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

<b>Outcome 1:</b>	Indicator 1:							
	Indicator 2:							
<b>Outcome 2:</b>	Indicator 3:							
	Indicator 4:							
	Etc.							
<b>Etc.</b>								

**Indicator Assessment Key**

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved
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In addition to the progress towards outcomes analysis:

- Compare and analyse the GEF Tracking Tool at the Baseline with the one completed right before the Midterm Review.
- Identify remaining barriers to achieving the project objective in the remainder of the project.
- By reviewing the aspects of the project that have already been successful, identify ways in which the project can further expand these benefits.

**iii. Project Implementation and Adaptive Management**

Management Arrangements:

- Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
- Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement.
- Review the quality of support provided by the GEF Partner Agency (UNDP) and recommend areas for improvement.

Work Planning:

- Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.
- Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?
- Examine the use of the project’s results framework/ logframe as a management tool and review any changes made to it since project start.

Finance and co-finance:

- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.



- Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?
- Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans?

#### Project-level Monitoring and Evaluation Systems:

- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?

#### Stakeholder Engagement:

- Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?
- Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?

#### Reporting:

- Assess how adaptive management changes have been reported by the project management and shared with the Project Board.
- Assess how well the Project Team and partners undertake and fulfil GEF reporting requirements (i.e. how have they addressed poorly-rated PIRs, if applicable?)
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

#### Communications:

- Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?
- Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)
- For reporting purposes, write one half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits.

#### **iv. Sustainability**

- Validate whether the risks identified in the Project Document, Annual Project Review/PIRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why.
- In addition, assess the following risks to sustainability:

##### Financial risks to sustainability:

- What is the likelihood of financial and economic resources not being available once the GEF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?

##### Socio-economic risks to sustainability:

- Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?

##### Institutional Framework and Governance risks to sustainability:

- Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.

##### Environmental risks to sustainability:

- Are there any environmental risks that may jeopardize sustenance of project outcomes?

#### **Conclusions & Recommendations**

The MTR team will include a section of the report setting out the MTR's evidence-based conclusions, in light of the findings.<sup>26</sup>

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<sup>26</sup> Alternatively, MTR conclusions may be integrated into the body of the report.

Recommendations should be succinct suggestions for critical intervention that are specific, measurable, achievable, and relevant. A recommendation table should be put in the report's executive summary. See the *Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects* for guidance on a recommendation table.

- ❖ Lessons learned; The midterm evaluation is expected to extract lessons and successes of the program

The MTR team should make no more than 15 recommendations total.

### Ratings

The MTR team will include its ratings of the project's results and brief descriptions of the associated achievements in a *MTR Ratings & Achievement Summary Table* in the Executive Summary of the MTR report. See Annex E for ratings scales. No rating on Project Strategy and no overall project rating is required.

**Table. MTR Ratings & Achievement Summary Table for (Promoting Sustainable Rural Energy Technology for Household and Productive Uses Project)**

Measure	MTR Rating	Achievement Description
<b>Project Strategy</b>	N/A	
<b>Progress Towards Results</b>	Objective Achievement Rating: (rate 6 pt. scale)	
	Outcome 1 Achievement Rating: (rate 6 pt. scale)	
	Outcome 2 Achievement Rating: (rate 6 pt. scale)	
	Outcome 3 Achievement Rating: (rate 6 pt. scale)	
	Etc.	
<b>Project Implementation &amp; Adaptive Management</b>	(rate 6 pt. scale)	
<b>Sustainability</b>	(rate 4 pt. scale)	
<b>TIMEFRAME</b>	<b>ACTIVITY</b>	
<i>Sept 01, 2018</i>	Application closes	
<i>Sept 24, 2018</i>	Select MTR Team	

### 6. TIMEFRAME

The total billable days will be 30 working days however the consultant will be given maximum of approximately working 60 days to conclude the MTR over a time period of 8 weeks starting on September 2018, and shall not exceed five months from when the consultant(s) are hired. The tentative MTR timeframe is as follows:

<i>Sept. 30, 2018</i>	Prep the MTR Team (handover of Project Documents)
<i>October 3-6, 2018 4 days</i>	Document review and preparing MTR Inception Report
<i>October 17-20, 2018 4 days</i>	Finalization and Validation of MTR Inception Report- latest start of MTR mission
<i>October 24 – November 15, 2018 (15 days)</i>	MTR mission: stakeholder meetings, interviews, field visits
<i>November 22, 2018</i>	Mission wrap-up meeting & presentation of initial findings- earliest end of MTR mission
<i>November 23-31, 2018 (7 days)</i>	Preparing draft report
<i>December 01-02, 2018 (2 days)</i>	Incorporating audit trail from feedback on draft report/Finalization of MTR report (note: accommodate time delay in dates for circulation and review of the draft report)
<i>December 08, 2018</i>	Preparation & Issue of Management Response
<i>NA</i>	(optional) Concluding Stakeholder Workshop (not mandatory for MTR team)
<i>December 14, 2018</i>	Expected date of full MTR completion

**Options for site visits should be provided in the Inception Report.**

## 7. MIDTERM REVIEW DELIVERABLES

#	Deliverable	Description	Timing	Responsibilities
1	<b>MTR Inception Report</b>	MTR team clarifies objectives and methods of Midterm Review	No later than 2 weeks before the MTR mission: (Sep. 17, 2018)	MTR team submits to the Commissioning Unit and project management
2	<b>Presentation</b>	Initial Findings	End of MTR mission: (Oct. 22, 2018)	MTR Team presents to project management and the Commissioning Unit

3	<b>Draft Final Report</b>	Full report (using guidelines on content outlined in Annex B) with annexes	Within 3 weeks of the MTR mission: (Oct. 31, 2018)	Sent to the Commissioning Unit, reviewed by RTA, Project Coordinating Unit, GEF OFP
4	<b>Final Report*</b>	Revised report with audit trail detailing how all received comments have (and have not) been addressed in the final MTR report	Within 1 week of receiving UNDP comments on draft: (Nov. 08, 2018)	Sent to the Commissioning Unit

\*The final MTR report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

## 8. MTR ARRANGEMENTS

The principal responsibility for managing this MTR resides with the Commissioning Unit. The Commissioning Unit for this project's MTR is UNDP Ethiopia Country Office.

The commissioning unit will contract the consultants and ensure the timely provision of per diems and travel arrangements within the country for the MTR team. The Project Team will be responsible for liaising with the MTR team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

### 9. ToR ANNEX A: List of Documents to be reviewed by the MTR Team

1. PIF
2. UNDP Initiation Plan
3. UNDP Project Document
4. UNDP Environmental and Social Screening results
5. Project Inception Report
6. All Project Implementation Reports (PIR's)
7. Quarterly progress reports and work plans of the various implementation task teams
8. Audit reports
9. Finalized GEF focal area Tracking Tools at CEO endorsement and midterm *(fill in specific TTs for this project's focal area)*

10. Oversight mission reports
11. All monitoring reports prepared by the project
12. Financial and Administration guidelines used by Project Team

The following documents will also be available:

13. Project operational guidelines, manuals and systems
14. UNDP country/countries programme document(s)
15. Minutes of the Promoting Sustainable Rural Energy Technology for Household and Productive Uses Project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
16. Project site location maps

## Annex 11: Signed UNEG Code of Conduct form For Consultants

### Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

### MTR Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: **CLIFF BERNARD NUWAKORA AND DR. GETACHEW ESHETE BEYENE**  
**INTERNATIONAL CONSULTANT** **NATIONAL CONSULTANT**

**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**

Signed at Kampala 15<sup>th</sup> November, 2018

Signature:

