

Terminal Evaluation Review form, GEF Independent Evaluation Office, APR 2016

1. Project Data

Summary project data			
GEF project ID		4005	
GEF Agency project ID		GF/IVC/12/005	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNIDO	
Project name		Promoting renewable energy based grids in rural communities for productive uses in Côte d'Ivoire	
Country/Countries		Côte d'Ivoire	
Region		Africa	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		SP3-Promoting Market Approaches for Renewable Energy	
Executing agencies involved		Ministry of Mines and Energy	
NGOs/CBOs involvement		Akwaba Foundation - partner	
Private sector involvement		CI Energies – co-financier and project partner	
CEO Endorsement (FSP) /Approval date (MSP)		April 4, 2012	
Effectiveness date / project start		May 2012	
Expected date of project completion (at start)		February 2014	
Actual date of project completion		June 2016	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0.05	0.05
	Co-financing	0.05	0.05
GEF Project Grant		0.86	0.86
Co-financing	IA own	0.15	0.35
	Government	0.73	0.65
	Other multi- /bi-laterals		2.84
	Private sector	3.0	0.17
	NGOs/CSOs		0.04
Total GEF funding		0.91	0.91
Total Co-financing		3.93	4.04
Total project funding (GEF grant(s) + co-financing)		4.84	4.96
Terminal evaluation/review information			
TE completion date		August 2016	
Author of TE		UNIDO Project Manager	
TER completion date		February 2, 2017	
TER prepared by		Punji Leagnavar	
TER peer review by (if GEF IEO review)		Molly Watts	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes		S	S	MS
Sustainability of Outcomes		ML	ML	MU
M&E Design		S	S	MS
M&E Implementation		S	S	S
Quality of Implementation		S	S	S
Quality of Execution		-	---	MU
Quality of the Terminal Evaluation Report		-	---	S

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The overall objective of the project is to develop a market-based approach for improving the access to PV based mini grids in rural areas. (CEO Endorsement, p.1)

3.2 Development Objectives of the project:

The specific goal of the project was to: “support PV installations in Ivory Coast by assisting the government to create institutional, policy and financial mechanisms that advocate and support to design a model for public-private partnerships, which could then be utilized to stimulate the use of PV solar grids in Ivory Coast” (TE, p.7)

Project outcomes were:

- An effective, market-oriented policy and regulatory framework to stimulate investments in RE
- A portfolio of RE energy projects prepared for pilot PPP investments during and post GEF-project
- Reduced GHG emissions and increased access to rural electrification following increased awareness and technical capabilities of stakeholders to evaluate technical and commercial viability of photovoltaic based mini grids and reduced barriers to development of businesses in renewable energies

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

The project was not able to secure the USD 3 million from BOAD Banque, and had to find a new donor to agree to co-finance project activities. It was able to secure funds from an EU program for about the same amount (USD 2.8 million), and because it had to work within the objectives of that program, the project shifted its approach to Outcome 3. The Outcome remained the same, but the core activities changed. It moved from a market-based approach to a community-based approach. In the originally planned market-based approach, the project wanted to deploy activities with enterprises and companies, and foster a decentralized energy market. The

project instead took on a community-based approach to institutionalizing renewable energy and shifted its activities to building the capacity of villagers to understand renewables and creating community institutions to manage them.

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 Relevance	Rating: Satisfactory
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Relevance to national objectives: The Government of the Ivory Coast has realized that national energy consumption is expected to rise exponentially in the coming years and their energy infrastructure is engrained in economic and development goals. To confront these growing needs, the government has enacted many initiatives (special government bodies, policies, plans, etc.) that aim to grow the market for renewables. Some of these national initiatives include: National Committee for Solar Energy, Directorate of New and Renewable Energy, and law Articles 8 and 30 on solar PV. Enforcing these policies and developing supportive policies is essential to attract private investments for renewables, which is pivotal to scaling up the sector. This project aimed to do just this.

Relevance to beneficiaries: The project was relevant to beneficiaries because energy is not distributed to many of the rural parts of the country. The project aimed to fill the energy gap in many rural communities and also to address the development needs of the 11 communities the project worked with.

Relevance to the GEF: The project supported the GEF Strategic Program, SP3-Promoting Market Approaches for Renewable Energy. It aimed to increase and strengthen the market for renewables in rural areas, and areas that are not connected to electric grids.

4.2 Effectiveness	Rating: Moderately satisfactory
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The TER provides an effectiveness rating of *moderately satisfactory* due to the project's difficulty in meeting the original project outcomes, but recognizing project achievements and adaptive management. This rating revises the TE's rating of *satisfactory* downwards. The primary aim of the project was to remove the institutional, technical, knowledge and awareness-related barriers to the

promotion of a market approach for renewable mini grid systems in rural areas. As noted above, component 3 of the project was amended after a new cooperation began with an EU-funded project. The new cooperation allowed the project to achieve its goal of conducting technical demonstrations, despite the fact that the originally planned co-financing did not materialize. The project showed that it was able to be fluid and flexible when it was not able to meet its co-financing objectives. However, because the new donor (EU) wanted to work on community-based approaches to renewables, the project had to move away from its original approach of working directly with energy markets.

Outcome 1: An effective, market-oriented policy and regulatory framework to stimulate investments in renewable energy.

Outcome 1 was successfully accomplished with almost all of the outputs and output targets achieved. The project created several regulatory frameworks for the Government of the Ivory Coast, namely national stakeholder mapping, developing models for PPPs and creating local authorities' frameworks for strengthening RE in rural areas. Although the governance components of this outcome was realized, the project struggled to train policy makers, financial institutions and private sector representatives on RE investments. This was one of the project's big shortcomings, and was due to the fact that the project could not mobilize co-financing (TE, p.19).

Outcome 2: A portfolio of renewable energy projects prepared for pilot PPP investments during and post-GEF project.

Outcome 2 was also well executed according to the defined objectives. The project delivered a portfolio of PPP investments to the Government. The project identified new project sites for renewable energy, and pre-feasibility studies (the project was able to develop 11 sites instead of 10 targeted).

Outcome 3: Reduced GHG emissions and increased access to rural electrification following increased awareness and technical capabilities of stakeholders to evaluate technical and commercial viability of photovoltaic-based mini grids and reduced barriers to development of businesses in renewable energies. (*altered after the EU partnership*)

Outcome 3 was the most altered due to the lack of co-financing the project experienced. Despite the drawback, the project tried to realize some of the redefined outputs after the intervention from the EU. However, it was not able to fully meet all of its outputs and output targets; these include: feasibility studies (this activity was removed during the alteration because the EU project already had them), installing PV mini grids (the project installed 215kW instead of 350 kW), electricity provision for the Zanzan region (the project provided it to 4,000 people, instead of 8,750 – ~45% of the initial target), and training of local officers and private sector to be RE service providers (the project changed its beneficiaries for this and trained local villagers instead).

4.3 Efficiency	Rating: Moderately satisfactory
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The project experienced many challenges that ultimately affected the efficiency of the project to deliver on time. For this reason, the efficiency rating is *moderately satisfactory* (the TE rated it as *satisfactory*). The first was that in 2014, a project partner failed to honor the co-financing agreement and the management team had to find other donors in order to complete the project and achieve the Outcomes. The toughest area was Outcome 3 which had to be modified to fit within the donor's (EU) objectives. The project was extended for 1 year because of the change of direction and the logistical problems that it posed. One problem mentioned was that importing RE materials into the country took a lot longer than expected. Another challenge were time delays caused by slow communication between the IA and EA, something that could have been easily managed. These delays infringed on the project activities and ultimately decreased the project's efficiency.

There were no other efficiency problems related to cost or cost management.

4.4 Sustainability	Rating: Moderately unlikely
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The project rating for sustainability is *moderately unlikely*, which is lower than the TE's rating of *moderately likely*. This is because at the time of closing, there had not been any financial commitment to continue project activities or strengthen the regulatory or governance framework that can propel the project forward. The following is an overview of each sustainability dimension:

Financial: The financial sustainability of the project is moderately unlikely. The Government has not committed to project funds after the project has ended. However, the EU partnership has opened the door for some of the project activities to continue beyond its lifetime. Some EU financing modalities that could scale up and continue the project are the 'Programme d'Appui a la Promotion des Energies Renouvelables et l'Efficacite Energetique en Coted'Ivoire', working towards developing RE within government agencies. However, nothing has been committed by the EU.

Socio-political: The TE found that there was a positive outlook for the sustainability of the project (particularly the Zanzan community-based mini grids) among the communities involved. The significant capacity building of the local officials and community leaders is an approach that will likely continue after the project end. However, the TE does not remark on the socio-political dimension in the other project sites, and the project activities there did not integrate a community-based approach; only the installation of equipment. As with many solar PV projects, the continuation of the technologies is contingent upon the upkeep and maintenance of the equipment. Without proper life-cycle approaches implemented with the community, it will be unlikely that it continues long after the project ends (p.38).

Institutional framework and governance: The TE found that the Government had yet to enact or adopt any of the policies or studies that the project conducted. Without embedding those feasibility studies, PPP models and RE frameworks into existing law or processes, the project loses its impact and reduces

the chance of institutional and governance sustainability. Alternatively, although sustainability for the institutional framework on the national level seems moderately unlikely, the institutional framework among communities in the Zanzan region is highly likely. This is because there was a high sense of ownership and governance approaches were anchored into the local legal systems.

Environment: There were no environmental risks noted. The project results contribute to a better environment.

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

The project had issues meeting the co-financing that was promised at the CEO Endorsement. The West African Development Bank (BOAD) had committed about USD 3,000,000 but it was not mobilized. The TE notes that this had implications on Project Component 3 (Technology demonstration and creation of awareness and technical capacities). Knowing this, in 2013 UNIDO pursued a cooperation with the EU Akwaba project to complete the demonstration projects for this component. This resulted in the project being extended for 1 year.

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

There were delays at the start of the project and during implementation. The delays were the result of redesigning of the project due to co-financing problems and also due to the slow communication between the EA and IA. The project had to be extended for 1 year due to these delays, and it resulted in the project not being able to achieve its initial goals for technology demonstration and awareness building (Outcome 3).

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

The sense of ownership from the local villages was high, and it was because the project built a community-based approach into its framework. For example, the project developed local associations that were in charge of monitoring, and managing (financial management as well) the solar installations. This seemed to have fostered a sense of shared responsibility that contributed to some of the success of Outcome 3.

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 M&E Design at entry	Rating: Moderately satisfactory
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There were some problems with the M&E design at the entry of the project, albeit, minor errors. The M&E framework did not include monitoring plans or indicators that would help to assess impact, something that the TE noted was a requirement of the GEF. As well, the results framework did have some areas where the outcomes are missing. Another weakness of the design is that some of the indicators do not appropriately match what the outcome/output is trying to achieve. One example of this is that Outcome 3 is 'Reduced GHG emissions and increased access to rural electrification following increased awareness and technical capabilities of stakeholders to evaluate technical and commercial viability of photovoltaic based mini grids and reduced barriers to development of businesses in renewable energies'. Nowhere in the indicators is there an indicator on reduced GHG, or a target on GHG reductions. The TE noted that the budget for the M&E framework was appropriate and adequate, with a budget of USD 71,000.

6.2 M&E Implementation	Rating: Satisfactory
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The M&E implementation was completed in a satisfactory way. Of its strengths, the project showed adaptive management because the project shifted its focus and results framework in 2013 due to lack of co-financing. In addition, the TE found that the project completed the PIRs accurately and developed progress letters to the EA that were clear and concise. One drawback that was mentioned was that at the time of the TE, there was no way to verify the quality of the monitoring of long-term impact, something that was a requirement of the project and was budgeted for.

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 Quality of Project Implementation	Rating: Satisfactory
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The TE rated the quality of project implementation as *satisfactory*, agreeing with the rating provided by the TER. UNIDO was able to show its ability to be flexible and adaptive after realizing it wasn't going to receive financing for specific activities. It showed an ability to also be resourceful and seek other sources of financing with a partner that was conducting similar activities in the country.

In regards to project oversight and management, the project documents indicate that UNIDO managed the project well and efficiently. There did not seem to be problems related to staffing, disbursements or approvals.

7.2 Quality of Project Execution	Rating: Moderately unsatisfactory
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This TER's rating for the quality of project execution for the Ministry of Petroleum and Energy is *moderately unsatisfactory*. The TE does not provide a rating for project execution, but notes that the participation of the national government has been mixed and that there have been repeated delays due to lags in response time from the Ministry concerning the project. The UNIDO team often sent the Ministry paperwork to be approved, decisions to be made concerning project details, financial information, etc. and the Ministry would not reply. This led the project to experience delays that ultimately made it less efficient. As well, the government was not able to mobilize the co-financing it promised at the start of the project (TE, p.19).

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The project installed 215 kW of PV and connected 728 households to PV mini-grids. Although uncalculated, the project was probably able to reduce GHG emissions from those household substituting diesel generated energy with PV electricity (TE, p.20).

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The TE noted that the project could present some positive impacts for women in the villages that had installed electricity. Before the electrification, the women in the villages grinded cereal manually or they sold grains at the market. The processing machines that can be installed can increase the value of their grains, and the output can be maximized, and cereal can be preserved better. This results in higher profits for those women (TE, p.28).

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. “Capacities” include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. “Governance” refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

a) Capacities – As the project involved technical trainings and awareness-raising activities, it was able to bring about some impacts concerning increased capacities. The TE stated: “project has had an important and significant impact on local awareness levels, knowledge levels and management capacity levels. These elements include the strong design of the community-based approach by the project partners; the extensive information, awareness raising and consultation carried out in Zanzan during the preparatory phase; and, the significant focus on the provision of capacity building and technical training.” (TE, p.35)

b) Governance – The first Outcome of the project was the delivery of policies and frameworks for off-grid renewables in the Ivory Coast. The project documents indicate that the outputs (drawing up frameworks, feasibility studies, etc.) were achieved, however the TE does also note that the extent to which they made an impact are unclear as the Government had yet to implement any of the guidance it was given.

8.4 Unintended impacts. Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

Originally the project was not intending to work in the Akwaba region on community-based mini grid activities. It was supposed to implement a more market based approach to renewables. However, the community-based models were one of the project’s greatest successes and the impact it had was that communities developed a new sense of governance (community councils that managed the PV systems), built knowledge and capacities (TE, p.48).

8.5 Adoption of GEF initiatives at scale. Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

There were no broader adoption initiatives that were documented.

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report that could have application for other GEF projects.

There were several lessons presented in the TE (TE, p.41)

- Regulatory confusion (regarding PV mini grids) can hinder future development and a future market
- Lack of co-financing or the failure to mobilize co-financing reduces the speed and quality of project implementation
- Delays and a lack of response from the government concerning the project are reflective of the priority of the project; this raises questions about the government's vision for renewables and if it finds that renewables are important to its national strategies
- There was a lot of interest from other government ministries (such as Ministry of Agriculture and Rural Development), so projects shouldn't be so insular when working with ministries

9.2 Briefly describe the recommendations given in the terminal evaluation.

The TE presented several recommendations, below:

- UNIDO and the EU Akwaba should maximize the learned lessons from the project by implementing ongoing M&E systems
- Look into the development impact of the demonstration sites and what can be maximized; these can be maximized for the wider development impact
- Strengthen the regulatory environment for renewables; in order to do this, a consultation forum should be established between the Government, donor stakeholders and other development actors on this issue
- UNIDO should mediate a dialog between all Ministries interested in the project and renewable energy in a broader sense

- Refine the project design for the Zanzan demonstration sites and see its suitability for scaling across the country

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	GEF IEO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The report was robust and comprehensive and provided a good contextual narrative concerning the outcomes and the failures and achievements of the project	S
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report is consistent and there is evidence provided by the author concerning how ratings were chosen; however, this TER found that the ratings were more positive than they should have been and the UNIDO TE was not as critical as it could have been in critiquing project shortcomings.	MS
To what extent does the report properly assess project sustainability and/or project exit strategy?	Good assessment of sustainability, with all dimensions carefully discussed	S
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	Lessons learned were robust and also were supported by evidence	S
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The TE gives a revised budget (p.6), without a breakdown of costs spent. It provides that breakdown for the budget at time of CEO Endorsement	S
Assess the quality of the report's evaluation of project M&E systems:	Good assessment of project design, however, it could have discussed at greater length M&E implementation	S
Overall TE Rating		S

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).