

Terminal Evaluation Review form, GEF Evaluation Office, APR 2014

1. Project Data

Summary project data			
GEF project ID		28	
GEF Agency project ID		1352	
GEF Replenishment Phase		GEF-2	
Lead GEF Agency (include all for joint projects)		UNDP	
Project name		Renewable Energy Based Small Enterprise Development in the Quiche Region of Guatemala	
Country/Countries		Guatemala	
Region		LAC	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		OP-6: Promoting the adoption of renewable energy by removing barriers and reducing implementation costs	
Executing agencies involved		Fundación Solar	
NGOs/CBOs involvement		Lead executing agency	
Private sector involvement		One of the beneficiaries	
CEO Endorsement (FSP) /Approval date (MSP)		10/27/1999	
Effectiveness date / project start		07/01/2000	
Expected date of project completion (at start)		N/A	
Actual date of project completion		04/04/2002	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding	0.025	0.025
	Co-financing		
GEF Project Grant		0.383	0.383
Co-financing	IA own		
	Government		
	Other multi- /bi-laterals	0.373	

	Private sector		
	NGOs/CSOs		
Total GEF funding		0.408	0.408
Total Co-financing		0.373	U/A
Total project funding (GEF grant(s) + co-financing)		0.781	U/A
Terminal evaluation/review information			
TE completion date	07/2002		
TE submission date	07/2002		
Author of TE			
TER completion date	01/13/2015		
TER prepared by	Sean Nelson		
TER peer review by (if GEF EO review)	Joshua Schneck		

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF EO Review
Project Outcomes	N/R	N/R	N/R	U/A
Sustainability of Outcomes	N/R	N/R	N/R	U/A
M&E Design	N/R	N/R	N/R	MS
M&E Implementation	N/R	N/R	N/R	U/A
Quality of Implementation	N/R	N/R	N/R	U/A
Quality of Execution	N/R	N/R	N/R	MU
Quality of the Terminal Evaluation Report	-	-	N/R	U

3. Project Objectives

3.1 Global Environmental Objectives of the project:

According to the Project Document's (PD), the project's main GEO was to lower CO₂ emissions in the Zonapaz, which was the “peace zone” made up of formerly hostile areas during Guatemala's civil conflict. This was to occur through expanded adoption of renewable energy technologies. The PD estimates that over 20 years, this project would displace between 6,149 tC and 7,684 tC. El Quiché, which overlaps with the Zonapaz and is the focus region for this project, had one of the lowest electrification rates in Guatemala as of the Project Document's (PD) writing. The Guatemalan government had recently written a national rural electrification plan. A rural electrification fund was part of this plan. This project aimed to demonstrate that sustainable financial instruments could reduce barriers to adopting renewable energy as part of the national rural electrification plan. According to the PD, small-scale renewable energy “projects are the most cost effective option (although still expensive) for energy supply in the context of energy service in rural populations in the Quiché Region” (PD, p. 6).

3.2 Development Objectives of the project:

As stated in the PD, the Development Objective was to promote renewable energy and reduce financial barriers to renewable energy adoption in the Zonapaz. The project aimed to remove institutional and financial barriers to using renewable energy technologies. Small renewable energy service enterprises would provide renewable energy services on the local level in rural areas, which would promote economic self-empowerment in local areas.

The project had the following four components:

- 1) Creating and enacting innovative financing schemes and social organization set-ups to enable renewable energy businesses in the Zonapaz
- 2) Provide training to local stakeholders in order to improve local knowledge about renewable energy and to promote renewable energy business development
- 3) Support improving the evaluation capacity of local developers and financial institutions. This will foster a stronger pre-investment assessment capacity.
- 4) Use renewable energy to mitigate and displace CO2 emissions from the following sources: candles, kerosene lamps and biomass fuel.

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

The TE does not mention any changes to the GEOs or the DOs

4. GEF EO 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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The project is relevant to the GEF under OP-6: Promoting the adoption of renewable energy by removing barriers and reducing implementation costs. The project explicitly aims to remove barriers to adopting renewable energy in the Zonapaz and making renewable energy relatively more affordable. In addition, this project is in line with the Guatemalan government's goals laid out in the national rural electrification plan, including the rural electrification fund. The project also aimed to mobilize funding from the Guatemalan government and the European Union (EU) for further renewable energy project funding. El Proyecto Quiché, the Guatemalan government's socioeconomic development program aimed at promoting local enterprises, especially among the ethnic minority descendants of Mayans in the region, was also supported by the EU. The GEF project was linked to El Proyecto Quiché.

4.2 Effectiveness	Rating: Unable to Assess
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Note: The TE briefly acknowledges the project design in the PD, including the project components. However, it never addresses whether these components were executed and expected goals achieved. Instead, the TE addresses indicators never mentioned in the PD, such as the percentage of local families willing to send their girls to school, but ignores several major renewable energy-related indicators discussed in the PD. According to the TE, “the results that have been reached by the project do not include elements that permit a terminal evaluation since the effects on development and benefits that energy supply through a micro-hydro system can provide could not be measured” (TE, p. 60). The TE claims that financial barriers for renewable energy fell and that local communities were engaged regarding renewable energy, but the details given are vague or nonexistent. This suggests that some of the project’s objectives had been met, but the TE is not clear on this point. For this reason, the project's effectiveness cannot be properly assessed.

4.3 Efficiency	Rating: Unable to Assess
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Summary: The TE praises Fundación Solar's project management abilities, especially given that Guatemala, and the Zonapaz in particular, had just finished a time of extreme civil strife. This made engaging local communities difficult due to logistical barriers due to wartime infrastructure damage and suspicion between different groups in Guatemala. However, this was not a perfect experience. For instance, Fundación Solar's attempt to interpret technical studies for Chajul municipality may have added to the confusion and misunderstanding between groups. Discussions with the Nebaj and Cotzal municipal corporation produced no concrete results after 4 years of talks.

With this said, the TE does not address issues of time management, personnel management or financial management. For this reason, this section has been rated unable to assess.

4.4 Sustainability	Rating: Unable to Assess
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Summary: Despite the TE's positive assessment of Fundación Solar's abilities, the actual details provided suggest that it is not up to the task of making the project sustainable. In addition, the current political climate fostered an environment of distrust that threatened the project's future viability as it moved into the full project phase. Since it is unknown what the exact project results were, the project's results' sustainability cannot be properly assessed.

The project’s sustainability is assessed according the following 4 risk factors.

Environmental: **Unable to Assess**

The TE does not address environmental threats to project sustainability.

Sociopolitical: **Moderately Unlikely**

The low likelihood that these communities would become connected to the National Energy Supply Grid raised the incentives to embrace small-scale local renewable energy. While the central government remained committed to rural renewable energy development and electrification, post-civil war tensions between communities in the Zonapaz made coordination and cooperation difficult. The highly technical nature of renewable energy in particular exacerbated these problems.

Institutional: **Moderately Unlikely**

While Fundación Solar possessed a high degree of technical skill, it had not shown a high level of skill in engaging local communities and municipal governments. In fact, it had shown an ability to exacerbate local concerns over projects developed outside their communities. The TE notes that municipal governments felt that Fundación Solar had an “arrogant and impositive attitudes” (TE, p. 53).

Financial: **Moderately Unlikely**

The TE claims that “the project achieves particular results regarding the removal of financial barriers for implementing renewable energy projects to a great extent,” (TE, p. 55) but the evidence to back this up is vague. The TE claims there is a high level of local support, but the majority of the TE's discussion of local views suggests otherwise. In addition, EU support for the associated Quiché Program was set to end soon after the TE's writing. There was no plan in place for how to fill this funding gap. Last of all, the actual equipment used in demonstration projects has at times proved inadequate, which has threatened the viability of microenterprise growth based on promoting renewable energy. For instance, the photovoltaic systems used in demonstration projects in Pa'l and Santa Clara were inadequate to run the electrical equipment needed to promote local enterprise growth.

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 TE does not mention the level of co-financing used during the project.

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?

The TE does not directly mention if the project experienced delays or was finished on time.

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 Ministry of Energy and Mines showed support for the project through the Rural Electrification Program and the National Institute for Electrification (INDE). However, due to Fundación Solar's poor history of engagement with multiple municipal governments in the Zonapaz, municipal governments were often skeptical of the project and were wary of being part of it. According to the TE, the project suffered from “the meager participation of the municipality, which has become the greatest obstacle of the project” (TE, p. 58).

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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The TE does not provide a rating for M&E Design. This TER rates M&E Design quality as Moderately Satisfactory, based on the design of the M&E system detailed in the PD.

The indicators and goals provided in the PD are often SMART and clear. For instance, the PD expects that by the project's end, there will have been “at minimum 4 and maximum 8 renewable energy systems are fully operational within the project period of 2 years,” (PD, p. 8) which is a clear goal against which the project's experience could be measured. The design required a Mid-Term Review (MTR) to be carried out at the end of the project's first year, along with also requiring Tri-Partite Reviews (TPR). The UNDP Guatemalan office would be in charge of M&E. However, the PD did not mention a dedicated M&E budget. The baseline data for the without-project scenario was more qualitative than quantitative. The PD lacked provisions for collecting quantitative baseline data.

6.2 M&E Implementation	Rating: Unable to Assess
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The TE's discussion of the M&E process is unclear. The TE only references the MTR once in a footnote as the source for the phrase “in the first year of management the consolidation of the technical team was achieved” (TE, p. 9). The TE does not otherwise state the MTR's findings. For this reason, the M&E implementation process is rated unable to assess.

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: Unable to Assess
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The project design was thorough and written with a clear understanding of the sociopolitical and energy situation in Guatemala at the time. The design was appropriate given country needs at the time. The M&E design was adequate except for the lack of a clear dedicated M&E budget and providing for collecting baseline data. The main drawback is that choosing Fundación Solar as the executing agency may have negatively affected attaining project goals. These municipal governments are unsure of what benefit engaging with Fundación Solar, and by extension this project, brings. However, the TE does not directly address the performance of UNDP during the project. For this reason, this section is rated unable to assess.

7.2 Quality of Project Execution	Rating: Moderately Unsatisfactory
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The TE does not provide a rating for project execution. This TER rates project execution as Moderately Unsatisfactory, based on the evidence presented in the TE narrative.

The TE gives Fundación Solar high marks for its performance during the project, singling out the organization's technical expertise in particular for praise. However, when the TE actually addresses Fundación Solar's performance in clear terms, the TE identifies multiple problems. Fundación Solar's relationship with the municipal governments and communities in Chujal, Nebaj and Cotzal are not strong despite a long history of engagement. The TE also states that Fundación Solar's coordination skills were poor, noting that coordination problems hurt its relationship with Chujal, Nebaj and Cotzal. In addition, TE also states that Fundación Solar gave public opinions on local matters where stating an opinion publicly created tensions between different communities.

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 provided Photovoltaic Lighting Systems (PLS) to the Pa'l and Santa Clara community. This community saw its use of traditional fuels (ocote, kerosene and candles) fall. However, the TE does not provide a clear number for the total amount of this drop, but instead shows that the drop was statistically significant compared to control groups (TE, p. 48).

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.

While the project design expected that families that received PLS systems would generate enough electricity to help them open businesses, this failed for 90.57 percent of such families. In general, families that received a PLS from the project noted “that the system does not let them have much more than a radio, three light bulbs and scarcely a TV” (TE, p. 40). Families that received PLS systems did appear to have a statistically significant decrease in their incidence of eye redness, coughing and the common cold. This was possibly due to a lower rate of burning fossil fuels in or near the home (TE, p. 51).

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

The project trained a local energy promoter and a nursing assistant to work in local health centers (TE, p. 36). In addition, the project held 6 training sessions that trained 10 men and 8 women on topics like “rural credit, environment, energy policies, community organization and PLS's.” (TE, p. 55).

b) Governance

The TE does not provide any evidence of how the project directly affected governance in Guatemala and the Zonapaz.

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.

Fundación Solar made public comments that alienated members of the local population. According to the TE, “this situation has gotten worse with other statements that could even be ill-intentioned” (TE, p. 53). The executing agency's poor engagement and coordination skills have helped to alienate members of the public and municipal governments in Chajul, Nebaj and Cotzal (TE, pp. 22-23).

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.

While it was still expected that the full project would be initiated, there is no evidence of any GEF initiatives brought to scale in the TE.

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.

The following are drawn from the “Inputs for Learned Lessons” section of the TE:

- 1) A project aimed at promoting renewable energy requires a different skill set than a project aiming to use renewable energy to foster local microenterprise growth. The latter requires greater local community engagement skills.
- 2) When a project aims to provide enough electricity to promote microenterprise development but then fails to produce enough electricity to do so, the project's failure actively discourages local entrepreneurs from embracing renewable energy.
- 3) Projects must not bypass municipal governments, but instead must engage them to ensure stakeholder buy-in and support.

- 4) Executing agencies in delicate and divided political environments must appear apolitical to be able to work with all relevant parties, otherwise they will be seen as partisan and untrustworthy by some stakeholders.

9.2 Briefly describe the recommendations given in the terminal evaluation.

The following are drawn from the “Recommendations” section of the TE:

- 1) The TE authors claim this is not a traditional TE since these project's results could not be measured. The GEF should commission a more traditional TE be written. They define this as “an ex-post evaluation process using the same instruments with the objective of being able to measure the effect indicators that address the fundamental objectives of the project” (TE, p. 60).
- 2) The project should stop postponing carrying out work in Chel. The project has already delivered equipment, but during the long wait before work has started, equipment and infrastructure have already become damaged, which will just get worse the longer time passes.
- 3) Fundación Solar should re-engage the Chajul Mayor to improve their working relationship so that the project can move forward there.
- 4) The Chajul Mayor has requested that the project “[give] preference in the payment of fees for beneficiaries who participated in the transportation of supplies.” The TE is skeptical of this claim, as “this can put the project at risk.” (TE, p. 60).
- 5) Fundación Solar's core mission for this project moving forward should be training stakeholders on electricity and lighting issues.
- 6) Fundación Solar should focus on providing schools and hospitals with lighting and electricity since any gains made here would have large spillover effects in terms of human development.
- 7) While statistics are useful, the project should take an ethnological approach to understanding local conditions in individual communities when statistical analysis alone is insufficient.
- 8) Building off of recommendation #7, the project should conduct a statistical and ethnological analysis of Chajul's experience with renewable energy through this project to be able to promote best practices elsewhere.
- 9) Fundación Solar should open a technical office in the areas around Ixil and Uspantán to ensure that any contingencies can be properly addressed.
- 10) The project should ensure that “periodical and horizontal communication between high-ranking authorities,” such as mayors, and Fundación Solar can be useful to keeping everyone informed and the project on track.

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 EO 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 TE lacks a section dedicated to assessing project objectives and outcomes. The TE is more devoted to discussing the process of its authors' evaluation work and what their consulting firm would have done on the project than actually analyzing what the project team actually accomplished during the project. The TE discusses indicators not discussed in the PD – percentage of families willing to send their girls to school, number of households with latrines, etc. – while ignoring relevant indicators from the PD. The TE's claim for why it could not systematically assess the project's results like a traditional TE is unconvincing.	U
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The discussion of the individual villages is interesting. However, the TE never explicitly states what the objectives of the pilot phase actually were. It does not address when, why and how the project was divided into a pilot phase and a full project phase. The TE praises Fundación Solar's performance, but the evidence given to back up these claims are often too vague to always properly assess.	U
To what extent does the report properly assess project sustainability and/or project exit strategy?	The TE does not directly address project sustainability according to the GEF framework, but it does note opportunities and risks to the project moving forward.	MS
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned and the recommendations appear to be evidence-based. The exception is the assertion that the TE was unable to be a more traditional TE because of the difficulty of analyzing this project's results. Other TE writers have encountered difficulties in the field, but have been able to deliver a traditional TE despite these difficulties.	MS
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The TE does not include financial numbers or a breakdown of project costs or actual co-financing.	HU
Assess the quality of the report's evaluation of project M&E systems:	The TE does not provide a systematic appraisal of the M&E process and only mentions the MTR once in a footnote.	U
Overall TE Rating		U

Overall TE rating: $(0.3 * (2+2)) + (0.1 * (4+4+1+2)) = 1.2 + 1.1 = 2.3 = \text{Unsatisfactory}$

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

N/A