

Terminal Evaluation Review form, GEF Evaluation Office, APR 2013

1. Project Data

Summary project data			
GEF project ID		3928	
GEF Agency project ID		103025 and 103026	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNIDO	
Project name		Global Energy Assessment: Developing Policy Tools for Jointly Reducing Energy Poverty and Greenhouse Gas Emissions	
Country/Countries		Global	
Region		Global	
Focal area		Climate Change	
Operational Program or Strategic Priorities/Objectives		CC1- Promoting energy efficiency in residential and commercial buildings CC2- promoting energy efficiency in the industrial sector CC3- promoting market approaches for renewable energy CC4- Promoting sustainable energy production from biomass CC5- Promoting sustainable innovative systems for urban transport	
Executing agencies involved		International Institute for Applied Systems Analysis (IIASA)	
NGOs/CBOs involvement		Not involved	
Private sector involvement		one of the beneficiaries	
CEO Endorsement (FSP) /Approval date (MSP)		10/21/2009	
Effectiveness date / project start		03/23/2010	
Expected date of project completion (at start)		05/31/2011	
Actual date of project completion		06/30/2012	
Project Financing			
		At Endorsement (US \$M)	At Completion (US \$M)
Project Preparation Grant	GEF funding		
	Co-financing		
GEF Project Grant		1.0	1.0
Co-financing	IA/EA own	0.5	0.5
	Government	1.26	1.35
	Other*	2.35	1.92
Total GEF funding		1.00	1.00
Total Co-financing		4.12	3.76
Total project funding (GEF grant(s) + co-financing)		5.11	4.76
Terminal evaluation/review information			
TE completion date		12/01/2012	
TE submission date			
Author of TE		Dr. Andrew Yager	
TER completion date		01/30/2014	
TER prepared by		Nelly Bourlion	
TER peer review by (if GEF EO review)		Joshua Schneck	

*Includes contributions mobilized for the project from other multilateral agencies, bilateral development, cooperation agencies, NGOs, the private sector, and beneficiaries.

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF EO Review
Project Outcomes	S	S	S	S
Sustainability of Outcomes	L	L	L	L
M&E Design	N/A	HS	N/A	S
M&E Implementation	N/A	HS	N/A	S
Quality of Implementation	N/A	HS	S	S
Quality of Execution	N/A	N/A	N/A	UA
Quality of the Terminal Evaluation Report			Not rated	MS

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The Global Energy Assessment (GEA) is a multi-year and multi-stakeholder activity that aims to help decision makers address the challenges of providing energy services for sustainable development throughout the world. This project uses the GEA as a knowledge platform upon which to develop specific analytical tools to assist decision makers. Specifically, this project is meant to support the development of policy options and analytical tools aimed at informed decision-making to support scaling-up of low carbon energy technologies, achievement of reductions in greenhouse gas emissions, and the reduction of energy poverty. Therefore, the global environmental objective of this project is ultimately to reduce GHG emissions.

This project will focus on access to sustainable electricity, and to cooking and heating fuels for buildings and transportation in developing countries. The challenge is how to achieve access while reducing GHG emissions. The project will explore how to meet this challenge with a combination of energy efficiency and renewable energy solutions, including solar, wind, biomass, geothermal and ocean energy for power generation, modern biofuels, solar heaters and heatpumps in the buildings sector, and sustainable biofuels and other CO₂-free energy carriers for transportation.

3.2 Development Objectives of the project:

This project would support the development of policy options and analytical tools aimed at informed decision-making to support scaling-up of low carbon energy technologies, achievement of reductions in greenhouse gas emissions, and the reduction of energy poverty. The project supported production of two substantive reports on modern energy access and transformative energy pathways, two web-based energy analysis tools, including a database and user manuals, and the conduct of one sub-regional and two national workshops. In addition, the project contributed to four chapters of the Global Energy Assessment.

This project had three components:

- (1) Policy tools for improving energy access. Outcome: Dissemination of the analytical tools generated by the GEA project

- (2) Technical analysis for improving energy access. Outcome: Providing a better understanding of key outcomes of the GEA (technology, TT, policy instruments) to serve future GEF programming.
- (3) Interactions with policy makers in developing countries. Outcome: Establish a dialogue to disseminate policy tools and GEA activities

This project would lead to the adoption of GEA-recommended policies in most LDCs and by foreign aid agencies in developed countries. It was further envisaged that GEA results would be used in the forging of multi-lateral environmental agreements (e.g., UNFCCC).

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

No change was reported.

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 consistent with GEF-4 Climate Change Focal Area Strategy, including strategic programs CC-SP1 through CC-SP5. The project provides data that will help GEF establish decision criteria for future project selection. For example, by assessing the cost, efficiency, technical capabilities, and possible applications of technologies, both currently available and next - generation, the project clarifies which technologies are best suited to GEF interventions and elucidates what are some of the barriers to deployment of new energy technologies.

The project is aligned with country priorities: discussions with African policy makers asserted the relevance of the project for policy formulation. The project would contribute to creating a better understanding among decision makers of key technologies, technology transfer issues, policy instrument choices and major sustainable development issues.

4.2 Effectiveness	Rating: Satisfactory
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All planned tasks were completed: (1) scenario tools were produced and introduced to policy-makers in workshops, (2) four GEA chapters were written, (3) targeted manuscripts on modern energy access and transformative pathways were published. However, the workshops were limited due to time and budget constraints. Therefore, the effectiveness of the project is rated as satisfactory.

The Global Energy Assessment explored several possible transformation pathways of the future global Energy System with the aim of assessing the technological feasibility as well as the economic implications of meeting a range of sustainable objectives simultaneously. The main outcome was to show that it is technically possible to achieve improved energy access, air quality, and energy security simultaneously while avoiding dangerous climate change. From a large ensemble of possible transformations, three distinct groups of pathways were identified and analyzed. The analysis done through the modeling work of the GEA, provided valuable insights of what is possible and what it takes to make these possible pathways a reality. The GEF supported work, therefore, was extremely influential in the overall GEA report and its findings. Under this GEF contract, a synthesis of this work and its results is provided in a report entitled “The Next Energy Transition: Transformative Pathways, Choices and Opportunities”.

In addition to the modeling work, three chapters provided the basis for a review of the progress to date, past policies and programs, and the development of future scenarios related to modern energy access. Under the project, a synthesis of this work is provided in a report with the title “Access to Modern Energy Access: Assessment and Outlook for Developing and Emerging Regions”. The objective of this report is to provide guidance on how to facilitate the achievement of universal access to clean combusting cooking fuels and stoves, and rural electrification by 2030. This work is complemented by two inter-active web-based tools, which have been developed in support of this study.

Two web-based analytical tools were developed; (1) the IIASA Energy Access Tool (Energy-ENACT); and (2) the IIASA Energy-Multi Criteria Analysis Tool (ENE-MCA) including the GEA Scenario Database. The primary utility of Energy-ENACT is to provide advice to policy makers while visualizing costs and benefits that each policy or combination of policies offers. The ENE-MCA is designed to assist national policy makers in their strategic policy planning processes. It aims at adding some analytical rigor and objectivity to the concept of energy sustainability and to do this in such a way that the specific needs and priorities of the decision maker are considered. The GEA scenario database aims at documenting results and assumptions of the GEA transformation pathways. The database serves as a central data-repository for the dissemination of GEA scenario information. Those outputs of the GEF supported project are helpful to decision makers and policy specialists for visualizing costs and benefits of specific policy choices and their impacts.

Three workshops were held to present the tools developed under the project. Due to budget and time constraints, it was determined to limit the number of workshops and while ensuring that they

are geographically diverse. The target audiences included policy makers ranging from LDCs to emerging economies thus envisioning contrasting energy policies and social realities. The workshop locations also considered areas where UNIDO has development activities.

Finally, a document on access to modern energy was created. It makes clear the importance of innovative financing and external financial support for the success of energy access programs

4.3 Efficiency	Rating: Satisfactory
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According to the TE “the cost effectiveness of this project could not be assessed in a quantitative fashion. The GEA objective was to address multiple global challenges simultaneously, a goal that could not be reached by multiple independent studies. In that sense, it can be regarded as cost effective by providing the benefits of undertaking several research initiatives with a single data set and coordination.”

The delays in the preparation of the GEA, upon which the project was based, resulted in the project being completed in June 2012. According to the TE, this was done at no additional cost to the GEF and with no loss of quality in the deliverables.

4.4 Sustainability	Rating: Likely
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The sustainability of this project is rated as likely. The global energy investments will continue to increase; the project provides policy guidance to ensure the judicious use of clean modern energy choices. The financial risk identified insufficient funding for the GEA as a concern, but sufficient funding was obtained to complete the GEA so that it provided a suitable platform for the successful implementation of the GEF project.

There are indications that the GEA is being widely used. One measure is the number of downloads of GEA outputs and the purchase of the GEA report. The recently adopted General Assembly Resolution on the Decade of Sustainable Energy for All 2014-2024 will utilize the project outputs and thus ensure the longevity of the products of this project. The project supported activities aimed at applying the knowledge from GEA to regional and national levels. According to the TE, in the near term (months–1 year) the GEA findings are being disseminated and reports are being made available to as wide of an audience as possible; then medium-term (1–4 years) spin-offs will make the information accessible and transparent for national and regional policy-makers while also providing opportunities for developing tools to support national policy-makers in designing energy roadmaps and for tracking national and global progress towards the SE4All goals. These dissemination activities are being undertaken by IIASA and other contributors to the GEA. The GEA Dissemination Advisory Committee also provides outreach and ensures sustainability of the outcomes emanating from the GEA.

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?

At the time of CEO endorsement, GEF support was intended to contribute about 20% of the total cost. By the time the GEA was published in June 2012, the total cost had reached USD 8.216 million. This included a contribution from IIASA in cash and in-kind of approximately USD 3.1 million. Hence, the USD 1 million GEF grant provided 12% of the final GEA production cost.

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?

One main delay that resulted in a project extension was reported during project implementation. In April 2011, IIASA sent UNIDO a request seeking a no-cost project extension to December 2011. This request was prompted by delays in the GEA report finalization which had repercussions on the implementation of key activities under the GEF funded project. A full revision of the project plan was conducted during May and June 2011, resulting in the preparation of a revised work plan. A further extension was granted to enable a series of three workshops to be conducted for the purpose of disseminating the project deliverables. Activities under the GEF project were essentially completed with the final workshop in June 2012.

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:

Unable to assess.

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: Satisfactory
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The TE rates M&E design as Highly Satisfactory, and states that "Monitoring of IIASA delivery was achieved in line with UNIDO standard monitoring procedures for institutional contracts." Because the budget for M&E was not specified in the PD, M&E design is rated as satisfactory.

According to the PD, the reporting will consist of two reports for GEA and web based and computer based tools. In addition, a final progress report will be prepared that includes a review of the project activities including workshops and meetings. IIASA will report its progress on a quarterly basis to UNIDO. A meeting will be held to discuss this progress and to suggest adjustments to the project execution, if needed.

The project will be ex-ante and ex-post evaluated by the UNIDO Quality Assurance Group. Self-evaluation of the GEA is of two kinds. First, the governance structure of the GEA includes a Council, responsible for ensuring the integrity, credibility, legitimacy, and relevance of the GEA. The Council provides informal feedback to the Executive Committee as the latter develops the written products the GEA and will endorse the final report and summary for policymakers. The Council is constituted so as to ensure that at the highest level a comprehensive range of energy interests and concerns are represented, ensuring ownership of the Assessment process and products by all key stakeholders. Second, there will be a formal peer review in the first quarter of 2010. The review process will be an independent, refereed review with the goal of ensuring quality and relevance of the scientific and technical advice in the written GEA products. The Council Co-Presidents will appoint expert reviewers with the needed expertise to provide comments on specific knowledge modules of the report. The Executive Committee will appoint the Review Editors whose task it will be to ensure that all review comments have been appropriately reflected in the revised report.

6.2 M&E Implementation	Rating Satisfactory
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While the TE rates M&E implementation as Highly Satisfactory, the TE fails to provide complete information on how funds were utilized. M&E implementation is therefore rated as Satisfactory. According to the TE, “following the revision of the project scope, a task-based work plan was defined with concrete outputs and a timeline”. The UNIDO Project Manager (PM) tracked progress towards the achievement of the milestones set in the work plan, and notified the GEF of any deviations. The PM monitored the progress of the main GEA process, trying to anticipate the repercussions that a delay in that process could affect the GEF project work plan, while keeping track of the main project goals. The PM ensured that transparent communications between stakeholders were made periodically. While both key challenges caused time delays, neither caused additional cost to the project.

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 quality of implementation can be rated as satisfactory. According to the TE, UNIDO provided all the human and financial resources required to assure the achievement of the project objectives. However, there is insufficient information in the TE on the specific role of UNIDO vis-à-vis IIASA.

UNIDO financially supported the GEA directly and by funding specific experts and activities in line with UNIDO's global role in the industrial energy sector. Beyond the issue of UNIDO's energy related standing and exposure, which was greatly enhanced by actively participating in the GEA, the GEA also provided UNIDO with an opportunity to collaborate on in-depth research into a range of different aspects concerning industrial energy use.

However, some issues arose. Thomas Johansson resigned as a GEA co-Chair in September 2011. Following an extraordinary meeting followed by consultative meetings of the GEA Council, the concerns raised by Thomas Johansson were addressed, in particular those related to ensuring integrity and credibility of the GEA. Mr. Johansson resumed his position as GEA Co-Chair in November 2011. The GEA Council maintained a strict progress control over the GEA process throughout this period. While the resignation had a minor impact on the timing of the release of the GEA report, it did not have a negative impact on the achievement of results. In fact, the TE mentions that "the persons interviewed during the evaluation suggested that the report quality had improved as a result of the even closer scrutiny of the content". The GEF CEO requested UNIDO to stop disbursement and report on the concerns raised, to provide a delivery plan, to conduct an evaluation and audit of the project. UNIDO provided evidence and responded to the entire request. The GEF Secretariat allowed the resumption of Disbursements in December 2011.

7.2 Quality of Project Execution	Rating: Unable to Assess
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There is no information in the TE about the quality of project execution. A description of IIASA is given but nothing is mentioned about the quality of its execution. Therefore, the quality of project execution cannot be assessed.

8. Lessons and recommendations

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

The key lessons identified in the TE are:

- Technical: Addressing multiple issues simultaneously provides as a way of identifying the linkages between the issues, and it generates economies of scale in funding the research of multiple topics.
- Stakeholder Engagement: While liaising with multiple stakeholders is a complex process which strengthens the quality of the scientific products, differences in opinions should not compromise the quality of the outputs. Also, communicating openly to all parties facilitates stakeholder management. While the situation that arose in this project execution is uncommon, it demonstrates that engagement is a key factor for project success.
- Project Management: Aligning the work plan to the changing realities in a project requires consensus building and flexibility

8.2 Briefly describe the recommendations given in the terminal evaluation.

The key recommendations as described in the TE are

- Continue building capacities. There is significant need to develop capacity building initiatives to make the material accessible to a wider audience by training practitioners in the design and delivery of energy initiatives. Dissemination of the results has begun with the three policymaker workshop undertaken in 2012, but further work is required. This is within the scope of UNIDO activities and can be undertaken by UNIDO and its development partners.
- Facilitate the use of web based tools. The workshop participants expressed a need for back-stopping support in the use of the web-based energy access tools. Setting up a chat room at IIASA would be an effective means to accomplish this task.
- Formulate technical cooperation projects. UNIDO played a seriously significant role in the design and execution of this initiative. It is important to catalyze on this experience and develop programmes to serve the Member States in energy use for industrial development, access, and low-carbon solutions for eradicating energy poverty. UNIDO is well placed to develop partnerships with UN-Energy, the GEF, World Bank, bilateral donors and the private sector to further address the sustainable energy agenda.
- Promote further dialogue and dissemination of GEA results

9. 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)

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 assesses the achievements of the project. The relevance and effectiveness are described. However it mainly focuses on outputs and not at all on outcomes. The efficiency is lacking information.	MS
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	There is few concrete evidence presented. All the ratings are given but not necessarily justified (e.g. Quality of M&E). More concrete and detailed evidence should be given.	MU
To what extent does the report properly assess project sustainability and/or project exit strategy?	The sustainability of the project is assessed for short term and medium term, however very little evidence is presented, and therefore it is difficult to find support for the ratings given.	MU
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	Lessons and recommendations are given. They are presented in a short way, but they are comprehensive enough. As explained above, there is once again a lack of concrete evidences.	MS
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The project costs are too briefly described. More details are needed on the efficiency of the funds utilization. The co-financing amounts are given, but the costs are not detailed per activity.	MS
Assess the quality of the report's evaluation of project M&E systems:	There is almost no information on the M&E system. The M&E design at entry is not analyzed, while the M&E implementation is briefly described. More evidences and justifications are needed. The ratings are given in a table but there is no justification for them.	MU
Overall TE Rating		MS

TE Quality Rating: $(.3*(4+3)) + (.1*(3+4+4+3)) = 3.5 = \text{MS}$

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