

Final Evaluation of the UNDP–GEF Project

Removal of Barriers to Energy Efficiency and Conservation in Small and Medium Enterprises in Kenya (KEN/98/G31, KEN/98/031), “GEF–KAM Industrial Energy Efficiency Project”

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Last edited: 10 November 2006

Status: Final



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This evaluation of the UNDP-GEF project Removal of Barriers to Energy Efficiency and Conservation in Small and Medium Enterprises in Kenya (KEN/98/G31, KEN/98/031), “GEF-KAM Industrial Energy Efficiency Project” was carried out between 4 September and 20 October 2006.

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Introduction

This evaluation report contains a final evaluation of the UNDP-GEF Project “Removal of Barriers to Energy Conservation and Energy Efficiency in Small and Medium Scale Enterprises (SME)” (project number KEN/98/G31, KEN/98/031).

The evaluation was carried out by Rona Wilkinson, the Team Leader, of Eco Ltd, a UK based consultant firm and Evans Kituyi from the University of Nairobi. A visit was made to Kenya by the international and local evaluation experts between 11 and 19 September and interviews with relevant project stakeholders, including governmental representatives, municipal representatives, individual project beneficiaries, implementing agency, project executing agency, project staff and others were made. The Terms of Reference for the assignment are given in Annex 1.

This final evaluation aims to contribute to ensure proper documentation of lessons learned by assessing the relevance of the project, project performance (progress in terms of effectiveness, efficiency and timeliness), management arrangements focused on project implementation, and overall success of the project with regard to impact, sustainability, and contribution to capacity development. The evaluation assessed project synergies with other similar projects, evaluated the efficiency, relevance and sustainability of the financial instrument set up within the project, including its potential impact on leveraging co-financing, and makes recommendations to serve as lessons learned which could be useful to the GEF for funding of this type of projects in the future.

The approach used for the evaluation was based on the results-oriented ‘outcome evaluation’ approach within the framework of Results Based Management. This approach generally covers a set of related projects, programmes and strategies intended to bring about outcomes¹. In this case, the focus of the review was a single project. The evaluation thus focuses more on the UNDP contribution to the outcome through the project outputs, and possible improvements that could be made to increase the performance of delivery of outputs and ultimately the desired outcomes.

Details of the people interviewed and the documents reviewed are given in the lists in annexes 3 and 4. Local operational and technical project staff as well as the UNDP-GEF project staff in Kenya gave excellent support during the evaluation.

¹ An outcome evaluation focuses on the ‘developmental changes between the completion of outputs and the achievement of impact’ (the outcomes), and encompasses efforts of partners working on the same issues. The evaluation assesses how and why outcomes are or are not achieved within a given context, and the role that UNDP has played in bringing these about.

Executive Summary

Background

This document contains the terminal evaluation of the UNDP-GEF Project “Removal of Barriers to Energy Conservation and Energy Efficiency in Small and Medium Scale Enterprises (SME)” (project number KEN/98/G31, KEN/98/031). The overall objective of the project (the project outcome for GEF) was to reduce CO₂ emissions through increased energy efficiency in Kenya’s small- and medium-sized enterprises and consequently provide growth of Kenya’s industrial sector. The project, which started in January 2001, under the Kenyan Ministry of Trade and Industry through the Kenyan Association of Manufacturers (KAM) aimed to remove barriers to energy efficiency in SMEs, and had four original components:

- *Component one: Capacity awareness and training in industry.* This component aimed to increase awareness among business owners and operators of the economic advantage to be gained through implementation of energy efficiency measures, and build capacity within the industrial and service sectors to implement energy saving measures.
- *Component two: Overcoming financial barriers.* This component aimed to develop business plans for environmental and energy efficiency actions and assist enterprises to identify opportunities for leveraging additional financing for their projects through commercial financing sources and international assistance programmes.
- *Component three: Demonstration projects.* This component aimed to provide demonstrable energy saving results, for wide replication throughout Kenya. This component to apply lessons from component 1 and 2, secure financing for energy efficiency projects; and show the SME and financial communities the benefits of energy saving.
- *Component four: Institutional strengthening and sustainability.* This component aimed to enhance the capability of the Project Management Unit (PMU) to execute the project.

Project Design

The overall project design is highly relevant to national, sectoral and development plans in Kenya and focused on the national environment and development interests. In particular, the project was initially driven by the need to contribute to national efforts aimed at implementing the national industrialisation and environmental management policies (Sessional paper No.2 of 1996 on Industrial Transformation to the Year 2020 and the 8th National Development Plan 1997-2001). The project has been topical in energy and industrial plans and policies and remains important at the present time.

The project design is generally focused, clear and practical. The outcomes, activities and management arrangements are well considered and structured. The project design clearly tackled the barriers to energy efficiency that had been identified (i) The lack of experience in Kenya to identify energy efficiency options, (ii) Lack of information regarding the economic viability of energy efficiency

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measures, (iii) Lack of ability to develop bankable proposals, (iv) Lack of ability to secure financing for bankable projects and (v) Lack of institutional capacity to mainstream energy efficiency within small and medium enterprises and financial communities.

The project design clearly involved the target beneficiaries, namely the small and medium enterprises, but also took good account of the other stakeholders who could contribute or benefit from the project activities.

The outputs and activities in the logical framework do not generally include good objectively measurable indicators and did not include details of Quantity, Quality and Timeframe. Better indicators would have facilitated better project execution as well as monitoring and evaluation.

The management arrangements at the design stage were UNOPS, UNDP and UNIDO. The latter was later dropped due to problems at the implementation stage, which could not have been foreseen at the design stage. The composition of the Steering Committee appears to have been well defined at the time of project formulation.

Implementation

The overall implementation of the project was good with the Project Management Unit having staff of high professional quality and a clear, systematic and transparent way of working with open lines of communication with the project manager. The good relationships between the PMU, KAM and other stakeholders were fundamental to implementing the project and achievement of project objectives. The PMU adjusted well to potential risks and emerging changes during the life of the project and adapted activities accordingly. Overall stakeholder participation has been very high.

The project effectively established a number of good partnerships and collaborative relationships with local, national and international entities, including industry, Government, NGO, academia and consultants. The engagement of financial institutions was less satisfactory and although the project did try and engage these institutions it did not manage to reach the decision makers in the financial institutions.

In terms of cost-effectiveness the GEF component gave funds of \$3.19 million and the estimated CO₂ reduction over the lifetime of the production was given to the evaluators as 580, 225 tonnes so cost per tonne of CO₂ over the lifetime of the project is \$5.50 per tonne, which is satisfactory in terms of cost effectiveness. However if we take the yearly estimated CO₂ reduction of 351,530 tonnes over a 15 year life span of the measures then there is an overall reduction of 5.27 million tonnes and the cost of avoided CO₂ emissions will be about US\$ 0.6 per tonne, which is highly cost effective. The evaluators were not

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shown how the exact calculations were made to reach this figure and would therefore recommend an independent verification.

The achievement of most of the components was successful- the awareness raising and training was rated 'Highly satisfactory' and was very successful, especially in regard to the Energy Management Award. There was also considerable achievement in setting up post graduate courses in energy efficiency in two education institutions. The Industrial Energy Efficiency Network was also implemented successfully (although there is concern over its sustainability after the project finishes). Output four-strengthening the PMU also achieved all its objectives. The overcoming of financial barriers (component two) was less successful as (1) although a book was produced which aimed to be a Guide for Investors, it was not sufficiently designed at its target audience (decision makers) and feedback received suggested it was more appropriate for implementers and operators and (2) the market conditions to allow the emergence of an ESCO did not materialise. The implementation of the demonstration projects (component 3) was not as satisfactory as hoped as none of the demonstration projects were on the small enterprise side and no external financing was secured.

Two extra components were added to the project (but not the logframe), component five to increase capacity at KAM and component six to develop suitable policy to promote energy efficiency. Both these components were reasonably successful with a Centre of Energy and Efficiency set up within KAM (with funding from the Ministry of Energy) and an Executive Energy post established at KAM. The project has also influenced Energy Policy and the new Private Sector Development Strategy.

Dissemination was fairly good throughout the project, with a variety of brochures, articles, and media publicity, although some of it could have been more targeted to its particular audience.

Results

The project has had satisfactory impact in overcoming the barriers to implementing energy efficiency measures in small and medium enterprises in Kenya. An assessment of energy savings potential of industry and the hotel sector was carried out in 2002 and found a potential annual savings of 108,263 Toe (Ton of oil equivalent) financial savings of \$32 million. An impact assessment carried out by GEF-KAM from 2003 to 2005 gave figures for the June 2006 of 115,447 Toe and \$28.5 million which shows a substantial impact on the market. The evaluators were not able to verify these figures or establish exact calculations and would recommend an independent verification.

The evaluators felt that the objectives of the project have been met to the extent that a solid foundation has been set for further energy efficiency activities in Kenya, and some of the barriers removed. The sustainability and replicability of the project lies in the universities being able to attract students for the

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courses, the capacity and willingness of KAM to support and develop the Centre for Energy Efficiency and Conservation and the Industrial Energy Efficiency Network, and for the ESCO to develop contracts. The Evaluation Team felt that overall the project has contributed to the capacity development of the target groups.

Key Lessons Learnt

- Industrial associations are potentially very well placed to take forward the messages of energy saving and economy. It has become clear through the implementation of this project that the KAM has provided a strong and sustaining institutional framework for the activities.
- The Energy Management Award initiated by the project has shown excellent promise. This mechanism appears to be in high demand and have a real and positive impact on the awareness of companies. The approach is certainly worthy of replication in other countries.
- Methods for monitoring the impact and quality of courses carried out by the project have been lacking. In future projects carrying out training, attention should be given to this aspect.
- In the demonstration projects, no actual calculation of GHG savings was made. This is a significant shortcoming in a project whose purpose was the reduction of GHGs. In future projects, the tracking and determination of project savings should be more explicit (although it is noted that there was an activity for this in the project design), and UNDP should actively track these data throughout project implementation.
- The aim of the demonstration projects was to raise awareness, to test and prove the new financial mechanisms and to illustrate to the SME and financial communities. Good case studies were developed in the industrial and hotel sector. However, these demonstration projects, although having been successfully stimulated by the project, arguably have limited replication potential, across the whole SME sector, since they were mainly carried out in medium and larger companies, which had sufficient resources to implement the savings themselves. There were no demonstration projects showing how to implement energy efficiency savings in a small enterprise or using external financing mechanism and thus no demonstration of how to overcome these barriers in such a situation.
- Excellent South-South knowledge transfer appears to have taken place within this project, and this appears to have been highly appreciated by participants in the project.
- A number of Critical Success Factors have been identified. These include
 - a. Good Project Management: the PMU operated very efficiently with weekly meetings, a good knowledge system which made it easy to track progress and results and determine action points. There was good open communication and processes between members of the PMU and KAM. Given the diverse activities and different stakeholders it was critical to have a system which was efficient and transparent
 - b. A high level of stakeholder participation: the project outcomes required engagement and participation from Government, industry, utilities, financial institutions, companies and

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NGOs. The stakeholders involved in GEF-KAM were enthusiastic and continue to be supportive which was key in reaching the objectives of the project and will continue to be key in the replicability and sustainability. The PMU was also very successful in building on diversity and engagement with all stakeholders.

- c. Support from the government, especially Ministry of Trade and Industry and Ministry of Energy: the ongoing support from Government was crucial in giving a high profile and authority to the project.
- d. Ongoing institutional support from KAM, and an excellent level of flexibility: the relationship between KAM and the project was an important factor for both parties. KAM helped the PMU reach their stakeholders through their membership and the project helped KAM reach other industrial sectors and has added to the professional expertise within KAM. The success of this relationship owed a lot to the support of the chairman of KAM (there were three during the project's lifetime) and critically to the support from the CEO of KAM, as it is the CEO who advises the KAM board. There have been two CEOs during the project and both have been very positive towards the project
- e. The PMU felt that although UNOPS added an extra administrative step it was a crucial component as had more flexible procedures and activities proceeded more quickly as a result
- f. The Chief Technical Advisor (CTA) who was with the project for the first two years was very important in helping to establish the project nationally and in promoting it internationally
- g. At these nascent stages of ESCO development, there is no business that can survive solely upon performance based contracts; energy auditing alone is not particularly profitable. Hence an energy business will have to offer a range of services, of which ESCO contracts are one.

Main Recommendations

- The Kenyan Association of Manufacturers should be commended for the efforts made to increase energy efficiency and serve their members more effectively. These activities should certainly continue in the long-term future.
- Under the component on awareness and training (component 1) it has become clear that mechanisms for the post project sustainability and replication are of concern. The short courses implemented by the project do not appear to be continuing. Efforts should be made to identify institutional mechanisms for continuation.
- The network of certified energy efficiency auditors has not been sufficiently established. Follow-on activities to establish this, including possible legislative stimuli (creation of 'certified energy auditor'), should be developed

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- An aggressive marketing of the Energy Management Award – in terms of outsourcing should be pursued.
- More innovative strategies for engaging CEOs of SMEs should be developed, since this was a significant challenge in the execution of the project.
- Excellent foundations have been laid for the creation of the Industrial Energy Efficiency Network. However there is a real and present need to identify strategies, which will rejuvenate the network, now that the funding from the project (and dynamic leadership) is coming to an end. An institutional mechanism to support this should be considered.
- The formalising of partnerships/linkages among institutions (e.g. KPLC/UoN) is highly recommended to ensure better co-operation and longer term sustainability.
- The structure of the Financial Engineering course appears to be good. However the Financial Engineering course material does not appear to be part of the curricula on Energy Efficiency that has been developed. This is of concern, since financing was clearly a barrier that was insufficiently well addressed through the project.
- The book produced on 'Lowering Energy Costs' may have been intended as a Guide for Investors but does not appear to be widely used by its target audience. A survey of CEOs on the appropriateness of the publication would provide valuable insight into this issue, and a more targeted flyer or other document may be more appropriate.
- The ESCO engagement strategy for Financial Institutions is not well defined and is of concern as the project failed to engage the financial institutions and there needs to be a clear strategy on how the ESCO is going to achieve this.
- The demonstration projects were arguably only really relevant to a subsection of the enterprise sector as they were all at the larger end of the SME spectrum and all had internal financing. So, although good examples are available for this particular subsection, future activities should give priority to selecting demonstration projects that include smaller enterprises, and use external financing. This will give examples for the whole SME sector on how to overcome these barriers.
- A strategy for the long-term existence of the CEEC should be explored, including how this body would provide services to other sectors and to non-KAM members. The evaluation team recommends that the CEEC gradually moves out of KAM as an independent non-governmental institution, if it is to exploit the significant EE potential in the broader non-KAM clientele
- The project has resulted in impressive achievements that have laid the foundations for future energy savings in industry. As a result of the energy audits carried out numerous opportunities have been identified. However barriers still remain to industrial efficiency. Continued cooperation and participation will be required to capitalize on the successes of this project.

It is envisaged that in the short term the above recommendations are co-ordinated by KAM under the CEEC.

I. The Development Context

Background

1. The GEF-KAM project is a result of the energy situation in Kenya and the effect it was having on the industrial sector in Kenya. Most Small and Medium-sized Enterprises (SMEs) use petroleum products as their primary energy source, which accounted for 780,000 Toe in 1996, along with electricity which had an installed capacity of 810 MW for the commercial sector. At the time the GEF-KAM project was developed, predictions were that the energy demand from the SME sector was projected to double by the year 2020.
2. The high cost of this energy and use of inefficient technologies has led to high manufacturing costs and consequently higher priced products. The high cost of petroleum products coupled with inefficient energy technologies result in high manufacturing costs making Kenya's products less competitive internationally. In addition, Kenyan manufacturers are facing increased competition from lower priced imports. Electricity is the second most important source of commercial energy, with installed capacity of 1,200 MW. Development plans for the next 15 years indicate that additional capacity of 1300 MW will be required.
3. Surveys of Kenyan SMEs at the time of the proposal development had shown energy wastage of between 10% and 55% of primary energy input and, indications were that by improving energy efficiency in SMEs through removing capacity and financial barriers, this energy wastage would be reduced, the production costs lowered, and profits increased.
4. The project is funded with co-financing provided by the Government through the TRAC fund of the UNDP-Kenya. The UNDP is the implementing agency and UNOPS the executing agency.
5. The project was endorsed in mid 2000, started in January 2001 and ended December 2006.

Project outcomes and objectives

6. The overall development goal of the project (the project outcome for GEF) was to reduce CO₂ emissions through increased energy efficiency in Kenya's small- and medium-sized enterprises and consequently provide growth of Kenya's industrial sector.

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7. These goals / outcomes were to be achieved through this project by addressing capacity and financial barriers. The specific barriers being addressed by this project, as described in the Project Document were:

- The lack of experience in Kenya to identify energy efficiency options
- Lack of information regarding the economic viability of energy efficiency measures
- Lack of ability to develop bankable proposals
- Lack of ability to secure financing for bankable projects
- Lack of institutional capacity to mainstream energy efficiency within small and medium enterprises and financial communities

The project design is aimed to facilitate the learning process required for widespread application of energy efficiency and energy conservation activities in Kenya.

8. To overcome these barriers to energy efficiency in small and medium enterprises the UNDP/GEF project was designed with the following main project components:

- *Component one: Capacity awareness and training in industry.* This component aimed to increase awareness among business owners and operators of the economic advantage to be gained through implementation of energy efficiency measures, and build capacity within the industrial and service sectors to implement energy saving measures.
- *Component two: Overcoming financial barriers.* This component aimed to develop business plans for environmental and energy efficiency actions and assist enterprises to identify opportunities for leveraging additional financing for their projects through commercial financing sources and international assistance programmes.
- *Component three: Demonstration projects.* This component aimed to providing demonstrable energy saving results, for wide replication throughout Kenya. This component to apply lessons from component 1 and 2, secure financing for energy efficiency projects; and show the SME and financial communities the benefits of energy saving.
- *Component four: Institutional strengthening and sustainability.* This component aimed to enhance the capability of the Project Management Unit (PMU) to execute the project.

9. From those objectives, there were several proposed project outputs

For component one:

- Increase awareness among business owners and operators of the economic advantage of implementing energy efficiency measures
- Build capacity in SMEs to be able to implement energy efficiency measures

For component two:

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- Develop business plans for energy efficiency measures (including a guide for Investors)
- Deliver financial engineering courses to SMEs in order they can produce bankable proposals
- Assist SMEs to leverage external financing for energy efficiency projects, including the emergence of an ESCO

For component three:

- Implement demonstration projects with verified measurement of the energy and CO₂ savings

For component four:

- Enhance capability of the Project Management Unit (PMU)

Key stakeholders and beneficiaries for this outcome

10. Key stakeholders for both the UNDP and the GEF outcomes include:

- The Ministry of Trade and Industry who are undertaking the project through KAM
- The Ministry of Energy
- The Kenyan Association of Manufacturers (KAM)
- Kenya Power and Lighting Company (KPLC)
- Kenya Electricity Generating Company (KenGen)
- National Environmental Management Authority (NEMA)
- UNDP
- UNOPS
- Project Management Unit (PMU)

All of the above are members of the Project Steering Committee who meet twice a year and discuss progress and issues concerned with the project

Other stakeholders who have been involved with input and advice to the project are:

- Kenya National Cleaner Production Centre (KNCPC)
- Kenyan Bureau of Standards
- Electricity Regulatory Bureau (ERB)
- Kenya Polytechnic and University of Nairobi

11. Direct beneficiaries are:

- The small and medium scale enterprises in Kenya who will reduce their cost of production through increased energy efficiency and thus will make a profit.

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- Local consultants, NGOs, academics and private companies who have benefited from the training and resources

II. Findings and Conclusions

11. The discussion that follows covers the current status of the project outcomes, and reviews key factors that affect the achievement of the project outcomes.

A. Project formulation (relevance & design)

Relevance to national development priorities

12. The project idea and strategic concept had its origin within national, sectoral and development plans in Kenya and focused on the national environment and development interests. A wide range of policies and strategies from the Government of Kenya were under development to support industrial transformation and national development.
13. In particular, conceptualisation of the project was driven by the need to contribute to national efforts aimed at implementing the national industrialisation and environmental management policies. Kenya's industrial development policy is set in Sessional paper No.2 of 1996 on Industrial Transformation to the Year 2020 and the 8th National Development Plan 1997-2001, both of which see rapid industrialization as the quickest avenue for creating employment opportunities, increasing incomes and reducing poverty. The industrialization policy then projected GDP growth at an average rate of 5.9% between 1997 and 2020—mainly driven by agriculture and industry. The then Environmental Management and Coordination Bill of 1999 (now an Act) in its Section 49c mandated the National Environmental Management Authority (NEMA) to work in consultation with relevant lead agencies to promote measures for the conservation of non-renewable sources of energy. More importantly then, the National Development Plan 2001-2008—published by the out-going Moi regime just before the project's inception—sought to harmonize environmental conservation and industrialization for sustainable development.
14. As a result of these development plans and policies, the project was designed to remove barriers to energy efficiency while increasing the institutional capability to implement energy efficiency projects.
15. Since the formulation of the project proposal, the energy situation in Kenya has changed in ways that increase the relevance of the project's aims and strategy: the SME industrial sector has continued to grow, droughts and floods have placed additional stress on Kenya's hydroelectric capacity with related load-shedding, and the prices of petroleum based fuels have increased.

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According to the Ministry of Trade and Industry, Kenya suffers an acute energy shortage. It is estimated that supply is some 120MW less than demand, a shortfall equating to 10% of Kenya's current installed generating capacity of 1,200 MW. The government has recently underlined the priority it is giving to industrial energy efficiency, by agreeing to fund energy efficiency activities through KAM by giving 20 million KSH per annum over the next 3 years – this will be used to support the “Centre for Energy Efficiency and Conservation” within KAM. In 2004 energy efficiency was formally incorporated into energy policy. In 2006 the Private Sector Development Strategy was developed, and developed by the MTI, and has incorporated the GEF-KAM project outcomes to promote energy saving in SMEs

16. It is thus the opinion of the evaluators that the project was both highly relevant when it was written, and that the relevance has increased throughout the period of project execution.

Relevance to target groups

17. This project specifically targeted small and medium scale enterprises in Kenya. An assessment of the energy saving potential in Kenya was carried out at the time of project preparation, and was based on 20 walk through audits of SMEs in 5 industrial sectors (tea, paper, textiles, food& beverages and hotels) and showed that implementation of energy efficiency measures would result in a payback of between 1.7-4.6 years and a total energy saving of 172 Terajoules. The potential for replicability of the audited enterprises was then assessed and showed that the savings for all SMEs could be as much as 6, 500 million KSh (per annum) and 16,000 TJ a year but assuming just 20% penetration would still yield savings of 1,300 million KSh and 3,200 TJ a year. This project was then designed around removing the barriers to implementing these energy efficiency measures so that the SMEs could benefit from energy and cost savings. The project design was thus highly relevant to the beneficiaries.
18. Another direct beneficiary was the Kenyan Association of Manufacturers (KAM). KAM has benefited in numerous ways through the project, including:
 - a. The project helped give a higher profile to KAM
 - b. Income from the project, helped to stabilize KAM during initial years, and was cited as one of the reasons for the growth of KAM during the project period
 - c. The project ensured that KAM was accountable and increased transparency within the organisation
 - d. Capacity development within KAM including the provision of an IT network, vehicles and fuel and an energy officer paid for by the project in the first year.

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19. Other indirect beneficiaries are NGOs working in the energy sector such as the Kenya National Cleaner Production Centre who would benefit from training and capacity in the area of energy efficiency.
20. The project was also designed to benefit Kenya Power and Lighting Company (KPLC) and KenGen through increasing their energy awareness of SME and aimed to facilitate the work Kenya Power and that was being conducted under the World Bank Energy Sector Reform and Power Development Project
21. The project was specifically designed to complement the national policy presented in *Sessional Paper No. 2 of 1996 on Industrial Transformation to the Year 2020* which was adopted by Cabinet in November 1996 and so the ownership of the project was under the Ministry of Trade and Industry who have benefited from the impact the project has had on improving the performance of small and medium enterprises
22. The Ministry of Energy has had a close collaboration with the project and the design was aimed to support ongoing policies and programmes. An additional project outcome was added that implicitly linked project activities to influencing energy policy and legislation- this was an important addition to the project design as such policy and legislation will impact on the overall objective of the project.

Rating: Satisfactory

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Project design

23. The overall project design is generally clear, practical and realistic. With the exception of the objectively measurable indicators, most components, outputs and activities are defined in clear and unambiguous terms. This overall clear design has greatly facilitated effective and efficient project implementation.
24. There are however clear inconsistencies between the description of the project components given in the body of the project document and in the logical framework (eg. the description in the body of the project document contains 4 components and 6 outputs, the logical framework only has 4 outputs). The activities are also inconsistent. This may have caused misunderstandings in project implementation.
25. The implementation structure given in the project document includes UNOPS as executing agency, with the UNDP Country Office responsible for the overall local supervision of the work. The addition of UNIDO as ‘cooperating agency’ was logical given the prior activities of UNIDO in Kenya on similar subjects as the proposed GEF-KAM proposal, and their ongoing co-operation with KAM.
26. The implementation of project activities was carried out by the Kenya Association of Manufacturers (KAM) where the Project Management Unit (PMU) was located. The work of KAM and the PMU was enhanced by the work of a Chief Technical Advisor. The availability of a (frequently international) technical expert has been shown to be highly effective within a number of other UNDP projects.
27. The KAM Project Management Unit built on an energy management unit established at KAM within the UNIDO Kenya Energy Management Programme (KEMP). The intention and expectation was that the PMU would gradually move out of the KAM and become an “independent not-for-profit organisation” (since the PMU would increasingly carry out commercially oriented activities). According to the project document “This will allow the PMU to undertake energy service contracts on a profit basis as well as continue to work on socially oriented grant funded activities at no profit.” From a design perspective, this arrangement is complex and unlikely to be realized. There is also some ambiguity in the project document which states that KAM is non-profit, and therefore another non-profit organisation should be set up for the ‘profit-making’ activities of the PMU.
28. The composition of the Steering Committee appears to have been well defined at the time of project formulation. This is evident by the positive role played by the steering committee during project execution.

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29. The project outputs and activities in most cases do not include good objectively measurable indicators. This means that it is difficult for the project team to implement and assess progress for these activities. All indicators should reflect the desired Quantity, Quality and Timeframe. A number of the project objectives, outputs and activities would have benefited from being reformulated in a verifiable and quantifiable terms. An example may be given from Activity 1.2: Seminars and Workshops. The indicators given in the project planning matrix were:

- Good seminar/workshop attendance;
- Presentation and open discussion of common energy use problems;
- Increased dialogue between SME and financial institutions

These indicators cannot easily be used for monitoring or evaluation since they do not specify any:

- a. Quantities: How many seminars? How many attendees?
- b. Qualities: What is a 'good attendance'? What is increased dialogue? What sort of dialogue is desired?
- c. Time: By when should the targets be met? End of project?

It is the evaluators' opinion that better indicators would have greatly facilitated project execution as well as monitoring and evaluation.

30. Two other outcomes were added in 2005, after the Mid Term Review in 2003 and the Annual Planning Workshop in December 2004. These outcomes were to build capacity at KAM (to host the Centre for Energy Efficiency and Conservation) and to influence National Policy and Legislation to promote energy efficiency and conservation. The logframe was not changed.

31. A number of other initiatives targeting the lowering of production costs and gaseous emissions through energy conservation exist in Kenya. These interventions may be classified into (i) awareness raising initiatives on energy conservation (ii) training on energy efficiency management, and (iii) basic energy audits commissioned by proactive enterprises.

Awareness: Utilities such as the Kenya Power & Lighting Company (KPLC) have for long carried out some public awareness campaigns on safety and energy conservation by way of mass media (radio, tv and print) targeting the domestic sector. The Kenya National Cleaner Production Centre (KNCPC) continues to raise awareness on waste minimisation in SMEs targeting energy, water and materials under the Centre's Clean Enterprise Programme (CEP) funded by the UNDP.

Training: Through its staff training school, KPLC recently started training its staff on energy efficiency, hence contributing to the critical mass of man power on the supply side. The KNCPC on

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the other side has a record of training SME personnel on waste minimisation and energy efficiency (mainly fossil fuels) in its Cleaner Production (CP) capacity development projects.

Energy Audits: Even before the GEF KAM Project, there existed a number of energy management experts who provided services to the scarce market. Since the 1990s, a few enterprises have been consistently carrying out basic energy audits through regular energy data measurement, analysis and use in production planning (driven by internal corporate policy or sheer business sense). Good examples included Spin Knit Ltd—a textile firm in Nakuru, and the Holiday Inn Hotel in Nairobi. These enterprises employed some of the few local energy assessment consultants available then. Other enterprises have over time adopted voluntary measures within the framework of CP and environmental management systems such as the ISO 14001 and other voluntary initiatives that promote waste minimisation (examples of enterprises that made significant savings in energy through other initiatives, such as the Resource Efficiency Assessment for Kenya Project implemented by the Kenya National Cleaner Production Centre (KNCPC) which was ODA funded, include Sara Lee Ltd, Haco Industries, Keru Tea Ltd and Kitabu Industries Ltd).

In general, these initiatives involved a few enterprises scattered in major towns around the country. The Project went beyond these activities by providing a broader framework for sustained awareness raising, capacity building and energy auditing in industry and other sectors.

32. Overall rating of Conceptualization/Design: *Satisfactory*

B. Implementation

Implementation approach

33. Implementation of the project was overall very good. The PMU worked together very well as a team with meetings every week, where minutes were taken, and action points raised. This meant that any issues that arose were documented and progress reviewed. The agenda for the meetings corresponded to the activities and outputs in the logframe.
34. The mid term review was carried out in May 2003 and made a number of recommendations:
- The assessment of energy savings potential report be updated every two years- this wasn't done but the Energy Management Awards in which an increasing number of enterprises are participating in gives these figures so they are being collected
 - Appoint a dedicated training co-ordinator and from 2004 training efforts should be directed to embedding courses in existing education and training institutions- this was done and curriculum developed in Kenya Polytechnic and University of Nairobi
 - Grow the IEEN and position so will continue after project- the IEEN was supported and covers 8 sectors with over 90 members. It will be housed in KAM after the project finishes but will need support from KAM to rejuvenate it
 - Select and implement the demonstration projects- 14 demonstration projects were selected and implemented but the none of the these had external financing and all were from larger enterprises.
35. In general, the Evaluation Team found the relationship between the institutions involved and others as cordial, leading to significant gains in favour of the project.

Between Institutions Involved: the PMU's relationship with the Government paid back in various ways, two key ones being (i) influencing public policy—integrating energy efficiency in the National Energy Policy in 2004 and making significant inputs into the Private Sector Development Strategy just published by the Ministry of Trade & Industry—and (ii) attracting generous financial support for sustained energy efficiency work in industry after the project comes to an end. The Ministry of Energy is now providing KSh 20 million per year to KAM for energy efficiency activities, which will be used to fund the Centre for Energy Efficiency & Conservation, a key product of the GEF-KAM project. Location of the PMU within the KAM also made it easier for the KAM management to promote the project among its membership, leading to the relatively easier formation of the Industrial Energy Efficiency Network (IEEN) and participation in the annual Energy Management Awards. The UNDP's support was instrumental in the establishment of the ESCO, whose success is

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yet to be proven. Similarly, although it introduced additional administrative steps in the project management process, the PMU felt that UNOPS assisted the project to expedite activities rapidly in addition to helping manage its budget well.

Between PMU and Other Institutions: Good collaboration between the PMU and the University of Nairobi and the Kenya Polytechnic led to the mutual development of academic curricula in energy management to be undertaken at both institutions beginning 2007 in furtherance of the project's capacity building objectives. Similarly, collaboration with KPLC led to increased public awareness on domestic energy efficiency strategies involving mass media (mainly radio, print and TV). A memorandum of collaboration between the PMU and KPLC awaits signature by the utility. It is encouraging that KAM is willing to take on and nurture this relationship and may sign this agreement with KPLC instead.

36. The evaluation team found that the relationships between the institutions involved and the other stakeholders were fundamental to implementing the project and achievement of project objectives. Outcome one of raising awareness and capacity building has been achieved through active engagement with the participants and continued support and help. For component two in overcoming financial barriers the PMU worked hard to bring financial institutions together and fund bankable proposals but ultimately the financing institutions remained cautious. For component three of developing and implementing demonstration projects the project build up strong relationships with six institutions- they could be considered the 'low lying fruit' as they were the larger enterprises. However the enterprises that implemented the projects have been very open and willing for other enterprises to see the measures they have taken. The fourth and fifth outcome of strengthening the PMU and KAM has also been successful. It has had some problems but these were overcome by effective dialogue and communication between the directors of KAM and PMU. Finally the additional sixth outcome of influencing policy and legislation was helped by the good relationships with the Ministries, Regulatory Board and National Utilities. The existence and regular meetings of the Project Steering Committee also facilitated this.

37. Overall rating of Implementation Approach: *Satisfactory*

Management arrangements

38. The ultimate test of sustainability of this project will be the emergence of an energy efficiency market where Kenyan industries are aware of the benefits of energy efficiency investments and where they can readily access relevant technical support and finance within Kenya. Evidence in the Mid Term Report demonstrates excellent achievements towards realising this goal. Efforts towards achieving this in the second half of the project period were outlined by the PMU in the 2004 and 2005 Project

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Operational Plans. A review of the Annual Reports for 2004 and 2005 reveals that apart from a few items, most of the intended milestones were achieved. Some of those not achieved include the development of a long-term strategy for sustainability of the IEEN beyond 2004. Similarly the Evaluation Team found no evidence of an established and functional ESCO—although sufficient efforts were in place to have one. These efforts included the already registered ESCO (IES) and Business Plan developed by the consulting firm Econoler of Canada.

39. All along, the PMU seems to have adjusted well to potential risks and emerging changes during the life of the project. The Evaluation Team noted some evident cases to include the PMU's handling of UNIDO's failure to judiciously implement its part of the inter-agency agreement and heeding the MTR's recommendation to pursue its subsequent cancellation. The PMU was able to adapt to this change by hiring international consultants to guide the development of demonstration projects instead. Another case involves the non emergence of an ESCO as earlier envisaged, which forced the PMU to successfully seek an alternative, which consisted financial support from UNDP Kenya to meet the cost of establishing one. The Integrated Energy Services Ltd was registered and its business plan developed. The PMU also took up well the challenge to assist and guide the process of embedding EM training in local universities and polytechnics. The University of Nairobi and Kenya Polytechnic have since adopted this element in their training curricula.
40. Occasionally, however, the PMU seemed to have been unable to cope with the overwhelming work load forcing it to shelve certain elements on its operational plan. For instance, energy efficiency and financial engineering training programmes scheduled for 2005 were not implemented. This contributed to slowing down the tempo established in awareness raising—as witnessed from regular enquiries for training received by the PMU. It is for the same reason that PMU's commitment to the IEEN decreased and since then the activities of the network have also fallen away.
41. The Evaluation Team is also impressed by the leadership, management and communication skills of the NPM. He managed the project professionally. He was backed by an equally competent team of engineers who were instrumental in ensuring the success of this management-intensive project that demands a high quality of senior management team. The Evaluation Team was impressed by the project's frequent recourse to local consultants – a key contributor to local capacity building. A large number of local engineering, finance and economics consultants have been assembled by the PMU and are integrated in all aspects of the project.
42. The Chief Technical Advisor was based in Kenya for the first 2 and half years of the project. He set up the PMU and the framework for collaboration within the partners. His presence had a very positive impact on skills and knowledge transfer as well as opening the project to a wider network of

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energy efficiency practitioners from around the world. The CTA has remained very close to the project and has given advice whenever called upon.

43. The PMU felt that the inclusion of UNOPS as an executing agency and then taking over financial disbursement was very important as using UNOPS for procurement and hiring helped speed up project activities and effectiveness. UNOPS had regular contact with the project and the UNOPS Portfolio Manager took a keen interest in the project. UNOPS also set up the project Imprest account which improved the funds disbursement as it is a flexible and efficient system. Although it added to the management workload, the PMU is of the opinion that the involvement of UNOPS in the project was constructive and helped in the timely delivery of the project outputs.
44. The Evaluation Team understands both the context and constraints within which the original decisions were made regarding the institutional arrangements for project implementation and execution. This led to a complex and management-intensive project implementation with many checks and balances and in which the PMU accounts to a host of institutions and stakeholders. Despite this challenge, the PMU seems to have adjusted well. The PMU managed and implemented the project on behalf of KAM (which assumed implementing responsibility on behalf of the Ministry of Trade and Industry). The PMU reported to a Project Steering Committee that was chaired by the Ministry and comprises a number of local and international stakeholders. The PMU was also accountable to UNDP (GEF's implementing agency for this project) and UNOPS (which was also the executing agency, and dealt with all international contracts). The Finance, Management and Projects (FIMAPS) committee of KAM also received regular reports from the PMU.
45. The difficulty of reaching the informal sector was noted, owing largely to its dispersed nature and failure to organize under one umbrella body. The PMU also highlighted the practical problems associated with outreach to the micro/informal sector, accounting for why many enterprises in this category were not involved in the project activities. The evaluation team also noted problems in project data flow between UNOPS and UNDP, a situation that may have affected the PMU's efficiency of reporting.
46. The Project had a US\$ 500,000 grant from the TRAC fund of UNDP Kenya which was in addition to the US\$3.19m from GEF. It is a good indicator of the success of the project that UNDP went further to co-finance the proposed GEF-KAM Standards and Labels project development process. However, for the PMU, there was a downside in having to report financially to UNDP and UNOPS especially as the figures given from the two entities did not always agree with each other.

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Stakeholder participation

47. Products/Information generated by the project included the following:

Products/information generated	Mode of dissemination
Newsletters <ul style="list-style-type: none"> • IEEN • GEF-KAM 	<ul style="list-style-type: none"> • Posted to key stakeholders • Post, pick-up by visitors to KAM
Regular Reports <ul style="list-style-type: none"> • Quarterly reports • Annual reports 	<ul style="list-style-type: none"> • UNOPS, UNDP, MoE/MTI • Printed and distributed in workshops, training forums, by post to key stakeholders, uploaded on KAM website
Case-study dossier	Distributed to participants during training seminars, also at KAM meetings
Publicity materials <ul style="list-style-type: none"> • Flyers (e.g. IEEN, CEEC flyers) • Posters, • Calendars 	Distributed to key stakeholders and at training meetings; By post to KAM members and partners

The products listed above were sent to KAM members and institutions that were not KAM members but involved in the project- this numbered about 1,000 and all came from the project database. The evaluators thought that (a) the publicity could have been more widely circulated in order to increase the awareness raising and (b) the impact of these publications in terms of awareness raising should have been monitored in order to assess the appropriateness of the content, design and media of the material.

48. The table below summarises the effect that the awareness raising activities had on project implementation and decision making, within different institutions

Institutions in Partnerships	Effect on Project Implementation
KPLC	Public awareness raising on energy efficiency
Kenya Bureau of Standards (KEBS)	Development of the Standards & Labels Project
University of Nairobi (UoN)	Curriculum development for energy management
Kenya Polytechnic (KP)	Curriculum development for energy management
KAM	Access to member facilities, hence outreach leading to establishment of IEEN and successful EMA
Private energy consultants	Accelerated energy auditing tasks and training-of-trainers tasks
Individual companies, hotels (non-KAM)	Facilitated demonstration projects and sites
Ministry of Trade & Industry	Influence of the PSDS
Ministry of Energy	Influence of the National Energy Policy, attracted government funding to KAM for energy efficiency activities which is being used to ensure CEEC sustainability
International consultants from India, South Africa,	Training of PMU and energy consultants,

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Zimbabwe, Canada and Norway	development of demonstration projects, foreign industry visits for PMU, etc
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49. The project effectively established a number of good partnerships and collaborative relationships with local, national and international entities. The above table gives key governmental institutions i.e. KPLC, UoN, KP, KEBS (all these have parastatal status) and the Ministries. The extent of Governmental support is shown by:

- Overall goodwill for project
- Participation on the Project Steering Committee (PSC)
- Facilitated PMU participation in policy dialogue around energy and private sector development policies and strategies.
- Provided funding to support post-project activities
- Technical support in standards development for the standards and labels project
- Involvement of Ministers and senior officials in Project events and activities

50. Overall rating of Stakeholder Participation: *Satisfactory*

Financial Planning

51. The last Project Internal Review (PIR 2006) stated that \$3.19 million of GEF funds, \$0.5 million of UNDP TRAC funds, \$52,000 from project-generated funds and \$4.59 million in co-financing would be disbursed by the end of the project.

52. The evaluation team were given a printout of the complete final budget but this was not broken down by activities but with cost codes relating to the UNOPS/UNDP ATLAS system. It was not possible to breakdown activity cost by activities. The co-financing element was also not given (as it is not normally included in the ATLAS system) but the evaluation team understand that a full financial audit is being undertaken but was not finished during their visit

53. There has been a lack of financial continuity with figures submitted by PMU to the UNDP then being inserted onto the ATLAS system but PMU not having access to this system. This led to the situation during the last meeting of the PSC in March 2006 where it was realised that there was a shortfall of almost \$200,000 due to lateness of posting expenditure figures into the UNOPS ATLAS system. This meant that certain activities had to be dropped, including Project Monitoring Verification for the demonstration projects and the Project Impact Assessment, which has consequences for the verification of the GHG emissions.

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54. In terms of cost-effectiveness the GEF component gave funds of \$3.19 million and the estimated CO₂ reduction over the lifetime of the production was given to the evaluators as 580, 225 tonnes so cost per tonne of CO₂ over the lifetime of the project is \$5.50 per tonne, which is satisfactory in terms of cost effectiveness. However if we take the yearly estimated CO₂ reduction of 351,530 tonnes over a 15 year life span of the measures (as calculated in the PD) then there is an overall reduction of 5.27 million tonnes and the cost of avoided CO₂ emissions will be about US\$ 0.6 per tonne, which is highly cost effective. However, the evaluators were not able to verify these figures or establish exactly how they were calculated and would recommend an independent verification.

Project effectiveness

55. Progress in project implementation against outcomes and activities is shown in the following table:

OUTCOMES & ACTIVITIES	INDICATORS	STATUS	RATING
Global objective is climate stabilisation by reducing CO ₂ emissions	Quantified CO ₂ emission reductions	Project estimates annual CO ₂ reduction of 351, 531 tonnes and cumulative of 580 225 tonnes	Satisfactory
Specific objective is removal of barriers to increased energy efficiency in SME	Identified barriers to energy efficiency removed	There is evidence available that the capacity barriers were substantially addressed. However, there is little evidence that the project had any impact on the financial barriers as identified in the project document	Satisfactory
Output 1 Capacity Building among SME; and increased awareness of energy efficiency possibilities	Assessment of SME structure; Training programme prepared and given to qualified SME staff; identification of interested SME; training needs assessment;	Assessment of energy saving potential produced; Over 100 training programmes prepared and delivered. Training needs assessment was carried out by UNIDO; University and Polytechnic curriculum was developed although none implemented so far	Highly Satisfactory
Activity 1.1 Specialised short courses	Training manuals; 100 trained professionals; energy auditors trained and accredited. Increased number of energy audits in 8 major regions of Kenya; creation of a network of energy auditors.	Over 1200 trained from over 400 institutions Eight experts accredited with Certified Energy Manager (CEM) certificates Over 50 walkthrough energy audits and 20 full energy audits were completed	Highly Satisfactory
Activity 1.2 Seminars and workshops	Good seminar/workshop attendance; presentation and open discussion of	20 awareness seminars held; The project case studies were presented in over 50 forums; many newspaper	Highly Satisfactory

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	common energy use problems; Increased dialogue between SME and financial institutions	articles and dissemination materials (website, brochures, calendars) produced Energy Management Award (EMA) launched in 2004 with initial participation of 16 SMEs, in 2006 it was 52. EMA likely to continue No evidence of the dialogue between SME and financial institutions was made available	
Activity 1.3 Operation and maintenance skills	Awareness & use of control and monitoring equipment	No evidence available to be able to rate this indicator	N/A
Activity 1.4 Industrial energy efficiency network (IEEN)	Network established and active; industrial sub-sector energy use benchmarking;	IEEN established with 8 sectors represented and over 90 members; local benchmarking has taken place to a limited extent; Active participation in network has lessened recently	Satisfactory
Output 2 Financial barriers overcome	Financial mechanisms adopted and operational	An ESCO is in the process of being established, although at the time of evaluation it was not possible to gauge the success as no performance based contracts have been established.	Satisfactory
Activity 2.1 Guide for investors	Preparation and publication of a comprehensive guide for investors; adoption of the Guide by public and private sector stakeholders; Increased investor interest in energy efficiency projects	After a long process (over 50 experts involved) a book was published which aimed to be an Investor's Guide but was not sufficiently designed for its target audience (decision makers). It is a useful technical publication for operators or as a text book but initial feedback showed that it was not being used by CEOs or Investors. It is sold for 500 KSH	Un Satisfactory
Activity 2.2 Course in financial engineering	Increased knowledge of fundamentals of life-cycle energy and economic analysis; 40 professionals trained; Business plans developed & acceptable to SME's & financing institutions; Preparation of bankable proposals; 20 proposals prepared; 12-15 proposals accepted & implemented.	12 Financial courses carried out 2002-2004 in Nairobi, Mombasa and Eldoret for 77 participants. All participants presented on projects, some of which had been developed for their particular enterprise; lessons have been learnt on producing bankable proposals. No proposal has been accepted by external financing institution	Satisfactory
Activity 2.3 Feasibility studies	14 feasibility studies completed in accordance	14 feasibility studies carried out in 6 institutions	Satisfactory

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	with sound financial engineering principles.		
Activity 2.4 Development of Financial Mechanisms and Project Financing	14 project documents prepared; energy efficiency project transaction costs are reduced by preparation of replicable financing schemes; financing secured. Energy service agreements and investment agreements signed; models of novel financial mechanisms prepared and disseminated.	20 full energy audits will full financial analysis and implemented with internal company resources; an assessment of financial institutions prepared. 3 workshops held with CEOs and financial institutions. To date no external financing has been made for energy efficiency projects	Satisfactory
Activity 2.5 ESCO development	Development of business plans for ESCOs; Favourable institutional framework developed for emergence of ESCOs; ESCO's established. ESCOs deliver viable energy efficiency projects acceptable to SME; ESCO business becomes profitable.	Tender call put out to start an ESCO. Business plans were part of tender. Chosen ESCO was one with PMU engineers. The ESCO was established in late 2005 and contracted by KAM in April 2006. To date no ESCO contract been produced but is contracted to deliver two by end 2006.	Satisfactory
Output 3 Demonstration projects	Energy Efficiency Projects identified; 14 projects identified	14 demo projects in 6 enterprises were identified	Satisfactory
Activity 3.1 Implementation of Demo Projects	SME are prepared to invest in profitable energy saving projects; Additional financing secured—loans repaid; 14 projects financed & successful through project; anticipated energy savings and GHG reductions are realized; financial benefits are realized.	14 demo projects carried out in 6 enterprises No loans were secured (all demonstrations were financed by enterprises themselves). The savings, GHG reductions and financial benefits from the demonstrations were tracked to a certain extent but not using Int'l Performance Measurement and Verification Protocol.	Satisfactory
Activity 3.2 Measurement and Verification	Reports documenting energy savings produced and available; energy saving and GHG reductions of at least 20% achieved; Measurement of savings according to Int'l Performance Measurement and Verification Protocol.	Energy cost savings claimed of between 10–40%; case studies produced and disseminated	Satisfactory
Output 4 Institutional strengthening within the Project Management	Creation of a qualified PMU	PMU established and recognised locally as respected authority on energy efficiency. Advises Government (Ministry	Highly Satisfactory

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within the Project Management Unit		of Trade and Investment and Ministry of Energy in particular)	
Activity 4.1 Establishment of PMU	PMU staff engaged and PMU office established. PMU recognized as a viable professional organization for project execution; Charter documents approved by Board of Directors.	The PMU appears to be a professional organisation operating under KAM Charter documents were approved.	Highly Satisfactory
Activity 4.2 Specialised short courses for PMU staff	Specialised training of PMU staff completed; six staff receive training; enhanced PMU capacity to train local energy professionals	All PMU staff went through local and international training in project management, energy management, financial engineering	Highly Satisfactory
Activity 4.3 Study tours	Exposure and increased knowledge of international practices	Study tours were carried out in 6 countries during the course of the project	Highly Satisfactory
Activity 4.4 International conferences	Participation in international experience exchange; Presentation of technical papers; results discussed in international forums; international dissemination and peer review of results.	International experts have visited and advised the PMU throughout the project. The NPM has been asked to present at international conferences	Highly Satisfactory
Activity 4.5 Secondments	Exposure to/and increased knowledge of international best practices	International experts have visited and advised	Highly Satisfactory
Output 5 Capacity at KAM to carry out energy efficiency work <i>(this output was not in the original project logframe, and was added during project execution)</i>	Ability by KAM to offer energy services to its members	Centre for Energy Efficiency and Conservation set up within KAM. This is support from the Government (Ministry of Energy) who have given funds of 20 million KSH per annum over the next 3 years for energy efficiency activities in KAM	Satisfactory
Activity 5.1 Equip KAM with suitable personnel and skills to offer energy services	KAM has suitable staff to carry out services	Energy Executive post established in KAM, and KAM will continue to employ. The IEEN is now run by KAM	Satisfactory
Output 6 National Policy and Legislative framework to promote energy efficiency and energy conservation	National policy which recognises energy efficiency and sets up framework for continued energy efficiency promotion	In 2004 energy efficiency was incorporated in energy policy The Energy Bill has just been published and includes a section on energy efficiency and conservation.	Satisfactory
Activity 6.1	Influence national policy	In 2006 the Private Sector Development	Satisfactory

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Assist in development of suitable national policy framework to promote energy efficiency		Strategy uses GEF-KAM to promote energy saving in SMEs	
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C. Results

Impact

56. The project has had satisfactory impact in overcoming the barriers to implementing energy efficiency measures in small and medium enterprises in Kenya. An assessment of energy savings potential of industry and the hotel sector was carried out in 2002 and found a potential annual savings of 108,263 Toe (Ton of oil equivalent) financial savings of \$32 million. An impact assessment carried out by GEF-KAM from 2003 to 2005 gave figures for the June 2006 of 115,447 Toe and \$28.5 million which shows a substantial impact on the market². This same assessment gave a breakdown of the total energy and financial savings for each certain activities by December 2004:

57.

Project Outcomes	Fuel oil savings Toe	Cumulative financial savings KSh
Training and IEEN (2003&2004)	8,554	154 million
Demo Projects (2003&2004)	2,410	43.4 million
EMA Award (2004)	13,614	245 million
EMA Award (2005)	44,444	800 million

This table shows that the biggest impact on the market has been through the Energy Management Award although the preliminary activities of awareness raising, training and demonstration projects were a necessary prerequisite.

58. The project succeeded in attracting up to KSh 20 (US\$270,000) annually for 3 years from the Ministry of Energy [Memorandum of Agreement between the two institutions is available] for KAM to run energy efficiency activities. This is being used to fund the Centre of Energy Efficiency and Conservation. This amount may be increased and the grant extended beyond this period depending on the project's performance. This is a good gesture from the Government and, though not enough in running all the proposed activities of the CEEC, it is sufficient to lay the Centre's foundation to a state where it will be able to attract funds from other sources.

59. A consultant's report³ commissioned to assess the sustainability of energy management courses at the University of Nairobi and Kenya Polytechnic also identified potential sources of financial support

² The evaluators were not able to verify these figures or establish exact calculations and would recommend independent verification.

³ Geoff Styles (2005)

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including donors (foundations and bilateral) and collaboration with the private sector. However, the evaluation team feels that this potential is unlikely to be harnessed by these institutions unless they become proactive and more aggressive in resource mobilisation efforts.

Sustainability and Replicability

60. There is evidence of ownership among the major stakeholders as seen from the current enrolment in the IEEN and participation in the annual Energy Management Award. Although the current numbers are low (IEEN had 92 members by the end of 2005, and the EMA participation stood at 52 companies covering the hotel and manufacturing sectors in 2005) indications are that these numbers are rising as awareness continues to grow. Enrolments to the award have grown from an initial 16 in 2004, to 52 in 2005 and the KAM now reports increased enquiries for the 2006 edition. Furthermore, good support seems to exist among key stakeholders such as ERB, KPLC, KENGEN, among others in sponsoring the annual energy awards. Whereas interest and support for the IEEN and EMA seems to exist among the involved stakeholders, the level is still low and further efforts are needed to raise awareness in the industry and public domains to expand it. In particular, much will depend on how well KAM (through the CEEC) takes over the management of the EMA, and the strategy the CEEC will adopt in resuscitating the waning interest in the IEEN. There is evidence of sustained political goodwill from the government and likelihood of further funding from the MoE to support energy efficiency activities, such as the running of the CEEC. However, the CEEC has not been able to retain most of the GEF-KAM project staff and may be forced to train new programme staff in the future if it is to effectively implement the activity it proposes in the Centre's programme document and work programme.

61. The administration at University of Nairobi and Kenya Polytechnic are both enthusiastic about the new curricula on energy management to be offered by the institutions. Both have sufficiently mobilised internal systems and structures to make it possible to develop, review and approve the courses ready for offer in January 2007. However, the efforts have not been matched by similar efforts to proactively mobilise external support to complement GEF-KAM efforts. There is need to go beyond the two institutions and increase the number of outlets for training. Furthermore, there is need for initial focus on short courses to raise the level of awareness and interest in industry, hence demand for energy efficiency services. On its part, the KAM has shown willingness to inherit current agreements or sign fresh memoranda of collaboration with the two academic institutions with a view to providing the needed support in the effective implementation of the training courses in energy management. Our recommendation is that the UoN and KP take more responsibility in driving this collaboration to the next level. We also recommend strengthening of the CEEC to effectively

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implement the Support Strategy for the UoN and KP developed by the South African consultant Geoff Styles.

62. There is some instance of overall sustainability of the project activities- following training of KPLC by the GEF-KAM project, they have been able to undertake 16 full energy audits and over 20 walk-through audits in enterprises in the country. The increase in the number of companies enrolling for assessment towards the annual Energy Management Awards since inception in 2004 when 16 firms participated, to 52 firms in 2005. The KAM secretariat indicates that even higher numbers are registering for the 2006 event scheduled for November. The Jomo Kenyatta University of Agriculture & Technology is taking up the certificate course in energy management developed for the UoN but which was not approved by the University's senate owing to a new policy not to run any certificate programmes at the institution. The Holiday Inn in Nairobi has received about 10 energy efficiency-related enquiries and 5 site visits by delegations from other tourist hotels in 2006 to see how they managed to cut their monthly energy bills from KSh 1.8 million to KSh 0.8 million today after investing only KSh 0.45 million in a boiler redesign project. Savings on IDO went down by 50% at the hotel as a result of the project's recommendation being implemented.

Replication

63. The evaluation team found the following examples of replication:

- Component one: the awareness raising aspect will continue through the funding of the Energy Management Award once the project stops. The training element will continue through courses offered by the University of Nairobi and Kenya Polytechnic
- Component two: the financial engineering should be incorporated into the education curriculum at the University of Nairobi and Kenya Polytechnic
- The demonstration projects continue to be disseminated and attract interest from other enterprises and replicate some of the measures in their own enterprises
- Institutional strengthening: the hosting of the Centre for Energy Efficiency and Energy Conservation by KAM and the continuation of the IEEN will also ensure the replication and scaling up of activities

Sustainability

64. Though insufficient, some level of awareness has been raised among industry and hotel sector in Kenya. Their engineers and operations managers are using the knowledge gained to implement changes in their facilities to varying degrees. These are making significant energy and financial savings of up to 20-30% for firms the Evaluation Team visited. The fact that many visits are being reported by interested firms to those involved in the project is evidence that a fair level of awareness

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has been achieved. An interesting lesson in industry was perhaps the case of General Motors East Africa which had both the ISO 9001 and 14001 quality and environmental management systems yet was able to be assisted make savings of about KSh 8.5 million per year following an investment of KSh 7.5 million. Many firms certified to such international quality standards have always had little interest in the energy efficiency message with the assumption that energy efficiency issues are covered. This lesson from GM is therefore an important demonstration to such organisations.

65. The project seems to have significantly empowered the University of Nairobi and the Kenya Polytechnic to implement the energy management training curricula. The challenges to be dealt with are those around (i) lack of experience/exposure to real energy audits to complement the training received by the lecturers in these institutions (ii) lack of basic energy audit equipment to complement those in their possession, and (iii) lack of proactive approach by these institutions to the cause.
66. Through training, and by participation in demonstration projects, a number of energy auditors have been trained to not only audit but also to also assist enterprises develop bankable energy efficiency investment proposals. The consultants expressed their concerns about the non-involvement of CEOs (they usually sent technicians to energy efficiency meetings instead of attending themselves), most firms expecting free energy management services, more focus on KAM memberships, and the guide book generated by the project not being appropriate to influence CEOs.
67. Government institutions and utilities benefited too. Noting the successful implementation of the project, the government did not find it necessary to establish a unit to implement its energy efficiency obligations stated in the National Energy Policy. Rather, it decided to support the KAM to carry on with industrial energy efficiency work. This is being undertaken by the CEEC within KAM. The former KAM Board Chairman explained how this project empowered his bargaining position with the government on issues around cost of production and taxation on energy. KPLC has now conducted many walkthrough and full energy audits using knowledge gained from project. KenGen made significant energy savings at its Geothermal (Olkaria) and fuel-oil (Kipevu) power stations using knowledge gained.

Contribution to capacity development

68. The Evaluation Team felt that overall the project has contributed to the capacity development of the target groups. Evidence for this is that:
 - There is awareness of how to implement energy efficiency measures in SMEs
 - There are a group of accredited Energy Managers (8) who can carry out audits

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- There are courses available in educational institutions that are capable of running these courses

However the team felt that there is still a need to develop the capacity of:

- CEOs so that they understand the energy savings that can be made and want to implement energy efficiency measures
- Financial Institutions so they will provide funding for energy efficiency interventions

III. Recommendations

69. The Kenyan Association of Manufacturers should be commended for the efforts made to increase energy efficiency and serve their members more effectively. These activities should certainly continue in the long-term future.
70. Under the component on awareness and training (component 1) it has become clear that mechanisms for the post project sustainability and replication are of concern. The short courses implemented by the project do not appear to be continuing. Efforts should be made to identify institutional mechanisms for continuation.
71. The network of certified energy efficiency auditors has not been sufficiently established. Follow-on activities to establish this, including possible legislative stimuli (creation of ‘certified energy auditor’), should be developed.
72. An aggressive marketing of the Energy Management Award – in terms of outsourcing should be pursued.
73. More innovative strategies for engaging CEOs of SMEs should be developed, since this was a significant challenge in the execution of the project.
74. Excellent foundations have been laid for the creation of the Industrial Energy Efficiency Network. However there is a real and present need to identify strategies, which will rejuvenate the network, now that the funding from the project (and dynamic leadership) is coming to an end. An institutional mechanism to support this should be considered.
75. The formalising of partnerships/linkages among institutions (e.g. KPLC/UoN) is highly recommended to ensure better co-operation and longer term sustainability. The process could be accelerated if the UoN recognises the need to be more proactive in pursuing collaborative linkages.
76. The structure of the Financial Engineering course appears to be good. However the Financial Engineering course material does not appear to be part of the curricula on Energy Efficiency that has been developed. This is of concern, since financing was clearly a barrier that was insufficiently well addressed through the project. The evaluation team calls upon the UoN to overcome internal curriculum development policy barriers that led to the exclusion of this critical course component. Innovative institutional arrangements should be explored with the UoN Business School to jointly teach this component.

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77. The book produced on 'Lowering Energy Costs' may have been intended as a Guide for Investors but does not appear to be widely used by its target audience. A survey of CEOs on the appropriateness of the publication would provide valuable insight into this issue, and a more targeted flyer or other document may be more appropriate.
78. The book is of high technical content and may be a useful text for the energy efficiency curriculum courses at the University and Polytechnic, and for actual operators in enterprises.
79. The ESCO engagement strategy for Financial Institutions is not well defined and is of concern as the project failed to engage the financial institutions and there needs to be a clear strategy on how the ESCO is going to achieve this.
80. The ESCO management are very aware and apprehensive of the risk in entering a new market. A recommendation that would build the capacity and increase the confidence of the ESCO would be for them, or CEEC, to contract an experienced ESCO manager for a certain period, to work with the ESCO and offer practical advice and support particularly in the negotiation and packaging of ESCO contracts
81. The demonstration projects were arguably only really relevant to a subsection of the enterprise sector as they were all at the larger end of the SME spectrum and all had internal financing. So, although good examples are available for this section, future activities should give priority to selecting demonstration projects that include smaller enterprises, and use external financing. This will give examples for the whole SME sector on how to overcome these barriers.
82. A strategy for the long-term existence of the CEEC should be explored, including how this body would provide services to other sectors and to non-KAM members. The evaluation team recommends that the CEEC gradually moves out of KAM as an independent non-governmental institution, if it is to exploit the significant EE potential in the broader non-KAM membership.
83. The project has resulted in impressive achievements which have certainly laid the foundations for future energy savings in industry. As a result of the energy audits carried out numerous opportunities have been identified. However barriers still remain to industrial efficiency. Continued cooperation and participation will be required to capitalize on the successes of this project.
84. It is envisaged that in the short term the above recommendations are co-ordinated by KAM under the CEEC.

IV. Lessons Learned

85. Industrial associations are potentially very well placed to take forward the messages of energy saving and economy. It has become clear through the implementation of this project that the KAM has provided a strong and sustaining institutional framework for the activities.
86. The Energy Management Award initiated by the project has shown excellent promise. This mechanism appears to be in high demand and have a real and positive impact on the awareness of companies. The approach is certainly worthy of replication in other countries.
87. Methods for monitoring the impact and quality of courses carried out by the project have been lacking. In future projects carrying out training, attention should be given to this aspect.
88. In the demonstration projects, no verifiable calculation of GHG savings was made. This is a significant shortcoming in a project where the purpose was the reduction of GHGs. In future projects, the tracking and determination of project savings should be more explicit (although it is noted that there was an activity for this in the current project design), and UNDP should actively track these data throughout project implementation.
89. The aim of the demonstration projects was to raise awareness, to test and prove the new financial mechanisms and to illustrate to the SME and financial communities. Good case studies were developed in the industrial and hotel sector. However, these demonstration projects, although having been successfully stimulated by the project, arguably have limited replication potential, across the entire SME sector, since they were on the whole carried out in medium and larger companies, which had sufficient resources to implement the savings themselves. There was no demonstration project showing how to implement energy efficiency savings in a small enterprise, using external financing mechanism and thus no demonstration of how to overcome these barriers in such a situation.
90. Excellent South-South knowledge transfer appears to have taken place within this project, and this appears to have been highly appreciated by participants in the project.
91. A number of Critical Success Factors have been identified. These include:
92. Good Project Management: the PMU operated very efficiently with weekly meetings, a good knowledge system which made it easy to track progress and results and determine action points. There was good open communication and processes between members of the PMU and KAM. Given

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the diverse activities and different stakeholders it was critical to have a system which was efficient and transparent

93. A high level of stakeholder participation: the project outcomes required engagement and participation from Government, industry, utilities, financial institutions, companies and NGOs. The stakeholders involved in GEF-KAM were enthusiastic and continue to be supportive which was key in reaching the objectives of the project and will continue to be key in the replicability and sustainability. The PMU was also very successful in building on diversity and engagement with all stakeholders.
94. Support from the government, especially Ministry of Trade and Industry and Ministry of Energy: the ongoing support from Government was crucial in giving a high profile and authority to the project.
95. Ongoing institutional support from KAM, and an excellent level of flexibility: the relationship between KAM and the project was an important factor for both parties. KAM helped the PMU reach their stakeholders through their membership and the project helped KAM reach other industrial sectors and has added to the professional expertise within KAM. The success of this relationship owed a lot to the support of the chairman of KAM (there were three during the project's lifetime) and critically to the support from the CEO of KAM, as it is the CEO who advises the KAM board. There have been two CEOs during the project and both have been very positive towards the project.
96. The PMU felt that although UNOPS added an extra administrative step it was a crucial component as had more flexible procedures and activities proceeded more quickly as a result
97. The Chief Technical Advisor (CTA) who was with the project for the first two years was very important in helping to establish the project nationally and in promoting it internationally
98. At these nascent stages of ESCO development, there is no business that can survive solely upon performance based contracts; energy auditing alone is not particularly profitable. Hence an energy business will have to offer a range of services, of which ESCO contracts are one.

Annex 1: Evaluation terms of reference

Removal of Barriers to Energy Efficiency and Conservation in Small and Medium Enterprises in Kenya
(KEN/98/G31, KEN/98/031)
“GEF-KAM Industrial Energy Efficiency Project”

Terms of Reference for

Final Project Evaluation

1. Introduction

1.1. The GEF-KAM Industrial Energy Efficiency Project

The Government of Kenya (GOK) has implemented a project aimed at Removal of Barriers to Energy Conservation and Energy Efficiency in Small and Medium Scale Enterprises (SMEs). Budget support was provided by the Global Environment Facility (GEF), the UNDP Kenya Country Office and a GOK in-kind contribution. The UNDP is the GEF implementing agency and UNOPS is the executing agency. The GOK cooperating agency is the Ministry of Trade and Industry (MTI) through the Kenya Association of Manufacturers (KAM).

The expected outcome of the project is the reduction of Greenhouse Gas (GHG) emissions resulting from increased energy efficiency within Kenya's SMEs. The project was to assist the enterprises to reduce production costs through increased energy efficiency, thereby increasing profits, increasing employment and alleviating poverty. This was to be accomplished by removing capacity and financial barriers through awareness-raising, training and practical interventions.

1.2. Overall Project Objective:

The broad development objective of the Project is the provision of adequate energy for the growth of Kenya's industrial sector. The specific objective is to remove barriers to energy efficiency while increasing the institutional capability to implement energy efficiency projects at country level through the following.

- Increase awareness among business owners and operators of the economic advantage to be gained through implementation of energy efficiency measures.
- Build capacity within the industrial and service sectors to benefit from enhanced energy efficiency

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- Assist enterprises to identify opportunities for leveraging additional financing for their projects through commercial financing sources and international assistance programmes and assess the risks associated with energy efficiency projects.
- Promote the sustainability of the energy efficiency programme so it can be widely replicated throughout Kenya.

2. Objective of the Evaluation and UNDP/GEF Policy

2.1. UNDP/GEF M&E Policy

It is the GEF policy that all regular and medium-sized projects supported by the GEF should undergo a final evaluation upon completion of implementation.

This policy has four objectives: a) to monitor and evaluate results and impacts of GEF activities; b) to provide a basis for decision-making on amendments and improvements of policies, strategies, programme management, procedures, and projects; c) to promote accountability for resource use against objectives; and, d) to document, provide feedback on, and disseminate results and lessons learned.

2.2. Evaluation Objective

The overall objective of this final evaluation is to review the performance and the implementation of the Energy Efficiency Improvements and Greenhouse Gas Reduction Project, to assess the extent to which the global environment objectives and the improvements targets, as described in the project document, have been achieved and, to analyze the efficiency and cost effectiveness of how the project has moved towards its objectives and outcomes.

In addition, the final evaluation is expected to present and analyze main findings and key lessons, including example of good practices - (technical, political, managerial, etc) - for future projects in the country, region and GEF and to examine the project's compliance with the application of the incremental cost concept.

The Report of the final evaluation will be targeted at meeting the evaluation needs of all stakeholders- the Government of Kenya (specifically the Department of Industry in the Ministry of Trade and Industry), Kenya Association of Manufacturers (KAM) representing Kenyan industry, UNOPS, UNDP and GEF.

Specific Evaluation Objectives:

- a. Assess and document the experience with regard to the implementation, performance, impact and success of the GEF-KAM Project,

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- b. Evaluate early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environment goals,
- c. Identify and document key lessons learned and suggest actions to be taken at the local level to facilitate effective follow-up of the project in line with its long term development objective,
- d. Present and analyze any examples of good practices
- e. Describe key factors that will require attention to improve prospects for sustainability and the potential for replication and make recommendations for improving the effective continuation and sustainability of the project
- f. Make recommendations that might improve design and implementation of other UNDP/GEF projects.

The report will also have an annex explaining any differences or disagreements between the findings of the evaluation team and the IA/EA.

3. Scope of the Evaluation

The evaluation will be carried out along the following areas.

- i.* Sustainability
 - a.* An assessment of the relevance of the project to the development priorities of Kenya and the likelihood of sustaining and replicating the achievements of the project with reference to GoK policies on energy, economic and industrial development.
 - b.* In particular, analyse the two outputs of the Project – The Centre for Energy Efficiency and Conservation and the Energy Service Company in relation to sustainability of energy efficiency activities;
- ii.* Outcome/Achievement of objectives
 - a.* (An analysis of the extent to which the project's environmental and development objectives were achieved including documenting the impact of the project on the targeted beneficiaries.
 - b.* Assessment of the impact of the project on KAM especially capacity improvement to provide additional services to members. Identification of key constraints to development of energy efficiency services in Kenya and suggestions to further develop the market).
- iii.* Implementation Approach;
 - a.* Analyze the effectiveness of the approaches used to carry out the project activities, elements and characteristics of project design and implementation modalities, delivery

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- mechanisms, operational efficiency of project structures and their impact on project performance.
- b. Assess if optimal was made of the available human and material resources provided, the adequacy of equipment procured under the project including office and communication facilities, equipment maintenance, inventories and record keeping.
 - c. Also consider the Project adaptive management processes- how did project activities change in response to new conditions encountered during implementation, and were the changes appropriate)?
 - d. Evaluate the overall administrative practices and other quality control measures.
- iv. Stakeholder Participation/Public Involvement;
- a. Review and analyze the linkages established and roles played by different stakeholders in different parts of the project cycle, institutional arrangements, coordination, effectiveness and their impact on project performance.
 - b. Asses the effectiveness of the Industrial Energy Efficiency Network and the Energy Management Award and;
- v. Monitoring & Evaluation.
- a. Review the Project's M&E mechanisms, the use of the project's logical framework as a management and M&E tool, and the extent to which the findings and recommendations of annual reviews as well as the Mid-Term evaluation have been taken into consideration
 - b. In consultation with the UNDP Country Office, assess the consistency of the project performance with the Strategic Results Framework within the Country Cooperation Framework.

The evaluation will include **ratings** on the above aspects (i-v) as follows: Highly Satisfactory, Satisfactory, Marginally Satisfactory, Unsatisfactory, and N/A.

4. Methodology

4.1. Duration

The evaluation will be carried out through a period of 21 working days, including a 7 days mission to Kenya.

4.2. Preparatory stage - inception: 7 days

- Preliminary desk study review of relevant documentation provided by GEF-KAM and UNDP Kenya

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- Circulation of information among main stakeholders to determine the key issues to be addressed during the mission.
- Submission of Inception Report

The Inception Report will outline the work plan and the key issues to be addressed during the mission.

4.3. Field Mission: 7 days

Briefing for evaluators

Desk study and review of all relevant project documentation.

Interviews and meetings with the key stakeholders including:

- The Project Management Unit (PMU)
- UNDP and UNOPS,
- Ministry of Trade and Industry (MTI) and Ministry of Energy
- Kenya Association of Manufacturers (KAM)
- Representatives from Kenyan industries
- National energy consultants from the private sector

Validation of preliminary findings of the mission with UNDP, KAM, MTI and UNOPS. This will be in the form of a presentation and discussion forum.

4.4. Preparation of Final evaluation Report: 7 days

- Submission of first draft report and circulation for comments, and feedbacks from key stakeholders. (two weeks after the field mission)
- Preparation of final evaluation report: Period (two weeks after the receipt of the feedbacks from the stakeholders)

5. Outputs Expected from the evaluation

An Inception Report

A Final evaluation Report based on the general format outline at Annex 1

6. Implementation Arrangements

The UNDP Kenya Resident Representative will be responsible for organizing and managing the evaluation.

The team will report to the Resident Representative through the Assistant Resident Representative for environment and sustainable development who is also the UNDP-GEF Contact Point. The evaluation team will prepare a draft report indicating preliminary findings of the evaluation and discuss the findings in a de-briefing meeting with key stakeholders at the end of the evaluation mission.

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The UNDP country office will provide logistical support for the evaluation team.

Field visits for the evaluation team will be arranged as appropriate.

7. Expected qualifications of the Evaluator/Evaluator Team

- The team will be composed of two members – an international consultant (team leader) and one national consultant with the following attributes:
- Advanced degree in energy related field;
- At least 10 years' working experience with activities promoting energy efficiency in the commercial, and public sectors, including topics such as public awareness raising and marketing, energy sector management, institutional capacity building and financing;
- Demonstrated ability to assess complex situations in order to succinctly and clearly distill critical issues and draw forward looking conclusions;
- Experience in the evaluation of technical assistance projects, preferably with GEF, UNDP or other United Nations development agencies and major donors;
- An understanding of GEF projects, principles and analysis of expected impacts. The local consultant will have demonstrated public and private sector experience in Kenya;
- The team leader will have had experience with the implementation of energy efficiency related projects in a number of developing countries;
- Excellent oral and writing communication skills in English.

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Annex 2: Itinerary

Date	8.30-10.30	11-12.30	lunch	2.00 – 5.00
Monday 11 – 09-06	Meet with NPM Paul Kirai at KAM	Meet with KAM CEO – Betty Maina		UNDP Kenya Chris Gakahu/ Charles Nyandiga
		Former PMU team members Joseph, James, Lawrence, Mary(Upper boardroom)		UNOPS – Nick O'Reagan
Tuesday 12 – 09-06	Meet ERB Chairman and Chair of Energy Award	Meet Spin Knit		IES Team
		Review EMA documentation		Review Project KMS
Wednesday 13 – 09-06	Meet PS – Ministry of Energy	Visit to Synresins, Meet with immediate past chairman of KAM – Mr Devani		Energy consultants: Kiremu, Mutonga, Anjali, Shem, Jabongo, Njeri, Kaboro at KAM Boardroom
Thursday 14 – 09-06	Visit Nairobi Safari Club	Visit to KENGEN		Meet Director of Industry and Chair – PSC. Meet permanent Secretary - MTI
				Meet Co-op Bank
Friday 15 – 09-06	Meeting with University of Nairobi – Engineering Department	Meeting with Kenya Polytechnic		Meet General Motors
WEEKEND				
Monday 18 – 09-06	Meet KPLC	Meet CEO, KAM		Follow up
Tuesday 19– 09-06	Presentation to stakeholders at UNDP conference room	Discussions		Debriefing

Annex 3: List of interviews

Institutions

Betty Mainia, Chief Executive, Kenya Association of Manufacturers
Damaris Kimilu, PR & Communication Officer, Kenya Association of Manufacturers
Walter Kamau, Senior Executive Officer-Trade, Kenya Association of Manufacturers
Moses Kiambuthi, Executive Officer- Business Information, Kenya Association of Manufacturers
James Wakaba, Consultant Energy and Infrastructure Services, Kenya Association of Manufacturers
Arun Devani, Past Chairman, Kenya Association of Manufacturers

Industry

Jayesh Shah, Technical Director, Spin Knit Ltd
Mohammed Ali Godoro, Chief Engineer, Nairobi Safari Club,
Emmanuel Ogot, Director of Operations, General Motors East Africa Ltd

Government

Dr Frederick Nyang, Electricity Regulatory Board
Matere Keriri, Executive Chairman, Electricity Regulatory Board
David Nala, Permanent Secretary, Ministry of Trade and Industry
Fred Mungai, Department of Industry, Ministry of Trade and Industry
David Ngarama, Economist and PA to Permanent Secretary, Ministry of Trade and Industry
J.N.M Maina, Acting Director of Renewable Energy, Ministry of Energy

Consultants

Shem Oduor-Noah, Target Energy Consultants
John Kaboro, Director, Gill Consult
Gabriel Jabongo, Gedox Associates
D.M. Mutonga, Principal Partner, Synchconsult Associates
Muma Mang'erere, Lead EIA/Audit Expert, EMS Consultants Ltd
Ally Charlton, CarbonPositive
Matthew Owen, Natural Resources and Development Consultant

Financial Institutions

Felix Gichaga, Relationship Manager, Institutional Banking Dept, Co-operative Bank of Kenya

Academia

Njeri Kahiu, Jomo Kenyatta University of Agriculture and Technology
Felix Makau Luti, Professor Mechanical Engineering, University of Nairobi

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Professor Francis Asuoi, Principal, College of Architecture and Engineering, University of Nairobi

Cleophas Ondieki, Deputy Principal, Kenya Polytechnic

Gabriel Muthwale, Chief Principal, Kenya Polytechnic

ESCO

Anjali Saini, Director, Integrated Energy Solutions Ltd

Joseph Njuguna, Energy Engineer, Integrated Energy Solutions Ltd

Utilities

Margaret Kanini, DSM Co-ordinator, Kenya Power and Lighting Co. Ltd

David Muthike, PA to Managing Director, KenGen Ltd

Karume Weke, Technical Assurance Engineer, KenGen Ltd

Project implementation staff

Paul Kirai, National Project Manager

Mary Gathoni Kiema, Industrial Co-ordinator

UNDP project staff

Chris Gakahu: Assistant Resident Representative, (Sustainability- Energy and Environment)

Charles Nyandiga, Programme Analyst, (Sustainability- Energy and Environment)

UNOPS Project Staff

Nick O'Regan

Julie Klassen, Portfolio Manager, UNOPS

Annex 4: List of main documentation reviewed

Brief on Centre for Energy Efficiency and Conservation, August 2005
Draft agreement between Ministry of Energy and KAM on CEEC, 2006
Project operational Plans, 2003, 2004, 2005
Summary of Training Programmes, 2001-2006-10-20
Powerpoint presentation on success indicators for GEF-KAM, 2006
Powerpoint presentation on success indicators for GEF-KAM, 2003
Project Document on GEF-KAM Energy Project KEN98G31
Awareness raising workshop reports from Nairobi, Mombasa, Kisumu, Eldoret, Nakuru, Nyeri and Thika, all 2001
Workshop report on Energy Standards, Nairobi, 2002
Workshop report on energy and environment management, Nairobi, 2002
Energy Management Award Application, 2004, 2005
Energy audit data from 20 companies
Full Energy audit reports from 14 companies
Industrial Energy Efficiency Network Report on official launch, Nairobi, 2002
Industrial Energy Efficiency Network Report on bakery sector, 2002
Industrial Energy Efficiency Network Report on textile sector, 2002
Industrial Energy Efficiency Network Report on dairy sector, 2002
Annual Project Report (APR) and Project Implementation Report (PIR) for KAM, 2002
Annual Project Report (APR) and Project Implementation Report (PIR) for KAM, 2003
Annual Project Report (APR) and Project Implementation Report (PIR) for KAM, 2004
Annual Project Report (APR) and Project Implementation Report (PIR) for KAM, 2005
Annual Project Report (APR) and Project Implementation Report (PIR) for KAM, 2006
Saw copies of PMU weekly minutes from 2001-2006. Reviewed a selection
Minutes of 8 Project Steering Committee Minutes from 2001 to 2006

Summary Report on awareness raising and capacity building workshops, 2001

Training course material on boilers and steam systems
Training course material on electrical and compressed air systems
Training course material on energy auditing
Training course material on energy management
Training course material on financial engineering

Reviewed registration forms, participants list, adverts and brochures for above courses

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Training Needs Assessments questionnaires, 2003

Training Needs Assessment Report, UNIDO, 2003

Presentation on workshop on creating a successful energy management business, Dr Datta Roy, DSCL, 2003

Presentations on proposed energy efficiency projects from participants attending financial engineering course

Request for proposals to form an ESCO, 2005

Assessment of energy saving potential in Kenya, 2003

List of energy audits, 2001-2006

Curriculum course material for Industrial Energy Efficiency courses in University of Nairobi and Kenya Polytechnic

Book produced by GEF-KAM, 'Lowering Energy costs, A guide to energy efficiency and conservation in Kenya', 2006

Annual reports of Kenya Association of Manufacturers

Monthly newsletters of Kenya Association of Manufacturers