

Independent Evaluation of an Ongoing Programme 2007

Energy Advisory Project, Uganda

Brief Report

Produced by: AGE G Consultants eG, Germany
This report was produced by independent external experts.
It reflects only their opinion and assessment.

Published by:
Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH

Evaluation Unit

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn
Germany
Internet: <http://www.gtz.de>

Eschborn, 21.12 2007

Tabular overview

The evaluation mission

Evaluation period	10/2007 – 11/2007
Evaluating institute/ consulting firm	AGEG Consultants eG, Kirchheim unter Teck, Germany
Evaluation team	Dipl.-Ing. Detlef Loy, international expert Ing. Jane Nimpamya, national expert (22.10.07 – 26.10.07) Dr. May Sengendo, national expert (27.10.07 – 9.11.07)

The project/programme

Title of the project/programme according to the order	Energy Advisory Project
Project/programme number	2004.2075.2
Overall term broken down by phases	1. phase: 6/1999 – 5/2002 2. phase: 6/2002 – 5/2005 3. phase: 6/2005 – 5/2008
Total costs	Total cost of German contribution: 6,138 T€ for current promotion phase 2,050 T€ DGIS-contribution in current phase 2,000 T€
Objective of the project/programme	Access to modern sustainable energy services for business and the general population, with particular emphasis on the poorer sections of society has improved. (The goal of this phase is the same as the overall Project goal)
Lead executing agency	Ministry of Energy and Mineral Development - MEMD
Implementing organisations	Energy Department of the MEMD
Other participating development organisations	DGIS and Horizont 3000
Target groups	Private und industrial energy consumers with the emphasis on the poor rural population in 3 districts of Uganda.

The rating

Overall rating <i>On a scale of 1 (very good, significantly better than expected) to 6 (the project/program is useless, or the situation has deteriorated on balance)</i>	1
Individual rating	Relevance: 1; Effectiveness:1; Impact: 2; Efficiency: 1; Sustainability: 2

Summary

GTZ GmbH has appointed AGEG Consultants eG to carry out an independent evaluation of the current “Energy Advisory Project” in Uganda. The evaluation was carried out by Detlef Loy (International Consultant) together with Mrs. May Sengendo and Mrs. Jane Nimpamya who acted as local consultants. Before work started on the project an Inception Report was produced and this was based on project documentation and was also in accordance with the service specification. The evaluation in-country took place between October 22nd and November 11th 2007 and comprised, in addition to consultation with GTZ team members, interviews with project partners and representatives of other agencies. These interviews were held in the national capital Kampala and in various other districts of the country in which the project is active. The interviews were supported by an appraisal of the project results. In addition, the contents of many project documents and other background material were considered during these interviews.

In order to cover its energy requirements, Uganda is largely reliant on the use of predominantly non-sustainable biomass (wood), which results in ongoing deforestation. Outside of the towns and cities the electricity network coverage is extremely patchy so that basic energy services, such as lighting, have to be provided using simple petroleum-based lamps. At the same time, it must be noted that the use of both biomass materials as well as of other combustible materials and of electricity in general is extremely inefficient. The use of wood-fire based methods of cooking in both private households and by institutional organisations means that there is not just a constantly rising amount of work needed to collect the wood, or else constantly rising costs involved in purchasing the wood for the fires, but there is also a range of health problems associated with the procurement and use of wood in fires (**the core problems**).

The “Energy Policy Consultation Project” was designed and started in 1999 at a time when the entire Ugandan energy economy, and especially the electricity supply sector, was in a state of collapse (there was step-by-step privatisation and liberalisation of the market). The Department of Energy in the Ministry of Mining and Energy was chosen to be the national state partner in this project and this Department was at that time also going through a phase of development and decision making on locations for projects to be carried out. The original project goal was conceived as follows: „*The Energy Department (ED) is fulfilling its functions of policy development, planning, co-ordination, the provision of information, monitoring and evaluation in an efficient and effective manner.*” The project performed some valuable work in supporting other agencies during these initial years, especially providing institutional support, helping to support the personnel and to improve the market positions of the partner

organizations. The project gave rise to many strategic developments in the field of energy politics and thus contributed to setting the future course in establishing medium and long-term goals in achieving consensus within the framework of a participatory approach.

During the third phase of the project, which commanded the focus of attention during the evaluation stage, the project's work was concentrated on the efficient use of biomass fuels, the increasing of energy efficiency in the industrial, commercial and private sectors, as well as on the widespread introduction of technologies for the use of renewable energies in a decentralised system of power generation. The overall goal of the project as well of this third phase was agreed as being: *„Access to modern sustainable energy services for the economy and the population with special attention to the poorer sections of society is improved.“* For this purpose, the project received funding from the Dutch DC, in addition to that provided by the German contribution. The indicators, which are predominantly defined in terms of quantity, form only part of the desired project outcomes in terms of policy consultation and qualification. On the whole, the design of the project does accord with meeting the needs on the ground, the goals set were realistic and attainable in view of the means and experience available.

The project intervened in a targeted way in the **technical implementation of goals**, especially at the macro and meso-levels. Tangible results of this approach include the setting up of political strategies for developing energy efficiency and renewable energies. These provide the Government with guidelines and target orientations for future policies and may also serve as models for other governments in the region. In the initiatives for general publicity work around the subject of rational energy use we worked in close collaboration with the Energy Ministry. The previous loose arrangement of agencies involved in providing sustainable energy for the Country was viewed very critically, as was the comparatively minor participation of political partner institutions in the implementation of technologically - based measures to meet the country's sustainable energy needs.

Arising from the work of the project, a closely integrated monitoring system for energy-efficient fires and ovens was set up under which a minimum standard of quality was agreed for all new fires and ovens, even in the most remote regions of the Country. The project has played an active role in harmonizing services in the field of energy provision performance with those provided by other donor organizations. Critical preliminary work was also carried out in preparation of a new project which will, for the first time be carried out in a close partnership between TC and FC.

Commercial initiatives aimed at opening up a decentralised system of electricity generation for private consumers were supported during the market development process and through the expansion or establishment of new areas of business through such measures as the development of PPP agreements. At the same time local micro-financing institutions were brought into the project in order to remove some of the obstacles to making the high levels of initial investment required. The initial progress which we have made in this field of start-up investments, which we only began to tackle at the beginning of 2007, may also be described as being very encouraging. Equally successful have been the results which we have so far achieved using photo-voltaic cells to generate electricity for institutional customers (especially health services providers). Co-operation with regional district government authorities has been particularly constructive in this area. Preliminary work in the field of vocational skills training has been of particular benefit here. Amongst its other successes, the project has been able to facilitate, through the continuing education of specialist teachers and the equipping of vocational schools with teaching and visual aids, the introduction into national teaching curricula of a module on solar power generation.

With respect to “industrial and commercial energy efficiency”, we were able to increase the awareness of businesses for the need to make improvements in energy efficiency. This was achieved primarily through the consultation work carried out by members of staff at the Ministry, by independent experts and by knowledge transfer approaches. As part of this work, specialists from India were involved in the further education activities and they were able to take part in an exchange of experiences on the level of one country of the Southern developing world to another. This greatly facilitated the application of experience gained in Uganda to other comparable situations. In addition, and as a result of some of the consultation exercises which were carried out, new technological solutions were discovered over the course of pilot projects, which may well serve as models for other businesses which find themselves in a similar position.

The **performance of project agencies and implementation partners** was developed by, amongst other measures, promoting the growth of the numbers of staff members in the Department of Energy and in training measures designed to increase the levels of energy consultation carried out in the industrial and commercial sector. In order to implement the subsidiary aims of creating “energy-efficient fireplaces and ovens,” the emphasis was predominantly placed on creating partnerships with existing non-governmental organisations and in helping them to achieve the required qualifications. In doing this, technical expertise was transferred in a graduated process at the level of the users and design engineers. In

addition to these measures, other partners from the state sector and the non-state sector were supported by the project in the fulfillment of their roles.

The project goes a long way to meeting the national goals as they are set out in the government's plans for combating poverty and for the development of the crucial energy sector. The project's **relevance** was assessed as being **very good, (Level 1)**. The improvement in the energy supply and the protection of resources now occupy a key position in energy policy and these issues are now widely discussed in other fields of activity. The aims of the project also accord very well with the specifications of the BMZ in its focus on energy. Since 2007 energy supply has also been one of the three main areas of focus for which DC was agreed with Uganda. The close linkage of the project with current difficulties in the field of energy provision and the goal-oriented focusing of the project on eliminating deficits and discrepancies underlines its relevance. This is confirmed by the involvement of other donors in this field and by the decision to continue along these lines in setting up a new project.

In spite of the limiting of the implementation of the plan to selected districts, there has been a significant increase, especially of energy efficient cooking fires across rural areas which has far exceeded all expectations. We therefore assess the project's **effectiveness** as being **very good, (Level 1)**. Up until the middle of 2007 the project was successful in providing, with very modest financial means, around 300,000 cookers in private households. There were also significant increases in the numbers of sustainable commercial ovens, especially in rural and peri-urban areas, which were outside of the project's original target areas. In total we can safely say that most of the project's targets will be reached by the end of the project (May 2008) and will be in most cases exceeded by a considerable margin.

According to internal evaluations carried out by the GTZ, the use of wood has therefore clearly decreased by 50% whilst at the same time the harmful side-effects of reliance on wood for fuel, as well as the physical work expended in order to procure it and the financial expenses involved (health care costs) were also significantly reduced. The **impact** of the project was assessed as being **good (Level 2)**. The project has therefore made a significant contribution to the problem of maintaining the forest cover and has helped to reduce the potential for conflict over the procurement of wood. The threshold to the establishment of a functioning market in solar electricity generating equipment was also crossed for the first time. Basic electricity supply contributes significantly to improving the quality of life in rural areas and also helps to stem the flow of migration to the cities. Increasing electricity efficiency also helps to relieve state finances and balances of trade. In all we may assume

that the spreading out of the measures undertaken in this project to a wider geographical area will lead to many other indirect results.

With only a relatively modest use of resources, the project was able to far exceed, even before the end of the third phase, most of the quantitative indicators which had been set. **Efficiency** was rated as being **very good (Level 1)**. Efficiency makes a significant contribution to the work of conserving resources, to reducing environmental damage and to poverty reduction. It also provides long-term sustainable benefits in the form of the spread of sustainable ovens in the districts where these have been introduced and there is little danger that people in these areas will return to the *status-quo-ante*. In addition, the formulation of sector-specific energy policies helped to bring strategies for solving the country's critical energy supply problems out into the public area and this process has provided a model for the East African region.

The outputs of the project are reflected now in the formulation of official strategies and the setting of official targets. **Sustainability** was rated as being **good (Level 2)**. The decentralised foundation of energy policy is so far severely underdeveloped. This represents a weak point in policy which may only be attributed in part to shortcomings in the project. The close involvement of appropriated regional NGO's in the project is to be applauded and because of this it was possible to set up functional networks at village level and to ensure tight quality control measures. It was also possible to create a solid basis for the market which is primarily commercial orientated concerning the provision of large-scale ovens as well as the spread of solar heating installations. Progress towards sustainability was aided not least by the introduction of modules to the school and professional qualifications curricula and by the further training of specialist personnel.

The consultants rated the project as a whole as being "**very good**" (1) because, especially in terms of its design and successful implementation, it may be used as a model for comparable projects in other locations which face a similar range of problems to those found in Uganda. In assessing the success of the project, slight reductions were made to the ratings given because of the minor deficiencies in the project documentation and because the project was not rooted at a district level to a satisfactory degree.

With regard to the final phase of the current project and to the new project which is planned to succeed it, we would recommend in particular that attention is focussed on the improvement of the communication and information infrastructures and on the step-by-step transfer of knowledge gained from the project to a national institutional agency in order to ensure that the knowledge takes root in society for the longer term after the DC contribution

has ended. There have been suggestions that there needs to be an improvement in the quality of the documentation of the project results and that these should also be made more generally available beyond the confines of this project. We would also recommend that the range of topics covered in the current areas of business should not be further extended. This applies in particular to the intervention in field of traffic management which is currently under consideration. The planned activities in the field of bio-fuels should also be limited to the setting up of pilot projects, so that the slender resources of personnel should not be unnecessarily diverted. We consider that it is logical and right to transfer the results of previous experience to the northern regions. The increased emphasis on seeking and exploiting the potential of water-driven electricity generation is sensible because there is an urgent need for the exploitation of additional natural resources for power generation. In this connection, we see that it is essential to prioritize the provision of electricity for productive purposes over other uses so that this will help to generate employment and income for the populations in the rural regions. It also seems imperative to us to continue a close agreement with other donors, to maintain a constant and intensive dialogue with the Government of Uganda and to encourage it to pursue in a consistent manner the national goals which it has set itself within the Country's energy sector and to ensure that the necessary financial means needed to achieve these objectives are made available in a consistent and reliable manner. We also consider that the efforts made at the level of the consumer should be accompanied by an agreed and stable policy of reforestation, with the support of donor agencies, if necessary.