<Note: The work described is to set up a fund for providing subsidy to eligible rural electrification projects by the private sector, financed from donor funds and a transmission levy>

Terms of reference
Design of a Rural Energy Fund

1. Background

<Brief description of strategy and scope of the Government’s rural electrification program project, under which a Rural Electrification Fund (REF) would be financed. Establishment of the REF is provided for in an Electricity Law>.

Principles for organisation. In the organisation of financial intermediation, there will be a clear separation between the institutional responsibility for (i) the awarding of grants/subsidies to investments in rural electrification and (ii) the provision of debt finance. The REF will deal with subsidies only. All lending is undertaken by private financial intermediaries. The institutional set-up for the Fund is subject to the outcome of ongoing negotiations with the donor community. The determining criteria for the institutional set-up will be investor confidence, donor acceptance and operational efficiency. For reasons of transparency and good governance there will be a clear institutional division between (i) the definition of criteria, rules and principles for fund allocation and (ii) the processing and approval of funding applications from project sponsors.

Funding. According to the Electricity Act, 1999, the moneys of the Fund shall consist of:
- funds appropriated by the Government for this purpose.
- a 5% levy on transmission bulk purchases of electricity generation stations; and
- donations, gifts, grants and loans acceptable to the Government.

Funds provided by the transmission levy will provide only a modest source in the first years, growing rapidly as sales in the interconnected grid increase in response to grid improvements and the expansion in generating capacity. Thus, particularly during the early years, the REF will be largely dependent upon contributions from donors.

The Board of the REF. The Chairman of the RE Steering Committee will be represented on the Board, which should also include private sector representatives with relevant, legal, financial and sector expertise.

Types of investments receiving support from the REF. Three types of investment categories qualify for subsidy assistance by the fund:
1. Rural electrification projects through expansion of the interconnected grid. This covers investments in transmission lines and in power distribution networks:
2. Isolated grid projects comprising generation and distribution activities
3. Stand alone systems using renewable energy, such as solar home PV systems

In addition to the window for providing investment subsidies to the above types of projects the REF may also cofinance feasibility studies for minor grid extension and isolated grid projects. A further option would be to establish an environmental
facility within the REF to specifically promote projects using renewable energy and energy savings.

**Eligibility criteria for grant support.** The objective of the Fund will be to get maximum access per invested subsidy amount subject to the satisfaction of regional equity requirements. Eligibility criteria for grants will be established by “open and public discussion” in accordance with the Act. Eligibility criteria will include the institutional, financial and commercial viability of the project, as well as the satisfaction of the development and social goals for rural electrification. The criteria for fund allocation will be fixed in the annual report to the Cabinet on rural electrification, which is drafted by the RE-Unit and adopted by the RE Steering Committee. After discussion in the Consultative Working Group on Rural Electrification and a public hearing with a broad participation of stakeholders, the criteria for the first year of operation of the REF will be decided on by the RE Steering Committee. The decision document will be a supplement to the Government’s formal rural electrification strategy and plan.

**Links with Rural Electrification Planning.** To guide investment decisions by actors in rural electricity, the System Operator in consultation with the electricity ministry will prepare a 20 year Indicative Plan for Rural Grid Electrification, which will be updated every five years. The indicative plan can be used by the Transmission Company to plan its investment programme for extending the HV-grid (132 kV and above) into rural areas. Investors can make their investments in decentralised generation facilities, approximately knowing from the indicative plan if and when the transmission grid can be expected to come near enough to allow for connection to the national grid. Priority off-grid regional distribution projects identified in the plan will be subject to feasibility studies financed by the electricity ministry, unless initial development of the project has started already at local level. The concession for the regional projects supported by feasibility studies will be offered to the private sector by public tender. Investments in these projects will be subject to the general rules for the allocation of subsidies from the REF. Otherwise, project proposals will be conceived and developed at local level by representatives of future beneficiaries.

**General Procedures.** The REF may operate according to the following procedures:
- Grant funds will be held by a Trust Agent who will disburse them according to agreed and verified project milestones.
- RE subsidies will take the form of one-off grants to cover a proportion of RE project capital costs.
- Grant applications will be assessed against objective eligibility criteria. The process will be objective, transparent and open.
- Projects are not to be managed or majority-owned by the public sector, and projects must demonstrate local community support.
- Maximum grants will be determined on the basis of typical project costs, varying by technology type and possibly also by the geographical region. The maximum limits have yet to be decided but may be between 70 and 90 percent of costs.

**2. Open Questions to be answered in the Feasibility Study**
The proposed structure requires detailing and clarification. The major issues to be addressed in the feasibility study are listed below.

*Does the structure provide sufficient autonomy from political interference in day-to-day processing?*

The proposed legal structure for the Fund is a compromise solution. The draft Electricity Bill submitted by the electricity ministry to Parliament in August 1999 suggested the creation of a Rural Electrification Trust Fund. Parliament insisted on a Fund under the responsibility of the Minister. There is concern that the lack of autonomy will make donors reluctant to make longer-term commitments to provide grant funding to the Fund due to concern about the potential risk of politically dictated funding of low-quality projects.

The Minister is keen to avoid having to make changes in the adopted legislation in order to get alternative approaches implemented. Yet, alternative approaches should be developed and detailed. This will provide the electricity ministry with information on options that are available and the pros and cons of choosing one rather than the other. Having an alternative readily defined, will avoid delays in the implementation of the REF if it turns out that donors are too hesitant to commit funds to a REF that lacks autonomy.

**Organisational status of REFAU**

**REF Administration Unit.** Processing of funding applications will be undertaken by an *REF administration unit.* This could be an outside entity under contract with the Board of the REF, for example, a bank, which would provide these services against a fee. Or it could be a unit organised under the REF.

**Who will approve the applications for funding**

**Approval of funding applications.** One option is to entrust the approval of funding applications to the REFAU as a pure administrative decision. The contracted entity would be subject to close external auditing of the flow of funds, of compliance with the criteria for the awarding of grants that are fixed by the RE Steering Committee, and of efficiency in the processing of applications and requests for funding. The results of the audits would be presented to the REF Board and be summarised in the annual report by the electricity ministry to the Cabinet on the status of rural electrification. An alternative possibility is for the REFAU to do the processing and submit the result to the REF Board for approval.

**Will subsidy rates be fixed or will the REFA organise periodic bidding rounds for subsidies?**

There are two basic alternative options for allocating subsidies; both can be developed into several variants:

- One is on an annual basis *to fix subsidy rates for different categories of investments,* such as a fixed amount per km of transmission line, distribution, line drop; for diesel units and for solar home systems. Any project (promoter) that fulfils the published eligibility criteria for receipt of subsidies from the Fund is
entitled to get the subsidies at the published rates. Project promoters know their entitlements to subsidies already when they plan their projects and can calculate the needed tariff levels, and own-equity and debt-financing requirements. This procedure requires annual updating of the subsidy rates according to the level of demand and the availability of funds.

- The other option is to arrange a call for tender three to four times per year. Available subsidies are allocated to the projects with the lowest subsidy requirement per connected customer. In that case, different application / bidding procedures must be developed for national grid extension and larger mini-grid projects, on the one hand, and for smaller mini- and micro-grids on the other hand.

What are the criteria for fixing maximum subsidy percentages?

The over-riding objective is to get maximum access per invested subsidy amount. This objective has to be translated into useful practical guidelines.

Relevant questions for the tender procedure are:

- It is proposed to allocate subsidies on the basis of the results of competitive bids for minimum subsidies per connected consumer. Competitive bidding for minimum subsidies is an excellent instrument for the case of specific concession projects. It is a less elegant instrument for choosing between alternative projects located in alternative regions. Allocating available subsidies to projects on the basis of “subsidy per connected customer” will lead to connection pricing policies that are artificially inflated up-front. The cost for a utility of “artificial” grid intensification (initial connection of non-viable households to the proposed distribution grid) is much lower than the additional subsidy per connected household, which will be received. Presumably therefore, maximum limits will be fixed on the subsidies that can be obtained.

- Different technologies have different qualities and different costs. PV-systems are cheaper per “connected” household, than grid-based systems in rural areas. Therefore, it is suggested to fix different maximum subsidy levels for different technologies. The methodology for making such choices in rational manner is not explained.

How do you take regional equity into account?

The over-riding subsidy allocation principle is to get maximum access per subsidy amount. Yet, there are concerns about the regional equity implications of this.

Tender procedure. Proponents for the tender procedure have suggested to split rural Uganda into two categories – “relatively electrified” and “less electrified” and to allocate funds between these. How this will result in equitable regional electrification – a politically extremely sensitive issue in Uganda, like in most African countries – is difficult to see. With 80% of the country in the area that needs equitable distribution the logical conclusion is that there must be considerable effort to promote the REF, to build capacity, and then, let the competition begin.
**Fixed subsidy rates procedure.** If there are particularly disadvantaged, politically sensitive regions, specific procedures – such as high subsidy percentages can be worked out for them.

*Is the suggestion of centrally imposed maximum tariffs useful and workable?*

**Tender procedure.** In connection with the tender procedure it has been suggested to fix maximum tariffs for electrification projects. It is not clear, whether the maximum tariffs should be valid overall or for specific regions or districts. It is difficult to understand what the objective of centrally imposed maximum tariffs by Electricity Regulatory Authority, ERA, is, and how it will interface with the whole idea of competitive bidding for minimum subsidies. Presumably, a project promoter has based his bid for subsidies on a given tariff-revenue that he expects to receive. If ERA fixes a lower tariff, he is not likely to go ahead with the project.

In particular, it would not be useful or enforceable to fix maximum PV retail prices. Nor does it seem necessary for the micro-grids.

*What should be the scope of the REF?*

Should the REF be a Rural Energy Fund or a Rural Electrification Fund?

3. Objectives of the consultancy

The overall purpose of the consultancy is to:
- Present decision takers and stakeholders in the country with the pros and cons of different options for organising and operating the REF, enabling them to choose their preferred solution on an informed basis.
- Based on the outcome of consultations, develop a detailed organisation scheme for the REF, including draft statutes and draft procedures (administrative and operating manual), staffing chart and job descriptions for key personnel, and draft TOR for the functions proposed to be contracted out.

4. Outputs

- Detailed organization structure for the REF
- Draft statutes and draft business procedures for the Board of the REF
- Staffing chart and job descriptions for the key personnel in the REF
- Draft TOR for functions to be contracted out.
- Basic procedures for the administration of the REF and the treatment and processing of requests from projects for grant funding.
- Procedures for combining ERA procedures for tariff-approvals with REF procedures for project funding approval
- Procedures for the co-financing by commercial banks of the debt portions of project investments. For the SHS these procedures will be coordinated by the expert working on SHS dissemination.
• A practical methodology for defining objective criteria for determining subsidy levels, which is supported by a spreadsheet simulation model.

5. Scope of work, activities:

The work will be divided into three phases, following the three objectives listed above. The consultant team is expected to undertake the following activities:

Phase I

REF Seminar. The consultant team will during the first visit to Uganda hold a seminar on alternative models for REF that could be applied in Uganda. The seminar will be for key policy staff from the electricity ministry and other agencies of the Government, local stakeholders from industry and finance, and representatives from donors potentially interested in funding the REF. As a minimum, the team will present and discuss similar initiatives in other countries (Chile, Senegal, etc) and their relative merits and weaknesses for Ugandan conditions. The team will give a presentation on the subsidy principles for achieving maximum access. Finally, the team will present its preliminary observations and recommendations for the REF.

Phase II

REF Organisation, Staffing and Procedures. The team will develop detailed proposals for REF organisation, staffing, funding and operating procedures. Detailed job descriptions will be elaborated.

Definition of REF Eligibility Criteria and Conditions.

• Definition of principles, conditions and instruments for the operation of the RE financing mechanism that ensure an optimal allocation of available funding to rural energy projects.
• Development of spreadsheet model for representative types of rural investment projects in the country, which calculates the economic subsidy levels (difference between annuitised lifetime economic cost of supply and annuitised lifetime payments by consumers).
• Based on the above, detailed recommendations for appropriate subsidy levels for different technology options and purposes. Recommendations must include regional equity considerations.

Phase III

Administrative Manual. Preparation of procedures and forms for funding applications, etc.

6. Indicative work-plan and time frame

<p>| Phase I: | 3 months period after contracting |</p>
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<th>Phase II</th>
<th>• 2 months period after Phase 1</th>
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<td>Phase III:</td>
<td>• 3 months period after Phase 2 2001</td>
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7. Inputs of man-days

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<th>Category</th>
<th>Expertise</th>
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| International consultants: | • One economist with previous experience in the design and practical operation of an REF  
• One economist with previous experience in the design of REF and the definition of subsidy principles.  
• Peer reviewer with previous senior responsibility for the operation of a REF.  
• International lawyer for peer review of legal aspects and wording | 27 m.d.  
20 m.d.  
5 m.d.  
2 m.d. |
| Local consultants         | • One lawyer with previous experience with the design of Trust Funds and other forms of infrastructure financing funds | 15 m.d. |
| Local staff and officials  | • One staff from electricity ministry  
• One staff from ERA  
• One staff from the Ministry of Finance | 15 m.d.  
15 m.d.  
10 m.d. |