Terms of Reference

Technical, Economic and Financial Feasibility Study for Bioenergy Technologies

1. Background:
In 2010, the United Nations Development Programme (UNDP) in cooperation with the Ministry of Environment in Egypt launched the “Bioenergy for rural development project” that aims to provide access to modern energy through facilitating and accelerating the market development for new bio-energy technologies (BET) in Egypt.

More than 522,000 households, especially in remote areas have no access to energy, and rely on kerosene fuels to meet their cooking and heating needs. This reliance of kerosene as a source for energy leads to many health hazards including death, especially amongst women and children, as a result of the indoor air pollution.

The Programme in its first phase managed to install 100 biogas units in Assuit and Fayoum governorates providing additional access to energy for about 650 people. These biogas plants are expected to have significant environmental benefits not only on the communities where they were installed but also on the individuals themselves too.

In order to develop a possible plan and strategy for expansion and diversification of the programme, a feasibility study on domestic biogas in the Egypt deems enviable.

2. Objectives of the study
The objective of the assignment is to prepare a roadmap for installation of family size biogas units in Egypt to cater to cooking energy needs specifically in rural Egypt. This is expected to lead to the development of Bioenergy for Sustainable Rural Development Project.

3. Scope of work and proposed methodology
The scope of work is to prepare a plan that can support dissemination of family size biogas plants in rural Egypt. In order to arrive at a plan, it is essential that the pilot programme implemented by UNDP-GEF and other initiatives are assessed, overall potential explored and a perspective plan prepared for implementation in a time span of about 20 years. It will also be valuable to learn lessons, institutional structures, financial incentives provided in other countries such as India, China.

A. Assessment of other country programmes [desk review]

1 Family size biogas units: These are typically 1 to 6 cubic meter, catering to cooking or domestic energy needs of a household.
B. Assessment of the pilot programme, UNDP-GEF-EEAA, and other initiatives [sample field visit]
C. Exploration of biogas potential in Egypt, leading to assessment of potential numbers of households that can benefit [secondary survey, desk review]
   a. livestock details and distribution
   b. household and cooking energy needs
D. Present methods to meet cooking energy, leading to an understanding of costs to device financial incentive plan [sample field visit, secondary survey and analysis]
   c. Type of fuels, cooking devices used and quantity of cooking fuels used
   d. Cooking energy costs [direct and indirect]
   e. Kerosene, LPG supply, policies, and future plans
E. Potential assessment for family size biogas plants in Egypt and plan for dissemination [secondary data and desk review]
   f. Potential demand for domestic biogas
   g. Possible supply of services for domestic biogas;
   h. Techno-economic and socio-cultural feasibility for biogas units in Egypt
F. Capacity development programme to build biogas units, support technical aspects [secondary survey from other countries and desk review]
   i. Setting standards, benchmarking, quality assurance and quality control
   j. Building cadre of mesons, technicians, supervisors, service providers, technical support staff, etc.
   k. Developing manufacturers on biogas stoves, burners, components
G. Development of National Programme on Biogas Development in Egypt [desk research, secondary survey of other nations programmes]
   l. A rough outline for a national programme on domestic biogas targets [short term – 5 years, medium term -10 years and long term – 20 years],
   m. potential partners/stakeholders, define roles and responsibility
   n. proposed organization structure to implement the programme [national, province level, village level implementation, technical support, MIS, monitoring and evaluation, etc.]
   o. Funding required, possible sources of funding

4. Time schedule
The assignment is to cover **four months** starting **October 13, 2013**. Draft report shall be submitted before **January 13, 2014** and final study report will be presented before **February 12, 2014**.

5. Deliverables – Task, time and payment schedule
A well-structured and clearly written feasibly study report must be submitted and the main report should not exceed 50 pages.
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<thead>
<tr>
<th>SN</th>
<th>Task Name</th>
<th>Time</th>
<th>Payment</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>1</td>
<td>Draft report on assessment of biogas programmes in other countries [India and China] and learnings for Egypt</td>
<td>1 month</td>
<td>20%</td>
<td>In parallel</td>
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<td>2</td>
<td>Draft assessment report on UNDP-GEF-EEAA biogas programme and any other initiatives in Egypt</td>
<td>2nd month</td>
<td>20%</td>
<td>In parallel</td>
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<td>3</td>
<td>Draft report consisting of following chapters</td>
<td>3rd month</td>
<td>40%</td>
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<tr>
<td></td>
<td>• Learning from biogas programme from India and China</td>
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<tr>
<td></td>
<td>• Learning from UNDP-GEF-EEAA biogas programme and others in Egypt</td>
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<td></td>
<td>• Potential for biogas generation and households that can use biogas</td>
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<td>• Present method of cooking in Egypt, costs, supplies, policies etc.</td>
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<td></td>
<td>• Capacity development to implement biogas programme in Egypt</td>
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<td></td>
<td>• Development of NPBD-E [Targets short term – 5 years, medium term -10 years and long term – 20 years, Potential partners/stakeholders, define roles and responsibility, proposed organization structure to implement the programme, Funding required, possible sources of funding]</td>
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<td>4</td>
<td>Workshop to discuss the NPBD-E [2 1/2 day] [including one visit to few biogas plants in Fayoum]</td>
<td>During 4th month</td>
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<td>To be arranged by Bioenergy Project</td>
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<td>5</td>
<td>Final report</td>
<td>End of 4th month</td>
<td>20%</td>
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6. Team organization and credentials:
Indicate the structure of the team designated by your organization to work on this assignment, addition to Management team that would be available to provide overall project coordination and oversight.
Firm's past experience and references
- Provide a summary of similar assignments your organization has conducted;
- Provide details of your organization's international / regional experience.

7. Fees & Expenses
   It is recommended that the Firm presents an easy-to-calculate fee structure; the fee structure proposal format shall be as follows:
   - Flat fees for each task, separately; man hours and number of hours required.
   - Out of pocket expenses, which shall be reasonably capped. “Out of Pocket expenses” shall mean the Firm’s travel expenses, accommodation and sustenance expenses, and any expenses or costs of the same nature incurred by the Firm for the benefit of the project in connection with the scope of work.

8. Evaluation and Selection Criteria
   The Unit will base its selection and evaluation of the proposal received from the Advisor based on the following key criteria, which shall be taken into account:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation Weight</th>
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<tbody>
<tr>
<td><strong>Technical Capacity 70 %</strong></td>
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<tr>
<td>Personnel/Team qualification</td>
<td>15 %</td>
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<td>Expertise of Firm / Organization submitting Proposal</td>
<td>15 %</td>
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<td>Proposed Work Plan and financial models</td>
<td>20 %</td>
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<td>Understanding of the ToR</td>
<td>10 %</td>
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<td>Time line</td>
<td>10 %</td>
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<td><strong>Financial Proposal 30 %</strong></td>
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<td>All-in cost (Fees &amp; Expenses)</td>
<td>30 %</td>
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9. RFP Process and Deadlines
   - Interested Firms are invited to submit three copies of the two sealed envelopes (Technical & Financial) by mail to the address provided hereunder not later than 15:00 (Cairo time) on October 7, 2013.
   - The project will evaluate the proposals on the basis of the evaluation and selection criteria prior to the final selection of the Firm.

For any queries, please contact:

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