Terms of Reference
Renewable Energy Small Power Purchase Arrangements

Background

<Brief description of country characteristics, potential of renewable energy for electrification of unserved populations, objectives and scope of proposed Bank operations>

Objective

The objective of this consultancy is to: 1) develop a standardized power purchase agreement (SPPA) document that would be provided to small power producers who would contract to sell electricity at a non negotiable, published (advertised) power purchase tariff; 2) develop recommendations for a power purchase tariff and 3) build the capacity of small power producers to utilize this SPPA to invest in renewable energy small power production.

Scope of Work

Consultancy services required consist of the following three tasks: 1) Preparation of a Standardized Small Power Purchase Agreement, 2) Preparation of a Small Power Purchase Tariff and 3) Workshop on Development of Small Power Projects.

Task I Preparation of a Standardized Small Power Purchase Agreement

The tasks are expected to be carried out by a PPA specialist and a tariff specialist.

1. Workshop on principles of SPPAs and Purchase-tariffs. The consultants shall organize a workshop in which the principles of SPPAs, Purchase-tariffs and their commercial elements will be discussed. Similar small power purchase agreements from other countries as well as any currently used locally will be used for illustration. The workshop will help to define preliminary recommendations for SPPA-outline and the tariff calculation methodology. Proposed participants of the workshop are relevant ministries, the utility, Private Developers, Banks etc.

2. Prepare Draft PPA. The consultants shall study operational, legal, and administrative implications arising from the grid connection of privately owned power plants. Based on this knowledge and the guidance received from the Government and the utility during the training workshop, the consultant shall develop a draft PPA document. The document describes in simple and easy to understand language, the power purchase tariff and the rights and obligations of both the Govt/PC and the small power producer, including interconnection arrangements, metering, network protection, safety, coordination requirements, penalties for default, dispute resolution, changes in future pricing, etc. Contract terms and specifications shall be in accordance with accepted practice, laws and regulations in the country.

3. Workshop to Discuss PPA. The PPA consultant shall travel to the country to discuss the draft SPPA with relevant government agencies, the three Power Companies and potential project developers. The PPA specialist will be responsible for explaining the standard provisions and the initial position taken on the commercial and technical elements.

4. Final PPA. Following review by the pertinent government agencies and the World Bank, the draft PPA document will be revised to include comments provided and thereby become a Final Standardized Power Purchase Agreement.
Task II Preparation of a Small Power Purchase Tariff

The Small Power Purchase Tariff will be based on the avoided cost principle. This guarantees the utility that electricity bought from the independent power producers is not more than its own generation cost of generation and supply.

1. Workshop on principles of SPPAs and PP-tariffs. The Tariff specialist shall together with the SPPA consultant organize a workshop in which the principles of SPPAs, PP-tariffs and their commercial elements will be discussed (see Task 1).

2. Analysis of Avoided Cost. The Consultant shall estimate the utility’s avoided financial and economic cost of electricity supply. Costs shall be differentiated by capacity (generation, transmission, distribution), energy (peak/off-peak, firm/non-firm, seasonality), and by service voltage (high voltage - HV, medium voltage - MV, low voltage - LV). The work will build upon previous work completed on this subject.

3. Development of Power Purchase Tariff. Using the avoided costs estimates in 2, the consultant shall formulate recommendations for power purchase tariffs. The tariffs should be based on a rationalization that is transparent and simple to implement.

4. Updating the Tariff. The consultant shall recommend a simple and transparent methodology for updating the power purchase tariff. Bearing in mind that many potential sellers who enter into a long term firm contract may need to be assured of a "price floor" over the duration of the contract.

5. Workshop to Discuss Tariff. The consultant shall travel to the country to discuss the Power Purchase Tariff with utility and potential project developers (see also Task I.3.).

6. Final Tariff and Methodology for Updating. Following review by the pertinent government agencies and the World Bank, the draft Tariff document will be revised to include comments provided and thereby become a Final Tariff and a Final Updating Methodology Document.

Task III Workshop on Development of Small Power Projects

The consultant shall organize a workshop in which the SPPA and Tariff will be used as basis to explain to government agencies, private developers and others on how to set up an independent small power project. The consultant will use the outline of a small power project business plan as talking points.

The intended audience for the workshop also includes policy and decision makers from the government, banking and utility sector to explain the rational, strategy and importance behind the SPPA approach. For a suggested outline of the workshop see attachment 2.

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Estimated Cost: US$ 150,000
Attachment 2 Outline of the Workshop on Development of Small Power Projects

POLICY SESSION (1 day):

I. Overview of Bagasse Cogeneration and Mini-Hydroelectric Potential in the Country
   - Financial, Economic, and Environmental Advantages to Utility, Industry and Government
   - Need for Policy and Regulatory Structure

II. Technical and Business Development Overview
   - Bagasse Cogeneration and Hydroelectric Options
   - Real Project Examples from Countries in Region
   - Power Purchase Agreements
   - Electricity Pricing
   - Project Finance

IMPLEMENTATION SESSION (4 days)

Day 2

I. Steps in Project Identification and Definition (parallel sessions for hydro and bagasse power generation)
   - Resource Assessment
     - Watersheds and Hydrology
     - Alternative Fuels
     - Alternative Uses of Bagasse and Water
   - Reconnaissance
   - Prefeasibility Assessment
   - Feasibility Assessment

II. Long Term Electricity Sales Commitment, Benefits and Risks

Day 3

III. Electricity Pricing
   - Energy and Capacity
   - Avoided Costs
   - Marginal Costs
   - Pricing Variables

IV. Power Purchase Agreements
   - Contract Term
   - Contractual Capacity Factor Requirements
   - Time Limit for Finance Commitment
   - Time Limit for Construction and Commissioning
   - Penalties and Incentives
   - Interconnection
   - Dispatchability
   - Price, Price Escalators, and Hard Currency Indexing
• Electricity Buyer Payment Terms
• Wheeling and Banking Terms

Day 4

V. Project Finance Considerations
• Definition of Finance Strategy Options
• Local Currency and Foreign Exchange Impacts
• Debt, Equity, and Debt Security Options and Strategies
• Role of Bilaterals and Multilaterals
• Potential for Beyond the Norm Environmental Costs
• Financial Analysis and Pro Forma Preparation
• Project Documentation

Day 5

VI. Project Scope, Definition, and Timing
• Reaching Commitment
  • Environmental Impact Assessment Approval
  • Power Purchase Agreement Signing
  • Formal Commitment of Project Finance Package
• Tendering and Long Lead-Time Items (parallel sessions)
• Construction Scheduling (parallel sessions)
• Financial Disbursement Scheduling
• Commissioning and Acceptance

VII. Training Recap with All Topics Question and Answer Period