REQUEST FOR PROPOSALS

FOR

STUDY ON SOCIO-ECONOMIC AND ENVIRONMENT IMPACTS OF BIOMASS POWER PROJECTS

Under

UNDP-GEF PROJECT on ‘REMOVAL OF BARRIERS TO BIOMASS POWER GENERATION IN INDIA’

PROJECT MANAGEMENT CELL
BIOMASS POWER PROJECT
MINISTRY OF NEW AND RENEWABLE ENERGY
BLOCK NO. 14, CGO COMPLEX, LODHI ROAD
NEW DELHI-110003
Telefax: 011-24369788

March, 2015
SECTION – 1
INVITATION OF BIDS
SECTION 1: INVITATION OF APPLICATION

The Ministry of New and Renewable Energy (MNRE), Government of India (GOI) is currently implementing a Biomass Power / Cogeneration and Gasifier programme with the main objective of promoting these technologies for optimum use of country’s Biomass resources for grid & off grid power generation or heat applications. Various promotional incentives in the form of capital subsidy, excise duty exemption, concessional custom duty, tax holidays, etc., are provided to the sector in these programmes. As of now, the cumulative biomass power capacity realized is around 4,300 MW. In addition, Ministry is also implementing a MNRE-UNDP/GEF Project on “Removal of Barriers to Biomass Power Generation in India”.

2. Considering that biomass is a promising source for generation of power and has the potential to provide large productive employment in rural areas, the outcome of the study may be useful in securing term loan from Banks and other Financial Institutions. This would provide an impetus to the sector through timely and adequate credit. As most biomass based power plants rely on agricultural residue, a significant part of the fuel supply chain is managed by the rural farmers and traders. Given the above, there exists a need for a detailed study on the social, economic and environment impacts of Biomass Power project, especially in the local rural economy.

3. The Ministry invites sealed offers under two bids system (Part I : Techno - Commercial Bid & Part II : Price Bid) from the Consultancy Organizations/Firms having experience and expertise in Renewable Energy (especially biomass) and livelihood for undertaking the assignment on “Study on Socio-Economic and Environment Impacts of Biomass Power Projects” under the MNRE-UNDP/GEF Project on “Removal of Barriers to Biomass Power Generation in India”. Interested organizations/firms may submit their proposal to the Project Management Cell (PMC) established in the Ministry of New and Renewable Energy, Block 14, CGO Complex, Lodi Road, New Delhi – 110003, Telefax: 011-24369788, Email: jainvk@nic.in. Last date for submission of the proposal is 30 March 2015.

(I) This RFP contains Terms of Reference and Instructions to Bidders for formulation and submission of proposals.

(II) The MNRE/Project Management Cell (PMC) reserves the right to alter any or all terms and conditions specified in this RFP. The terms and conditions governing the proposed assignment are not exhaustive and additional conditions, as may be mutually accepted, will be included in the Work Order / Contract Agreement. These conditions are also subject to modifications or deletion listed herein and clearly indicates specific deviations, if any, considered absolutely necessary.

(III) The Bidders are free to make suggestions in their offer, in addition to the specified Scope of Work or Methodology, to meet the objectives of the proposed assignment.

(IV) No Pre-bid meeting will be convened. Queries, if any, will be responded by the MNRE/PMC up to 05.30 P.M. on 25 March, 2015.

(V) At any time before the submission of proposals, the PMC may, for any reason, whether at its own initiative, or in response to a clarification requested by a bidder, carry out amendment(s)
to this RFP. The amendment will be notified in writing or by Email or Fax to all Bidders and will be binding on them. The PMC may at its discretion extend the deadline for the submission of proposals. The contractual obligations shall be as per the terms and conditions in Work Order issued to the successful bidder at a later stage.

(VI) The PMC reserves the right to reject all or any of the proposals without assigning any reason thereof.

(VII) It may be noted that the costs of preparing the proposal and of negotiating the contract, including visits to the PMC for Presentation, are not reimbursable, and the PMC is not bound to accept any of the proposals that may be submitted.

(VIII) The selected Bidder is expected to commence the assignment from the date specified in the Work Order.

4. Proposals in sealed cover may be submitted to National Project Coordinator, Project Management Cell (PMC), Biomass Power Project, Ministry of New & Renewable Energy, Block 14, CGO Complex, Lodi Road, New Delhi – 110003. Telefax: 011-24369788, E-mail: jainvk@nic.in and for details, please see Section-3 on "Instructions to Bidders".

5. Last date for submission of proposals is 05:30 P.M. on 30 March, 2015.
SECTION – 2
TERMS OF REFERENCE
SECTION – 2: TERMS OF REFERENCE

2.1 Introduction

Biomass has always been an important energy source for the country considering the benefits it offers. It is renewable, widely available, carbon-neutral and has the potential to provide significant employment in the rural areas. Biomass is also capable of providing firm energy. About 32% of the total primary energy use in the country is still derived from biomass and more than 70% of the country’s population depends upon it for its energy needs. MNRE has realised the potential and role of biomass energy in the Indian context and hence has initiated a number of programmes for promotion of efficient technologies for its use in various sectors of the economy to ensure derivation of maximum benefits. Biomass power generation in India is an industry that attracts investments of over Rs.600 crore every year, generating more than 5,000 million units of electricity and yearly employment of more than 10 million man-days in the rural areas. For efficient utilization of biomass, bagasse based cogeneration in sugar mills and biomass power generation have been taken up under biomass power and cogeneration programme.

In addition to the Biomass Power Programme, Ministry is also implementing a MNRE - UNDP / GEF assisted Project on “Removal of Barriers to Biomass Power Generation in India.” The aim of the Project is to accelerate the adoption of environmentally sustainable biomass power technologies by removing the barriers identified, thereby laying the foundation for the large scale commercialization of biomass power through increased access to financing. The Biomass Conversion Technologies that are proposed to be deployed in establishment of Model Investment Projects (MIPs) are – Combustion, Gasification and Cogeneration using different type of captive and distributed biomass resources.

Considering that biomass is a promising source for generation of power and has the potential to provide large productive employment in rural areas, the outcome of the study may be useful in securing term loan from Banks and other Financial Institutions. This would provide an impetus to the sector through timely and adequate credit.

As most biomass based power plants rely on agricultural residue, a significant part of the fuel supply chain is managed by the rural farmers and traders. Given the above, there exists a need for a detailed study on the social, economic and environment impacts of Biomass Power project, especially in the local rural economy.

2.2 Objective

The key objective of the study will be to assess and quantify the socio-economic and environmental effect of biomass based power projects on the rural economy and environment. This would involve 1 MW and above grid-connected power plants.
2.3 Scope of Work

The study would focus on the socio-economic and environment impacts that biomass power plants have in the surrounding area and economy. The assignment shall include only biomass grid-connected power plants.

The approach would entail a detailed case-study method spread across number of states and Biomass power plants to cover regional and seasonal variation, and impact of scale, fuel type and design of plant operations. The following socio-economic and environmental impacts will be considered under this study:

1. The impact on social welfare: income, health and education
2. The impact on the security of energy supply
3. The impact on local pollution and environment
4. The impact on migration flows

The appointed Consultant has to share the Terms of Reference of the study with the concerned State Nodal Agency and take their inputs for designing the parameters and formats for data collection. On-site data collection has to be done from existing Biomass Power plants (mentioned below), and communities affected by the collection of biomass and distribution of power. The most important aspect would be the study of the effect of biomass supply chain on the local economy. Critical factors such as overall cost, conversion efficiency, transportation cost, feedstock availability, labour requirement, weather conditions, local infrastructure, supply logistics, quality and availability of electricity in the local grid have to be taken into account while designing the study.

Primary data has to be collected across parameters that will cover the following aspects with regards to the overall supply and value chain of a biomass power plant:

1. Study the existing logistics of fuel linkage and supply in the plants, including cost and benefits of energy plantation, collection of agri-residues, transportation, processing, storage and seasonal variations;

2. Map the total economic, social and health impact across the total fuel supply chain, including indirect and ripple down benefits;
   a. Quantify the effect on income of marginal, small, and/or large farmers, including off-season income;
   b. Emergence and economics of new processing, distribution, and service industries in rural communities around the establishment of Biomass plants;
   c. Effect on local labour opportunities, number of man-day of wage labour, additional income and migration flows;
   d. Effect on health conditions, due to biomass burning.
3. Quantification of the benefits that have flowed down to local/regional manufacturers/industries as a result of the Biomass power plants

4. Study the avoided emission of particulate matter by using agricultural residue in Biomass Power plants as compared to open burning.

5. The sites for collection of primary on-field data would include:
   - Transtech Green Power Ltd, Kachela Bagsari-Sanchor, Jalore, Rajasthan – 12 MW
   - SM Environmental Technologies Pvt. Limited, Chippabarod, Rajasthan – 8 MW
   - Malwa Power Ltd., Gulabewala, Muktsar, Punjab – 7.5 MW
   - Orient Green Power Company Limited, Narsimhapur, Madhya Pradesh – 10 MW
   - Orient Green Power Company Ltd, Pollachi, Tamil Nadu – 10 MW
   - SLS Power Ltd, Nellore, Andhra Pradesh – 6.5 MW

   All data sheets and minutes have to be jointly signed by the appointed Consultant and the Project Developer. All decisions/discussion in meetings have to be minuted by appointed Consultant and signed by participating entities. The final report has to be presented to the State Nodal Agencies and has to be accepted by all concerned stakeholders.

   Indicative study parameters for the proposed study are given below:
# Study Parameters – Socio Economic and Environmental Impacts of Biomass Power Plants

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<td>Effect on education, health and other spending due to increased income</td>
<td>Effect on education, health and other spending due to increased income</td>
<td>Effect on education, health and other spending due to increased income</td>
<td>Avoided expenditure to local communities by use of power plant by-product</td>
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<td>Emergence of new industries in local area</td>
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<td>Training and skill development in local community</td>
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<td>Economic</td>
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<td>Increase in Labour &amp; Wages</td>
<td>Increase in Labour &amp; Wages</td>
<td>Additional income by use of power plant by-product</td>
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<td>Additional income for farmers /small entrepreneurs</td>
<td>Additional income for farmers /small entrepreneurs, including transport</td>
<td>Additional income for local small entrepreneurs</td>
<td>Additional income for local manufacturers/industries</td>
<td>Additional income for local small entrepreneurs, including consumable suppliers</td>
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<td>Economic value of plantation raised</td>
<td>Economic value of infrastructure created</td>
<td>Economic value of infrastructure created</td>
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<td>Environment</td>
<td>Use and Development of wasteland</td>
<td>Reduction in local air pollution by avoided burning of biomass</td>
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<td>Avoided carbon emission compared to conventional thermal power plants</td>
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<td>Carbon Sequestration</td>
<td>Effect on local water bodies</td>
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<td>Avoided SOx and other emissions compared to</td>
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<td>Effect on water table</td>
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<td>Effect on water quality around the plant</td>
<td>Improvement of soil quality through use of power plant by-product</td>
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<td>Avoided soil erosion</td>
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2.4 Time Frame

6 months from the signing of contract

2.5 Team Requirement

- Team Leader should be a Subject Matter Specialist with minimum 10-12 years’ experience in the biomass power sector.
- Team members should include specialists in biomass power sector, field research assignments, economics & statistical analysis and social & livelihood sector with minimum 5-8 years’ experience;
- Field staff with experience in data collection, collation and community interaction.

2.6 Qualifying Criteria

The interested bidders are required to have the following expertise:

- The agency should preferably be New Delhi based or have a permanent office in New Delhi;
- A team with technical expertise in fields mentioned in Clause 2.5;
- Prior work experience in renewable energy and / or energy access with bilateral or multilateral organizations and the GOI is desirable.
- Awareness of the energy security/economic issues related to biomass sector is desirable.
- Excellent planning and organizational skills and ability to deliver services even in tight deadlines.

2.7 Deliverables

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<th>Deliverable</th>
<th>Payment Terms</th>
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<tr>
<td>1</td>
<td>Report of inception workshop</td>
<td>25%</td>
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<tr>
<td>2</td>
<td>Completion of field level data collection</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>Presentation to and acceptance of final report by all concerned stakeholders</td>
<td>25%</td>
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<tr>
<td>4</td>
<td>Editing, Designing, Printing and submission of 300 copies of the final report</td>
<td>25%</td>
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2.8 Terms of Payment

I. As per deliverables stated in 2.7; or
II. 50% of the approved contract value will be released as advance against submission of Bank Guarantee (BG) of the same amount along with the work/sanction order; and
III. Balance 50% will be released after submission of 300 copies of the final report to the PMC. The BG’s validity will be for period of one year.

Note:

a) The assignment will be target oriented and if not achieved, the contract amount may be reduced proportionately which will be at the discretion of PMC after taking decision by the Project Executive Committee.

b) PMC will have the right to reject the L-1 bid even, if the budget is found to be extra ordinary high.
SECTION – 3
INSTRUCTIONS TO BIDDERS FOR FORMULATION AND SUBMISSION OF PROPOSALS
SECTION – 3: INSTRUCTIONS TO BIDDER(S) FOR PREPARATION AND SUBMISSION OF PROPOSALS

The bidders are expected to examine all terms and conditions and instructions included in the document. Failure to provide all requested information will be at the bidders risk and may result in rejection of their proposal. Further, the bidders are requested to submit technical and financial proposals separately.

3.1 PREPARATION OF TECHNICAL PROPOSAL

The Technical Proposal for the assignment should give a detailed description of each of the activities mentioned in the Section 2.3 and may include the following:

I. Expertise of the bidder in accomplishing the contract to be awarded. Assignments undertaken by them may be highlighted, providing herewith the title of the assignment, client for whom it was carried out, cost of the assignment, timeline, team strength, outputs/results. Assignments carried out for major multilateral/bilateral organizations, GOI and other similar organizations should be highlighted.

II. Personnel/Team qualification: Curriculum Vitae of the team members or external experts who will be a part of the team. (Note: These members should be available for the assignment to be contracted).

III. Letter of commitment to
   a. Depute resources at proposed time commitment and
   b. Ensure that the team would remain unchanged for the first two months and subsequently, any change in the team members would be replaced by resource of similar qualification/experience within two weeks.

IV. Proposed work plan, approach and methodology.

3.2 PREPARATION OF FINANCIAL PROPOSAL

The financial proposal should cover all costs, with break-up of costs, for providing the services against all the activities outlined in the Terms of Reference including fees and remuneration for services, preparation of reports, and other related expenditure in the field and home office. The following details should be provided with the Financial proposal:

- Dedicated number of man-days of each team member to the assignment and per man-day rates of each team member
- Number of consultancy days required per activity
- Activity wise budget
3.3 EVALUATION AND PROCEDURE FOR SELECTION OF THE BIDDER

An Evaluation Committee will be constituted to evaluate the technical and financial proposals and recommend award of the consultancy assignment.

3.3.1 EVALUATION OF TECHNICAL AND FINANCIAL PROPOSALS

(I) Points for evaluation for technical proposals:

<table>
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<th>Points</th>
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<tr>
<td>Approach/Methodology/Work Plan proposed</td>
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<tr>
<td>Expertise/experience of the organization in relevant area</td>
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<td>Qualifications/experience of the key personnel</td>
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<td><strong>Total:</strong></td>
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(II) Financial proposals will be opened only for those bidders who obtain more than 70 points on the technical proposal. Eligible bidders will be invited to the opening of financial bids.

(III) 70% weightage will be assigned to technical bids and 30% to financial bids.

(IV) The combined score of the technical and financial evaluation will be used to recommend the award of the consultancy assignment.

3.4 GENERAL INSTRUCTIONS

3.4.1 Bids that are incomplete in any respect, or those that are not consistent with the requirements as specified in this RFP, or those that do not adhere to formats, wherever specified, may be considered non-responsive and may be liable for rejection.

3.4.2 All communication and information should be provided in writing.

3.4.3 No change in, or supplementary information to a Bid, shall be accepted once submitted. However, the PMC reserves the right to seek additional information from the Bidder(s), if found necessary, during the course of evaluation of the Bid. Non-submission, incomplete submission or delayed submission of such additional information or clarifications sought by the PMC, may be a ground for rejecting the Bid.

3.4.4 The PMC reserves the right to reject any or all the Bids submitted in response to this Request for Proposals at any stage without assigning any reasons whatsoever.
3.4.5 Firms/organizations if found to have indulged in any corrupt or fraudulent practices will have their bids not taken up for consideration.

3.4.6 The PMC reserves the right to change any or all of the provisions of the RFP Document. Such changes would be intimated to all parties.

3.4.7 The successful bidder shall deposit 10% of the contract price as a security deposit in the form of Bank Guarantee within 7 days of issue of Work Order. The security deposit shall be in the form of an irrevocable Bank Guarantee issued by a Scheduled Commercial Bank, as described in clause 3.4.8, in favour of the PMC, as per the format given at Annexure – I: This security deposit on prescribed format shall be released only after successful completion of the consultancy assignment.

3.4.8 Bank Guarantees issued by the following Banks only would be accepted:

- State Bank of India and its subsidiaries
- Any Indian Nationalized Bank
- IDBI or ICICI Bank or Axis Bank

3.5 Submission of Proposals

The Bidders must submit one ‘Original’ and ‘Two Copies’ of the Technical proposal in one envelope, which must be sealed and clearly marked “Technical Proposal”. The Financial proposal must be kept in a separate envelope, which must be sealed and clearly marked “Financial Proposal”. Both these envelopes must then be placed in a single outer envelope, which must be sealed and addressed to the National Project Coordinator, Project Management Cell (PMC), Ministry of New and Renewable Energy, Government of India, Block No. 14, C.G.O. Complex, Lodi Road, New Delhi, India – 110003, Telefax: 011-24369788, Email: jainvk@nic.in

The Outer Envelope must further be clearly marked: Bid for “Conduct of Study on Socio-Economic and Environment Impacts Of Biomass Power Projects” under UNDP-GEF project on “Removal of Barriers to Biomass Power Generation in India”

The outer envelope should also clearly indicate bidder’s full address. Bids received with outer envelopes that do not indicate this information are liable to be rejected.

The Bidder(s) may submit their Bids by Registered Post or in Person, so as to reach the Ministry by the time and date stipulated by the PMC.

The Ministry shall not be responsible for any delay in submission of the Bids. Any Bid received by the Ministry after the deadline will not be accepted by the PMC.
ANNEXURE-I

BANK GUARANTEE FORMAT
(To cover payment of Security Deposit)

On a stamp paper of Rs.------------------- (From any bank listed under 3.4.8)

To
National Project Coordinator,
Project Management Cell (PMC),
Biomass power Project,
Ministry of New and Renewable Energy,
Block No. 14,C.G.O. Complex,
Lodi Road, New Delhi- 110003
Fax. No. 011- 24363638

Dear Sirs,

In consideration of your agreeing to accept Bank Guarantee for Rs…………….. towards Security Deposit, Messrs. …………………………. Having its/ their office/ registered officer at ………………………………. (hereinafter called the contractor) towards Security Deposit for the due performance of the Contract entered into by them for the ………………………………. at ……………………………………… in accordance with the due fulfillment of the said Contract or of the terms and conditions contained therein, we hereby undertake and agree to indemnify and keep you indemnified to the extent of Rs. ………. (Rupees …………………………………………………………………. only.

In the event of any loss or damages, costs, charges or expenses caused to or suffered by you by reason of any breach of non-observance on the part of the Contractor of any of the terms and conditions contained in the said Contract, we shall on demand and without reference to the Contractor irrevocably and unconditionally pay you in full satisfaction of your demand the amounts claimed by you; provided that our liability under this guarantee shall not at any time exceed Rs. ……….. (Rupees ……………………………………………………….. only).

The guarantee herein contained shall remain in full force and effect till you certify that the terms and conditions of the said contract have been fully and properly carried out by the contractor, and that the contractor has furnished necessary deposit or fresh guarantee towards his obligation during the Defect Liability Period of the works or till this guarantee is duly discharged by you in writing.

We also agree that your decision as to whether the contractor has committed any breach or non-observance of the terms and conditions of the said Contract shall be final and binding on us.
We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payments made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

This guarantee shall continue to be in full force and effect upto and inclusive of………………………………….. Notwithstanding the above limitation, we shall honor and discharge the claims preferred by you within thirty days of the expiry of this guarantee.

We shall not revoke this guarantee during its currency except with your previous consent in writing.

This guarantee shall not be affected by any change in the constitution of our Bank or of the Contractor firm.

Your neglect or forbearance in the enforcement of the payment of any money, the payment whereof is intended to be hereby secured or the giving of time for the payment hereto shall in no way relieve us of our liability under this guarantee.

Dated this ………………. Day of ………….., 2015

Faithfully

For……………………………

Signature and seal of the bank

(AUTHORISED SIGNATORY)