

**Checklist in respect of selection of Design Consultancy for EER&M of Parli TPS (U-3)****(a) Names of all consultants who submitted proposals;**

1. M/s Tractable Engineers Pvt.Ltd New Delhi
2. M/s Evonik Energy Services (India) Pvt.Ltd.Noida
3. M/s Energo Engineering Projects Ltd.New Delhi.

**(b) Technical points assigned to each consultant;**

Sr.No.	Consultant Name	Technical Score
1	M/s Tractable Engineers Pvt.Ltd New Delhi	62.88
2	M/s Evonik Energy Services (India) Pvt.Ltd.Noida	78.76
3	M/s Energo Engineering Projects Ltd.New Delhi.	81.75

\* Minimum Technical Score required 75 Points. M/s Tractable Engineers Pvt. Ltd New Delhi scored 62.88. The technical evaluation report submitted to HO & World Bank for approval, after receipt of NOL in this connection further processing for Financial proposal carried out.

**(c) Evaluated prices of each consultant;**

Sr.No.	Consultant Name	Price Quoted (In Rs.)
1	M/s Evonik Energy Services (India) Pvt.Ltd.Noida	11000000.00
2	M/s Energo Engineering Projects Ltd.New Delhi.	10101833.34

**(d) Final point ranking of the consultants;**

Sr. No.	Consultants' names	Technical Evaluation		Financial Evaluation		Combined Evaluation	
		Technical Scores <sup>1</sup> S(t)	Technical rank	Financial scores <sup>3</sup> S(f)	Financial rank	Scores S(t) * T + S(f) * F	Final Rank
1	M/s Evonik Energy Services (India) Pvt.Ltd.Noida	78.76	2	91.83	2	81.37	2
2	M/s Energo Engineering Projects Ltd.New Delhi.	81.75	1	100	1	85.40	1
T- Technical Score Weight = 0.80 and F- Financial Score Weight = 0.20							

**(e) The name of the winning consultant and the price, duration and summary scope of the contract**

**Winning Consultant:** M/s Energo Engineering Projects Ltd.New Delhi.

**Price:** Rs. 10101833.34/- +(10.3% Service Tax)  
(Amount in words- Rupees One Crore Ten Lakhs one Thousand Eight hundred thirty three & paise thirty four only.)

**Duration:** 15Months

**Summary scope of the contract:**

The objectives of the assignment “Consultancy Services to Design ‘Renovation & Modernisation Scheme to Improve the Energy Efficiency, Upgrade Capacity and Residual Life of Parli Thermal Power Station Unit-3 (210MW)’ “ are:

- To undertake Energy Audits for baseline assessments.
- Review of previous studies carried out on the unit, RLA of necessary components and Condition Assessment of the Unit.
- To assess the feasibility of up-rating the unit and provide feedback on successfully up-rated units.
- To address generic problems of the plant.
- To make market survey for latest technologies available for Thermal Power plants, feasibility of incorporating it with the advantages and cost benefit analysis studies for efficient, reliable, economical and safe performance of the unit.
- To prepare detailed Scope of Works with cost estimate and to assess cost effectiveness of alternative rehabilitation options.
- To recommend the scope of rehabilitation project of 210MW unit 3 of Parli TPS.
- Prepare draft of Tender specifications for bid.
- Assist the owner through tenderizing process by participating the pre bid meetings, technical bid opening, preparing replies to the clarifications of the technical bids.
- Evaluation of technical bids, post bid meeting/s, clarifications and preparing revised technical specifications if required, and price bid submission and opening.
- Review of Cost Benefit analysis based on actual quoted cost

**Checklist in respect of selection of EADD Consultancy for EER&M of Parli TPS (U-3)**

**(a) Names of all consultants who submitted proposals;**

1. M/S. Ernst & Young Pvt. Ltd. Madhapur Hyderabad Andhra Pradesh, India 500081
2. TERI The Energy & Resource Institute , New Delhi
3. Enzen Global Solutions Pvt.Ltd. Bangalore -560068
4. M/S ABS Consulting Inc Plot No. 27 Sector -15 CBD Belapur Navi Mumbai

**(b) Technical points assigned to each consultant;**

Consultants Name	M/S.Ernst & Young Hydrabad	TERI New Delhi	Enzen. Bangalore	ABS Navi Mumbai
Technical Score	78.51	82.03	84.06	71.26

\* The minimum technical score required to pass is 75 points. M/S ABS Consulting Inc Plot No. 27 Sector -15 CBD Belapur, Navi Mumbai disqualified due to low score.

**(c) The evaluated prices of each consultant;**

Consultants Name	M/S.Ernst & Young Hydrabad	TERI New Delhi	Enzen. Bangalore
Price Quote (Inclusive con. service tax) in Rs.	2937501/-	6834519/-	2589541/- audited.

**(d) The final point ranking of the consultants ;**

Consultants Name	Technical Evaluation		Financial Evaluation			Combined Evaluation	
	Technical Score S(t) *factor 0.8	Technical Rank	financial Score in Rs.	Weighted score	Financial Rank	Score(t)*T +S(f)*f	Final Rank
M/s.Ernst & Young Hydrabad	78.51*0.8 62.81	3	2937501	$\frac{100*2589541}{2937501} * 2 = 17.63$	2	80.44	2
TERI New Delhi	82.03*0.8 =65.624	2	6834519	$\frac{100 * 2589541}{6834519} * 2 = 7.58$	3	73.20	3
Enzen. Bangalore	81.6*0.8= 67.25	1	2589541	$\frac{100*2589541}{2589541} * 2 = 20$	1	87.25	1
factors 0.8 (Technical) & 0.2 (Financial) taken from Standard Request for Proposal Selection of Consultants The World bank Publication Washington D.C. May 2004 page -25							

**(f) Name of the winning consultant & the price , duration & summary scope of contract**

**Winning Consultant:** M/s Enzen Global Solution Pvt. Ltd.,  
#90,Hosur Road , Madiwala Banglore-560068, India

**Price** : Rs. 2589541/- audited.

**Duration** : 12 weeks

**Award of Contract** : LOA Ref.No.: C.E.(O&M) /PRL/Chem.Lab/11<sup>th</sup> R&M-U3/  
No.08807 dated 27<sup>th</sup> Jul 2011 on ENZEN Global Solution Pvt.  
Ltd. #90,Hosur Road , Madiwala Banglore-560068, India

**Summary Scope of Contract :**

The detailed scope of work will include the following – Parli TPS has five units in operation with an aggregated installed capacity of 1130 MW. Each unit has a separate stack for dispersing the emissions arising from combustion. Several common facilities that cater to all the units include Coal Handling Plant (CHP), Water storage and Treatment Facilities (WTP), Effluent Treatment Plant (ETP) and the Ash pond

Scopes of Environmental Audit and due diligence assessment, particularly the units / facilities to be covered under each category of assessment are as follows.

**1. To Study Baseline Environmental Performance**

**Compliance Assessment**

The consultant shall assess the plant's compliance with the applicable regulatory boards regulations & World Bank Pollution Prevention and Abatement Handbook (PPAH) guidelines and identify the gaps.

**2. Pollution Prevention & Control Assessment :**

Pollution prevention and control assessment shall be carried out for the entire plant and its facilities. The consultant shall analyze all the sources of pollution from the plant and.

- Measures / Systems to improve coal quality, burning efficiency and heat recovery.
- Electrostatic Precipitators/ Other particulate collection systems (collection efficiency) in different units.
- NOx Control systems
- Noise Control Systems
- Water Recycling Systems
- Effluent Treatment Systems
- Dust Suppression Systems
- Ash pond (Ash water decanting, as well as containments of ash slurry in the pond).

Using the data and information collected, the consultant shall also establish the various baseline pollution parameters (with the present set of pollution control systems) such as particulate emissions (kg particulate/KWhe), SO<sub>2</sub> emissions (kg SO<sub>2</sub>/KWhe), NO<sub>x</sub> emissions (kg NO<sub>x</sub>/KWhe), mercury emissions (g-Hg/MWhe) and ash generation (kg ash/KWhe).

### **3. Resources Efficiency Assessment :**

A detailed resource efficiency assessment shall be carried out for Unit- 3 (210 MW set), which is being proposed for rehabilitation. Historical performance of the efficiency parameters such as Primary Fuel Use (kg-coal/KWhe), Auxiliary Fuel Use (Litre/KWhe), Unit Heat Rate (UHR), Specific Water Consumption (Litre/KWhe) in different processes such as in Steam Generation, Condenser Cooling, Ash Slurry making). Auxiliary power consumption, etc shall be determined and assessed against their respective design parameters as well as with the industry best practices for similar plant and technology. A detailed material and energy balance assessment shall be carried out for different stages of power production to identify the losses, which could be minimized. Separate study on energy audit & project design is being carried out to establish various technical and efficiency parameters of the unit being proposed for rehabilitation. In association with the client's project team, the consultant shall coordinate with the consultants carrying out the energy audit and project design to collect the relevant additional data to establish the various baseline resource efficiency parameters.

### **4. Occupational Health, Safety Assessment :**

The consultant shall review the existence and implementation of the following health and safety measures in the plant and comment upon their adequacy and effectiveness.

- Fire fighting systems
- Workers safety equipments
- Safety drills
- Periodic health check up for workers
- Rotation of work and minimization of exposure
- Emergency management plants.

The consultant shall review the records, and consultation with workers and doctors, identify the prevalence of any specific occupational health concerns in the plant, review the management response to the same and assess ineffectiveness

### **5. Potential Liabilities /Risks**

The consultant shall in association with the client's project team, review relevant information available in the public domain and consult the local stakeholders particularly the plant management people being in the vicinity, project affected persons, PRIs, local NGOs, and the State Pollution Control Board in order to assess such liabilities. In light of increased attention to mercury pollution issues of thermal power plants, the consultant shall make an assessment of Hg pollution from Parli TPS. In this regard the consultant shall study the presence of Hg in coal, in stack emissions, in ash (both in dry ash and in slurry) and in the receiving water bodies.

### **6. Institutional Capacity Assessment**

The consultant shall in association with the client's project team, review the institutional set up and resources available within the plant for ensuring sound environmental performance assess their adequacy and effectiveness. suggest measures to enhance capacity. In this regard, the consultant shall review the following aspects.

- Institutional Set up for Environment Management
- Systems and Procedures & Training
- Mechanism for addressing public concerns

## **7. Identification of Interventions**

As part of the due diligence assessment specific measures / intervention would need to be identified to improve the overall environmental performance of the plants, including

Measures/interventions required to ensure compliance with the applicable national and state level regulatory requirements and any specific stipulations on the plant

Measures/interventions required for meeting the requirements of applicable PPAH guidelines and an assessment of their feasibility.

The consultant shall clearly state whether there are such aspects, where compliance achievement is not feasible due to either technology or input constraints. The Consultant shall also suggest measures/ best practices for addressing certain concerns, where there are no stipulated and guidelines.

## **8. Preparation of Investment Plan:**

The consultant shall also estimate the additional investments required for achieving industry best practices. The plan should be presented at two levels one for the overall plant and the common facilities, and the other specific to Unit- 3.