

PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Ltd. -
A Government of India Undertaking)

BID DOCUMENT

FOR

TECHNICAL CONSULTANCY SERVICES

FOR

Consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)



(A wholly owned subsidiary of Power Finance Corporation Ltd.)

Registered Office
1st Floor, “Urjanidhi” 1, Barakhambha Lane, Connaught Place,
New Delhi – 110 001

February, 2014

Page 1 of 117

BID INVITATION LETTER

BID INVITATION LETTER

Ref: 03/ OdishaUMPP-Coal/Vol I

19.02.2014

To

.....
.....

Sub: Sealed Bids for Consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)

Sir,

PFC Consulting Limited (PFCCL) (“Client”) is assisting Odisha Integrated Power Company (OIPL), an SPV created as a wholly owned subsidiary of Power Finance Corporation Ltd. in the selection of developer for setting up of 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha, as per Guidelines for Procurement of Electricity from Thermal Power Stations set up on DBFOT basis” issued by Ministry of Power, Govt. of India. PFCCL wishes to avail services of a Consulting organisation to undertake **Consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha).**

1. Project Background: MoP has taken the initiative for facilitating the development of UMPPs under tariff based competitive bidding route on Design, Build, Finance, operate and transfer (DBFOT) basis. Central Electricity Authority (CEA) is the Technical partner and Power Finance Corporation (PFC) is the Nodal Agency for the initiative. Odisha Integrated Power Ltd (OIPL) a wholly owned subsidiary of Power Finance Corporation Ltd. has been incorporated to undertake activities for obtaining various clearances, approvals and linkages including bidding process for selection of developer for Odisha UMPP at Sundargarh district of Odisha as per the Guidelines issued by Ministry of Power, Govt. of India.

2. Project Description:

The Annual requirement of fuel for Odisha UMPP has been estimated to about 19-20 MT Coal. Captive coal mines namely Meenakshi (285 MT), Meenakshi-B (254MT), Dip side of Meenakshi (299 MT) have been allocated by Ministry of Coal to OIPL for the above purpose. The coal will move from pit head to coal loading point at Dhuka chowk through a 6km belt conveyer system. In this point, Coal will be loaded mechanically from overhead silos in rakes comprising BOBRN wagons. After loading, the coal would be transported through MGR system of about 64 Kms loop length (aerial distance of 31 Kms).

The three coal blocks Meenakshi, Meenakshi-B, and Dipside of Meenakshi is located in the Hemgiri Tehsil of district Sundargarh in the state of Odisha. Total Land requirement of coal block area is approx. 1308 ha (492 ha for Menakshi, 486 ha for Meenakshi-B and 330 ha for Dip Side of Meenakshi coal blocks). Additional land requirement of non coal bearing area is 56.2 ha. The coal block area involves 102 ha of Reserve/ Protected Forest, 332 Ha Revenue

Forest, 236 Ha of Govt Land and 638 Ha of Private Land. The additional land requirement involves 33 ha for township, road, workshop, mine infrastructure etc. and 23.2 ha for conveyor corridor.

The following reports are available with PFCCL relating to the coal blocks:

- i) Geological Report of Meenakshi Coal block
- ii) Geological Appraisal Note of Meenakshi-B and Dipside of Meenakshi coal block
- iii) Coal Block Boundary
- iv) Report on Boundary Demarcation & Forest Species Enumeration
- v) Preliminary Socio-Economic and R&R Study
- vi) Preliminary Hydrogeology Report
- vii) Preliminary Land use Plan & Mapping Study
- viii) Initial Environment Examination Study for the coal blocks
- ix) Initial Environment Examination Study for the MGR corridor
- x) Feasibility Report for coal Transportation of coal to Odisha UMPP.

CMPDIL has already carried out Regional Exploration in Meenakshi-B and Dipside of Meenakshi coal block area. In the Meenakshi 'B' block they have drilled 36 BH's involving 4100.50m and in the Dip side of Meenakshi block, they have drilled 16 BH's involving 3974.20m. Based on this, Geological Appraisal Note has been prepared by CMPDIL.

The prospective bidders may see these reports available at PFCCL office before bidding.

Copies of these documents shall be made available to the successful bidder.

3. **Approach:**

The Geological Report of Meenakshi Coal block is available. Thus, initially the Pre-Feasibility Report, Feasibility Report and Mining Plan for Meenakshi Coal block shall be prepared on priority basis. As the exploration and Geological Report of Meenakshi-B and Dip Side of Meenakshi coal blocks is progressed and is at completion stage, the combined Pre-Feasibility Report, combined Feasibility Report and combined Mining Plan will be prepared for all the three coal blocks. This approach is being adopted in order to expedite Environmental Clearance (EC), forest diversion clearance and land acquisition for Meenakshi Coal Block and bring Meenakshi Coal Block alone to production / mining stage. As soon as the combined Pre-Feasibility Report, combined Feasibility Report and combined Mining Plan is ready, the revised approvals (viz. EC. Mining Plan etc. for all the three coal blocks together) will be obtained. Parallely, forest land diversion clearance and land acquisition for Meenakshi-B and Dip Side of Meenakshi coal blocks will be undertaken.

Sealed Bids are invited in single stage two envelope system (Technical bid & Price bid), excluding envelope for EMD, for undertaking **Consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha).**

The Scope of Work, Eligibility Criteria, Deliverables, Selection procedure and criteria, terms of payment, terms and conditions etc. are given below:

1.0 SCOPE OF WORK

The scope of work is covered in two parts i.e. **Part- A and Part- B**. Part -A covers exploration scheme/plan, topographical survey, obtaining statutory permissions & clearances, drilling, sampling & analysis, geological modeling, preparation of Geological Report and Part-B covers Pre-Feasibility Report, Feasibility Report, Mining Plan, EIA & EMP Studies, Environment Clearance, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies, R&R Plans, CSR Plan, Land Acquisition & Forest Clearance. The detailed scope of work is given below.

SCOPE OF WORK FOR PART-A

SCOPE OF WORK FOR PART-A

1.1 EXPLORATION AND PREPARATION OF GEOLOGICAL REPORT FOR MEENAKSHI 'B' AND DIPSIDE OF MEENAKSHI COAL BLOCKS:

- A. The proposed work involves approximately 13400 mtrs of diamond core borehole drilling, 1600 mtrs. of Non core borehole drilling and Geo-physical logging of about 15000 mtrs. in the Meenakshi-B & Dip Side of Meenakshi Coal Blocks.

CMPDIL has already carried out Regional Exploration in this area. In the Meenakshi 'B' block they have drilled 36 BH's involving 4100.50m and in the Dip side of Meenakshi block, they have drilled 16 BH's involving 3974.20m. Based on this, Geological Appraisal Note has been prepared by CMPDI.

Additional drilling of 40 boreholes (36 Nos. Core Drilling and 4 Nos. Non-Core Drilling) involving 6000 m in Meenakshi B and 35 boreholes (31 Nos. Core Drilling and 4 Nos. Non-Core Drilling) involving 9000 m in Meenakshi Dip Side block is envisaged in order to establish reserves in the proved category.

The detailed items and quantity is indicated at Form: 6A-1. Bidders shall base their offer based on this items and quantity and Consultant shall also furnish break up prices. Variations in quantity on either side of the contract price during execution of contract shall be applicable. However, for Exploration Plan, Geological Report, 3D Geological Model, Geological Mapping, House Keeping charges, Assisting and obtaining consent for entry & drilling in forest and non-forest area and Topography Survey, variations in quantity will not be applicable.

- B. The Objective of the drilling is to arrive at a detailed estimate of Geological and mineable reserves of Meenakshi-B and Dipside of Meenakshi Coal Block. The detailed scope of work, includes.:
- a) Preparation of Exploration Scheme / Plan
 - b) Topographical Survey
 - c) Coal grid connection
 - d) Geological mapping
 - e) Core drilling
 - f) Geophysical Logging
 - g) Core logging
 - h) Sampling and analysis
 - i) 3D Geological modeling
 - j) Preparation of Geological Report
 - k) Preservation of all cores and handing over to PFCCL with proper numbering and records
- C. The Geological report and 3D Geological Model is required to be prepared considering boreholes already drilled and proposed to be drilled. The basic Borehole data (Lithologs and analytical data) of the boreholes already drilled by CMPDI will be provided by PFCCL for incorporating/dovetailing the same in Geological report as well as 3D Geo Model.

The Geological Report and 3D Geo Model shall be prepared for both Meenakshi-B and Dipside of Meenakshi Coal Blocks together.

- D. The scope of services shall also include i) Preparation of exploration plan, ii) Preparation of application to forest authorities for entry and drilling holes in forest area and obtaining such approvals and iii) Preparation of application to Steel and Mines Dept, Govt of Odisha for entry and drilling holes in non-forest areas and obtaining such approvals. The Agency / Consultant shall also provide necessary assistance including follow up and also obtaining all the above approvals and other necessary clearances/ approvals for completing the Exploration/ Geological report.
- E. Guidelines for conducting detailed exploration of captive coal blocks by the block allottees have been issued by Ministry of Coal vide circular No. 17022/3/07-CRC dated 29th Aug 2007. Agencies/Consultants are required to adhere to these guidelines including addendum/amendments if any, for undertaking exploration and preparation of GR.
- F. As per the guidelines issued by MoC, monitoring and supervision of CMPDI is involved, Necessary co-ordination and follow-up with CMPDI as per these guidelines will also be the responsibility of the Consultants. A monthly report as may be prescribed by CMPDI on status of exploration shall be submitted indicating meterage drilled, number of boreholes completed with depth and general seam characteristics that have been encountered.
- G. Contents of the Geological Report shall be prepared as per the checklist and format attached to the circular No. 17022/3/07-CRC dated 29th Aug 2007 issued by Ministry of Coal. The checklist is an indicative one, however, the Agency / Consultant may improve upon the format keeping the main objective in view. The quality of Geological Report prepared by Consultant shall be of highest standards and shall not be inferior to GR prepared by CMPDI for Meenakshi Coal Block.
- H. In respect of Meenakshi-B Coal Block, Ministry of Coal has suggested to surrender 150 Ha of Medium Density Forest area out of 206 Ha of Medium Density Forest Area. As per MoC, the 150 Ha of MDF area to be surrendered has reserves of 6 Million Tonnes. Consultants in association with agency involved in forest land diversion clearance are required to identify this area with reserves of 6 Million Tonnes during the course of exploration or during preparation of Geological Report.

In respect of Dipside of Meenakshi Coal Block, Ministry of Coal has suggested to surrender 50 Ha of Medium Density Forest area out of 50 Ha of Medium Density Forest Area. As per MoC, the 50 Ha of MDF area to be surrendered has reserves of 56 Million Tonnes. Consultants in association with agency involved in forest land diversion clearance are required to identify this area with reserves of 56 Million Tonnes during course of exploration or during preparation of Geological Report.

In case, the area to be surrendered has reserves higher than reserves estimated by MoC, the same shall be documented by consultant for taking up the matter with the appropriate authorities.

I. EXPLORATORY DRILLING

- a. Drilling operations shall be conducted as per the MoC guidelines.
- b. The successful bidder will ensure availability of adequate numbers of Diamond Core drilling rigs with necessary accessories and Manpower and other ancillary equipment for exploratory core & non core drilling with NQ size. However, in the exceptional situation where the in-hole drilling condition such as jamming, collapse etc, make it impracticable to continue drilling in NQ size, further drilling can be carried out in BQ size (36.6 mm diameter), after obtaining approval/ consent of PFCCL without any additional charges.
- c. The drill holes will be vertical.
- d. The drill hole depth will be varying from 100 meters to more than 350 meters.
- e. The core recovery in coal seams should be more than 90% and for other formation it should be more than 75%. This will not apply in loose sand or it's equivalent formation.
- f. Borehole should be spaced at 400 meter grid pattern. Wherever required, additional boreholes shall be drilled to prove / delineate the structure, incrops or no coal zones. In such case, additional Boreholes shall be drilled as per the guidelines of MOC after obtaining approval / consent of PFCCL.

J. SURVEY WORK:

- a. As part of Exploration Plan, the Contractor shall prepare the proposed borehole location plan of all the areas to be covered under exploration in suitable scale and mark-up / identify minimum two bench marks location with Reduce Level & Co- ordinates (on plan) within close proximity of area of Exploration. Boreholes should be spaced at 400 metre grid pattern. For borehole survey, the reference baseline should be established connecting with coal grid coordinates. Contractor shall tie up the survey grid of areas with Latitude and Longitude.
- b. The contractor shall make its own arrangements to fix up the proposed borehole location on the site. They will also determine the Reduce Level and Co ordinates of all the boreholes.
- c. In case the borehole locations are in private land, the contractor shall carry out negotiation with private land owners and complete the drilling of bore holes.
- d. In case of the borehole location shown on plan is not feasible on ground, the alternative location shall be decided in consultation with PFCCL Officials.

K. CORE LOGGING:

- a. The contractor shall adopt Standard procedures of Geological core logging which include details of Lithology, Thickness, Grain size, Colour and Megasopic Characters and other related details.
- b. The Water table observation of each completed bore hole and loss of Water if any during the drilling work should be part of the core – logging.
- c. Contractor shall submit all the original logging registers to PFCCL after completion of the work.

- d. Contractor shall fix pillars, having marking of borehole number and RL of the borehole on the location of newly drilled borehole with their own cost.
- e. Bore Hole Logs have to be recorded in the scale of 1:100.

L. GEO-PHYSICAL LOGGING:

- a. All the non coring and coring boreholes shall be Geo-physically logged and the original log shall be preserved and submitted to PFCCL after completion of work.
- b. The Geo-physical logging probes shall include at least SP, SPR, density, caliper, resistivity, neutron and natural gamma.
- c. The data generated through geo-physical means should be validated with the information generated by drilling and the data co-related for interpretation purpose and the same should be incorporated/brought out in geological report.

M. SAMPLING AND ANALYSIS:

- a. The Contractor shall collect samples of all the economical minerals encountered during drilling operations
- b. Coal core recovered from drilling, should be packed in polythene tubes immediately after geological logging to avoid the loss of initial moisture and packed in core boxes with proper labelling for sending to laboratory.
Rest of the borehole cores should be packed in polythene tubes and stored in core boxes with proper labeling of borehole number and depths till the end of exploration.
- c. Contractor shall provide all necessary assistance to PFCCL for taking photograph of the Boreholes cores
- d. Analysis of Coal core shall be carried out as per MoC Guidelines {please refer 7(A) of Annexure of MoC Guidelines dated 29th Aug 2007}. Coal core analysis should be carried out in Govt./National Accreditation Board for Testing & Calibration Laboratories (NABL) accredited laboratory. All analyses should be carried out as specified in the relevant Bureau of Indian Standards (BIS) codes.
- e. The contractor will have to make arrangements for GI core boxes at his cost. The size and specifications of GI core boxes shall be finalised with the approval of PFCCL.
- f. The Contractor will transport and hand over all the collected samples to the Laboratory.
- g. Representative borehole cores selected by PFCCL shall be handed over to PFCCL at desired location for long term preservation. The selected borehole shall be arranged properly in GI core boxes. Each run shall be marked properly by Plastic tag and the core boxes shall be numbered properly.
- h. The sampling and analysis shall be carried out in presence of PFCCL representative at site as well as at the laboratory.

N. PHYSCIO-MECHANICAL/GEO-TECHNICAL TEST:

Rock Quality Designation (RQD) & Physico-Mechanical Test shall be done as per MOC Guidelines. Further, washability test shall be carried out as per MoC Guidelines.

O. BORE HOLE DEPTH:

The bore holes will be drilled up to older formation or may be closed as per the instructions of PFCCL representative at site.

P. GEOLOGICAL / EXPLORATION REPORT :

- a. The contractor shall prepare geological exploration report in accordance with the guidelines contained in the Circular No. 17022/3/07-CRC dated 29/8/2007 from Ministry of Coal, Govt of India
- b. Drilling operations and Geological report shall be prepared strictly as per the above guidelines only.
- c. The contractor shall prepare and submit geological / exploration report.
- d. Contractor shall submit interim report or required drilling data as per requirement of PFCCL during drilling operations and sampling analysis stage, in order to expedite preparation of Feasibility Report and Mining Plan.
- e. All the above data should be digitized and all borehole data should be tabulated in excel sheet. Soft copy of these shall be furnished to PFCCL.

Q. GEOLOGICAL MODEL:

3D Geological model should be prepared in Minex software and soft copy of this shall be furnished to PFCCL.

R. MEASUREMENTS:

Measurements of quantum of work (i.e in meter) drilled by drill machine will be carried out in presence of an authorized representative of the contractor and representative of PFCCL at site and they will certify the same.

This measurement shall be final and binding on the contractor.

S. Topographical Survey:

S.1 GENERAL

- a. The Agencies / Consultants shall carry out the Topographical Survey and preparation of Plans (Maps) and report of the entire area/areas indicated for coal mine block of Meenakhi, Meenakhi – B & Dip Side of Meenakhi.
- b. Providing all necessary surveying instruments and all other tools and materials, labour and qualified surveyors, scaffoldings, necessary transport, supervision by competent engineers/surveyors, full insurance and all other incidental items as may be necessary for successful completion of surveying and mapping work.
- c. The Agencies / Consultants shall carry out and setup the Bench Mark and reference pillars.
- d. The Agencies / Consultants shall carry out Bench Mark (BM) by fly-leveling from nearest GTS Bench Mark or available source and establish the same on a permanent Bench Mark at a convenient location at site. All subsequent transfer of levels shall be carried out with respect to this Bench Mark. Consultant has to obtain standard benchmarks data from Survey of India.

- e. The work shall also include constructing permanent reference pillars at suitable locations as approved by PFCCL. These reference pillars shall be labeled permanently with their respective coordinates and reduced levels for future use. The Bench Mark and reference pillars shall be shown on the survey drawings.
- f. The fly leveling should be carried out using two good quality levels simultaneously. The leveling instruments should always be kept free of collimation error that should be checked and adjusted before start of work every day. A record of adjustments should be kept in the field book.
- g. While carrying out bench mark to the project site, levels shall be established on the permanent objects like culverts etc at least on one object in every one km, sufficient description about the objects and levels shall be mentioned in the survey report to facilitate locating these objects later on.
- h. Closing error in leveling should be limited to $12 \sqrt{L}$ mm, where L is the length of the route in kms.

S.2 Topographical Survey & Mapping –

- a. Position, both in plan and elevation, of all natural and artificial features of the area like waterways, railway tracks, trees, cultivation, houses, fences, pucca and kutcha roads including culverts and crossings, foot tracks, other permanent objects like telephone posts and transmission towers etc. are to be established and subsequently shown on survey maps by means of conventional symbols (preferably, symbols of survey of India Maps). All the hills and valleys within the area/areas are to be surveyed and plotted on maps by contours. Necessary leveling work of the entire area/areas to be surveyed and plotted on maps by establishing horizontal location so that location and sketching of contours for the area/areas can be done at specified intervals and in specified scales on maps. Any unusual condition or formations on the ground, locations of rock outcrops (if visible on the surface) and spring/falls, possible aggregate deposits etc shall also be noted and plotted on the maps.
- b. The survey work shall be done with DGPS/ Total Station Equipment in the following steps:
 - i) Establishing horizontal and vertical controls and locating reference grids and bench mark in the area.
 - ii) Surveying for establishing spot levels and plotting contours.
 - iii) Surveying for locating the natural and man made details as described earlier.
 - iv) The grids (50 meter x 50 meter) (showing Latitude & Longitude) for the survey work shall be established in N-S & E-W direction (Corresponding to magnetic North)

S.3 Traversing

- a. Triangulation or traversing or a combination of the two methods shall be adopted for the purpose of establishing horizontal control and in order to determine the exact relationship between various existing points on ground so that surveys required under the present scope of work and in future may be co-related and tied together.
- b. Total station instruments should be deployed to achieve the specified accuracy of the work. Proper precautions for avoiding graduation errors and other instrumental and personal errors should be scrupulously observed.

- c. From main traverse/triangulation station, subsidiary station shall be established at suitable intervals to cover the entire area. Levels of these stations shall be based on the Bench Mark established in the survey area. Occupying the main & subsidiary stations, all major details shall be surveyed by Total Station instrument.
- d. The closing error in traverse shall not exceed $L\sqrt{N}$ seconds total in angular measurement, whichever is less (where L is the least count of the instrument and N is the number of stations).

S.4 Contouring

- a. Contractor shall carry out spot level surveying at an interval of 2 **meter** for contouring the area. Levels shall also be taken on all traverse stations and on salient points located at random over the area (ground points). The contours shall not be just interpolated but properly surveyed on the ground so that features falling between the two successive levels are also picked up. Sufficient points properly distributed over the entire area shall be located and levels taken so that accurate contouring can be done at places of sharp curvature or abrupt change in direction and elevation, points selected shall be close to each other. Salient points on ridge lines and valley lines shall also be measured.
- b. Transfer of levels shall always start from Main stations whose levels are based on permanent bench mark established in the survey area.
- c. Each set of features and contours shall be provided in separate layers in the drawing.

S.5 Latitude and Longitude

The contractor shall tie up the survey grid of areas with latitudes and longitudes.

S.6 Construction of bench mark, reference & grid pillars/stones

Bench Marks shall be constructed at specified locations or as per the instructions of PFCCCL. The reduced level of the top of the pillar shall be engraved clearly on the pillar and shall be painted with approved make paint. The back filling of the earth is to be done after installing the pillar and engraving the BM value & reference coordinates with respect to survey grid on the BM pillar and reference pillars.

S.7 Preparation & submission of survey maps

- a. The Contractor shall submit survey maps of the site to the scale indicating grid lines and contour lines, demarcating all permanent features like roads, railways, waterways, buildings, power lines, natural streams, trees etc. Each area should have two originals one showing spot levels and contours with grid lines and other with grid lines, contour lines and permanent features.
- b. All the maps and drawings should be prepared in digitized forms using standard computer software like Autocad (latest version) on standard A-0 size polyester base film.

All features and text should be in separate layers and colors to be used shall be got approved by PFCCCL.

- c. The Contractor shall submit copies of all the maps at draft stage for review and approval of the PFCCL. After approval, all the final maps along with a set of the originals on polyester base film shall be submitted. Copies of the maps shall be submitted in proper flappers and original polyester base drawings should be handed over in proper card board covers indicating index of drawings.

S.8 Submission of field data and report

- a. Contractor shall submit all data pertaining to the survey in original to the PFCCL.
- b. Two copies of the draft report shall be submitted on the completion of the field work for review and approval of the PFCCL. The report should give the introduction of the site, methodology adopted for surveying the areas, calculation of errors, transfer of Bench Mark, calculation for connecting the areas with latitudes and longitudes and any other calculation required for surveying and preparation of the survey maps.
- c. The survey report shall also cover the following:
 - i) General site observation such as location of access roads, river and nallah courses, irrigation canals, etc.
 - ii) Presence of any well and/or tube well in the site or adjoining areas and water level in them. Detail of earlier uses of the site i.e. mining, quarrying, agriculture etc. Existing drainage pattern of the site, possibility of water logging and high flood level of the area.
- d. The contractor shall present the report and drawings duly marking the grids with latitude and longitude (in degree, minutes and seconds). Each grid shall represent length & width in meters. The features of the drawings should be in different colors and all nallahs and rivers, etc shall contain their boundaries in color and different matching colour shall be filled in. The legend should contain all the features and in different layers in Auto CAD. Text for each feature should be in different layers corresponding to their drawing layer. The title and logo shall be as per the format approved by PFCCL. Both hard and soft copies shall be prepared and submitted. The ground plan, site plan and topographical and cadastral map shall be surveyed based on **1:4000 scale**.
- e. Final survey report and Drawings shall be submitted properly bound and printed using good quality paper and material.
- f. A minimum three Bench Mark/Control Point are to be provided with Northing, Easting and Elevation & Description.

T. General scope of Services:

- a. The Contractor shall mobilize all the equipment's for the drilling within the time schedule.
- b. The contractor shall deploy his own manpower for the satisfactory completion of the entire scope of work

- c. The Contractor shall make his own arrangement for shifting the drilling rigs to new location / site at his own cost.
- d. The contractor shall arrange the GI core boxes for preserving the core at his own cost.
- e. The contractor shall make his own arrangement for diesel, Lubricants, all other consumables, power, camping, transportation etc.
- f. Variations in Quantity: Variations in Quantity shall be applicable on either side of contract price and limited to 20 % of the contract price. Quantity variation shall be applicable for depth of drilling in meters, Geo-physical logging, sampling analysis (type and nos.), core boxes, etc. However, for Exploration Plan, Geological Report, 3D Geological Model, Geological Mapping, House Keeping, Assisting and obtaining consent for entry & drilling in forest and non-forest area and Topography Survey, variations in quantity will not be applicable.

SCOPE OF WORK FOR PART-B

1.2 PREPARATION OF PRE-FEASIBILITY REPORT:

- A. The proposed work involves preparation of PFR for Meenakshi Coal Block and combined PFR for all the three coal blocks together. The PFR shall take into consideration all aspects of coal quality and capital cost. The objective of PFR is to obtain ToR and prior environmental clearance.
- B. Ministry of Environment and Forests vide circular No. J-11013/41/2006-IA.II(I) dated 30th Dec 2010 has issued guidelines for preparation of pre-feasibility report for obtaining prior environmental clearance in terms of the provisions of EIA notification, 2006. The PFR is to be prepared for the purpose of obtaining ToR in respect of Environment clearance. Agencies/Consultants are required to adhere to these guidelines including addendum/amendments if any, for preparation of PFR.
- C. Initially, the Pre-feasibility Report shall be prepared for Meenakshi Coal Block by projectizing it for an opencast mine with an annual capacity of 20 MTY, presuming that the mine will be worked departmentally for a single variant option.

As the exploration and Geological Report of Meenakshi-B and Dipside of Meenakshi coal blocks progresses and means completion stage, the combined Pre-feasibility Report shall be prepared for all the three coal blocks (viz., Meenakshi, Meenakshi-B and Dipside of Meenakshi coal blocks) together by projectizing it for an opencast mine with an annual capacity of 20 MTY, presuming that the mine will be worked departmentally for a single variant option.

- D. The PFR shall take into consideration all aspects of Geology and Conceptual mine development & Mining methods for 20 MTPA Production for Odisha UMPP.
- E. The contents of the pre-feasibility report shall be comprehensive enough and provide necessary information required for scoping the project and prescribing ToR for MoEF.
- F. The consultant shall give presentations of PFR before PFCCL after submission of draft PFR. The consultant shall carry out modifications/ alterations in the PFR in consultation with PFCCL.
- G. Broadly, the PFR shall contain the chapters & contents as elaborated below. Consultant can also provide further suggestion on the contents of PFR.

Sl. No.	Chapter / Contents
1.	Introduction of the project / Background information: <ul style="list-style-type: none">• A brief description of the Mining Project of Odisha, OMPP.• Need for Mining Project and its importance to the country and / or region.• Demand-Supply Gap of Coal in the country.• Imported Coal for Power Project and its future demand in the country• Price Comparison between Imported Coal & Domestic Coal of same grade• Imports vs. Indigenous production of Coal.

	<ul style="list-style-type: none"> • Domestic Markets. • Employment Generation (Direct and Indirect) due to the Mining Project.
2.	<p>Project Description:</p> <ul style="list-style-type: none"> • Mining Project of UMPP interlinked with the Power Project at Bedabahal, Sundergarh Dist. of Odisha. • Location (map showing general location, specific location, and project boundary & project site layout) with coordinates. • Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted. • Geology- Area of Coal Block, Reserves, Size & Shape, Quality, Grade variation, etc. • Size or Magnitude of Mining Operation, Life of Mine and Back Filling Requirement. Basis of sizing / Capacity. • Mining Project description with process details (a schematic diagram/flow chart showing the project layout, components of the project etc. should be given) • Consumables like Explosives, Diesel, Lubricants, required for operation of the Mining Project along with estimated quantity, likely source and its mode of transport and storage. • Resource optimization/recycling and reuse envisaged in the project, if any, should be briefly outlined. • Availability of water its source, Energy/Power requirement and source should be given. • Quantity of wastes to be generated (liquid and solid) and scheme for their Management/disposal. • Schematic representations of the feasibility drawing which give information of EIA purpose.
3.	<p>Site Analysis</p> <ul style="list-style-type: none"> • Connectivity (Rail & Road) • Land Form, Land use and Land ownership. • Topography (along with map). • Existing land use pattern (agriculture, non-agriculture, forest, water bodies, shortest distances from the periphery of the project to periphery of the forests, national park, wild life sanctuary, eco sensitive areas, water bodies (distance from the HFL of the river). In case of notified industrial area, a copy of the Gazette notification should be given. • Existing Infrastructure. • Soil classification. • Climatic data from secondary sources. • Social Infrastructure available.

4.	<p>Planning Brief</p> <ul style="list-style-type: none"> • Conceptual mine development & Mining methods (facilities, transportation etc). • Population Projection • Land use planning along with Over Burden Dump (breakup along with green belt etc). • Assessment of Infrastructure Demand (physical & social). • Amenities/Facilities.
5.	<p>Proposed Infrastructure</p> <ul style="list-style-type: none"> • Mining Area • Residential, Office, Infrastructure Area (Non Processing Area). • Green Belt. • Social Infrastructure. • Connectivity (Traffic and Transportation Road/Rail/Metro/Water ways etc) • Drinking Water Management (Source & Supply of water) • Sewerage System. • Industrial Waste Management. • Solid Waste Management. • Power Requirement & Supply/source.
6.	<p>Rehabilitation and Resettlement (R & R) Plan</p> <ul style="list-style-type: none"> • Policy to be adopted (Central/State) in respect of the project affected persons including home oustees, land oustees and landless laborers (a brief outline to be given).
7.	<p>Project Schedule & Cost Estimates</p> <ul style="list-style-type: none"> • Likely date of start of construction and likely date of completion (Time schedule for the project to be given). • Estimated project cost along with analysis in terms of economic viability of the project.
8.	<p>Analysis of proposal (Final Recommendations)</p> <ul style="list-style-type: none"> • Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.

1.3 MINING PLAN:

- A. The proposed work involves preparation of Mining Plan for Meenakshi Coal Block and combined Mining Plan for all the three coal blocks together. The Mining Plan shall be prepared to explore the mineable reserves by opencast method so as to ensure conservation of coal.
- B. The Mining Plan document shall be prepared in accordance with the provisions of the Coal Mine (Nationalisation) Act, 1973, MMRD Act 1957, the Contract Labour (Regulation Act & Abolition) Act 1970, all the mineral, environmental and labour laws along with other regulations governing coal industry.
- C. The Mining Plan shall be prepared by Recognized Qualified Person (RQP) to whom Ministry of Coal has granted recognition for preparing Mining Plan for Coal/Lignite projects. The Bidder and RQP shall be jointly and severally responsible of preparation of Mining Plan and obtaining approval of MoC on the Mining Plan. The Consultant along with the RQP shall also provide necessary assistance including follow up and also in obtaining the necessary approvals.
- D. Initially, Mining Plan shall be prepared for Meenakshi Coal Block by projectizing it for an opencast mine with an annual capacity of 20 MTY, presuming that the mine will be worked departmentally for a single variant option.

As the exploration and Geological Report of Meenakshi-B and Dipside of Meenakshi coal blocks progressed and at completion stage, the combined Mining Plan shall be prepared for all the three coal blocks (viz., Meenakshi, Meenakshi-B and Dipside of Meenakshi coal blocks) together by projectizing it for an opencast mine with an annual capacity of 20 MTY, presuming that the mine will be worked departmentally for a single variant option. Detailed scheduling of preparation of Mining Plan shall be finalised after award of contract in consultation with PFCCL.

- E. The Consultant shall also undertake "Slope Stability Analysis" for Over Burden Dumps (Internal and External) and submit a detailed report considering all aspects of dump design including peak rainfall data, soil characteristics, present dump stabilization measures etc.,. On the basis of the study, if the design envisaged without this studies is not found stable, then the Consultant is to provide suitable dump design and dump stabilization measures. The Slope stability analysis shall be carried out for both the options i.e, mine plan for Meenakshi Coal Block and combine mine Plan keeping an annual capacity of 20 MTY.
- F. Ministry of Coal vide circular No. 34011/(48)/2009-CPAM dated 4th April 2011, has issued guidelines for preparation of Mining Plan for the coal and lignite blocks. Agencies / Consultants are required to adhere to these guidelines including addendum/amendments if any, for preparation of Mining Plan.
Further, Ministry of Coal vide circular No. 55011-01-2009-CPAM dated 7th January 2013, has issued guidelines for preparation of Final Mine Closure Plan. It has been decided by the Government that all coal running operations in India shall

be governed as per these guidelines including the preparation of Final Mine Closure Plan which shall be incorporated in the Project Report / Mining Plan. Agencies / Consultants are required to adhere to these guidelines including addendum/amendments if any, for preparation of Final Mine Closure Plan which shall be incorporated in the Mining Plan.

Contents of the Mining Plan shall be with chapters as mentioned in circular No. 34011/(48)/2009-CPAM dated 4th April 2011 issued by Ministry of Coal and each chapter shall contain minimum information as specified therein.

In addition to this the following chapters shall also be included in the report:

- Summarized Data & executive summary as per the said guidelines
- Drilling & Blasting – Drilling & Blasting at Coal /OB, Control at ground vibration & storage of explosive etc.
- Mine Drainage – Surface water / rain water from outside query area , water from inside query , garland drain , mine pumping etc.
- Report based on Slope Stability Study /Analysis and mitigation measures
- Possibility of diverting River / Nala flowing in coal block area is to be studied and proposal to be included in Mining Plan.
- Disposal of waste – OB & Topsoil disposal management
- Surface Transport & CHP , Rapid loading system including loading SILO etc
- Water requirement during mine development & mine operation stage
- Other facilities as required

The consultant shall include any other relevant chapter & contents apart from above; if he thinks it appropriate and justified to include so as to make the document acceptable at all levels of its approval.

- G. Mine Plan shall be prepared taking note of EIA Notification, 2006 and amendments thereof, EIA guidance manual - Mining of Minerals and any other guidelines/manuals issued by MoEF/SPCB/State Government.
- H. Mine plan conceptualized by consultant shall be presented / discussed with PFCCCL before proceeding further.
- I. The Mining Plan shall be properly integrated with drainage of the area.
- J. Mining plan and associated drawings / plates shall be prepared using latest software.

- K. The scope of preparation of Mine Plan shall include the following:
- 3D Coal body modeling (Geological Model) and estimation of extractable resources/reserves and quality by using Mining Software Minex.
- 3D Coal body modeling shall be prepared for Meenakshi Coal Block and all three coal blocks together.
- Further, Consultant shall provide soft copy of the exploration / geological report through the process of data entry in computers for facilitating geological and mining studies at the time of operation and for updating the geological model in both the cases (viz., Meenakshi Coal Block separately and all the three coal blocks together).
- Preparation of ultimate pit design and surface master plan by using latest software.
 - Background on selection of technology and selection of mining equipment and machineries along with sizing and configuration.
 - Project implementation schedule.
 - Detailed production scheduling chart using Mining Software Minex
- L. The Mine Plan shall contain a tentative scheme of mining and annual programme for excavation from year to year for five years.
- M. The Mining Plan should indicate the land requirement for the mining operations covering land requirement for (a) Mining of Coal, (b) External overburden dumps, if any (c) Infrastructure.
- N. The scope shall include preparation of stage plan / surface plan at the end of 1st year, 3rd year, 5th year, 10th year, 20th year, 25th year and 30th year intervals including OB dumps (with area, volume, dump height etc). Final stage plan including final voids details & Afforestation etc, shall also be covered. Upon approval of mine plan by MoC, stage plan / surface plan and final stage plan shall be prepared as per approved mine plan for submission of the same for EC purpose.
- Dumps and other surface features at the end of 1st year, 3rd year, 5th year, 10th year, 20th year, 25th year and 30th year should be shown in digitized map in the scale of 1:50 m scale for mine lease area for submission of the same for EC purpose.
- O. The Consultant shall send the draft Mine Plan to PFCCL for comments and make presentations to PFCCL. The comments/suggestions made by PFCCL shall be incorporated in the final Mine Plan.
- P. The Mining Plan shall be presented by the Consultant alongwith RQP before the committee of MOC for its clearance; any comments thereof shall be incorporated by the consultant for re-submission. The consultant shall undertake required modification(s) as per the advice of MOC and shall prepare technical replies supported by documents including calculations, plans, sections, etc. Such updation of observations of MOC shall be done till approval of Mine Plan by MOC.

Q. Mine Plan may also required to be updated / modified on the observations / suggestions of Ministry of Environment and Forest and Directorate General of Mines Safety (DGMS). The same shall be undertaken by the Consultant/Agency with the assistance of RQP.

R. Impact on availability of Reserves and Combined Mining Plan

In respect of Meenakshi-B Coal Block, Ministry of Coal has suggested to surrender 150 Ha of Medium Density Forest area out of 206 Ha of Medium Density Forest Area. As per MoC, the 150 Ha of MDF area to be surrendered has reserves of 6 Million Tonnes. Similarly, in respect of Dipside of Meenakshi Coal Block, Ministry of Coal has suggested to surrender 50 Ha of Medium Density Forest area out of 50 Ha of Medium Density Forest Area. As per MoC, the 50 Ha of MDF area to be surrendered has reserves of 56 Million Tonnes.

On account of surrendering 200 Ha of MDF area, Consultants are required to bring out the impact on the mining plan, availability of reserves, availability of extractable reserves, cost of production etc.,. In case of (i) locking up of large reserves and /or (ii) impact on surrendered 200 Ha of MDF due to mining around this area and/or (iii) increase in cost production due to multiple pit operation and requirement of larger external dump area are seen, Consultant is required to bring out through a proposal for taking-up with appropriate authorities for removing the restriction of surrendering of 200 Ha of MDF area/land.

Bidder to prepare a combined Mining Plan for all three (3) coal blocks together under the following considerations:

- Mine plan surrendering above mentioned area of MDF suitably and optimizing sacrifice of coal resource in forest land without sacrificing mining operation to achieve rated capacity.
- Mine plan without surrendering above mentioned area of MDF.
- Any other appropriate option as conceived in view of the above mentioned MOC advice may be proposed for further consideration.

1.4 FEASIBILITY REPORT

- A. The proposed work involves preparation of FR for Meenakshi Coal Block and combined FR for all the three coal blocks together. The FR shall take into consideration all aspects of coal quality and detailed cost economics. The consultant shall recommend the preferred option (Opencast / Underground Mining) in the draft FR and give detailed activity chart/PERT network convening all activities till the commencement & fulfillment of targeted coal production.
- B. Initially, Feasibility Report will be prepared for Meenakshi Coal Block by projectizing it for an opencast mine with an annual capacity of 20 MTY, presuming that the mine will be worked departmentally for a single variant option.

As the exploration and Geological Report of Meenakshi-B and Dipside of Meenakshi coal blocks progressed and at completion stage, the combined Feasibility Report will be prepared for all the three coal blocks (viz., Meenakshi, Meenakshi-B and Dipside of Meenakshi coal blocks) together by projectizing it for an opencast mine with an annual capacity of 20 MTY, presuming that the mine will be worked departmentally for a single variant option.

- C. The FR shall contain the chapters & contents as elaborated below. The FR shall also contain the details not covered in the table detailed at Para G.0 below, but are necessary to be covered to make it a comprehensive document for arriving at an acceptable techno-economic decision by PFCCL.
- D. The consultant shall give presentations of FR before PFCCL after submission of draft FR and shall incorporate the comments. The consultant shall carry out modifications/alterations in the FR in consultation with PFCCL till its final clearance Environmental & Forest Clearance from MOEF.
- E. The Feasibility Report shall be prepared broadly in line with the guidelines of Planning Commission, GOI regarding "Preparation of Feasibility Reports for Coal Projects" dated April 1992 & any further revision on that.
- F. Softcopy of the Project financial model (including formulas and macros builtin) shall be furnished along with FR.
- G. Feasibility Report shall be prepared with Chapters as detailed below and the chapters should have following minimum information. An executive summary shall be prepared for overview. All Tables, Annexure and Plates shall be brought out separately:

Sl. No.	CHAPTERS	CONTENTS
1	Description of the Project	-Brief Details of Project -Purpose and Objectives of the Project -Govt. Initiative and UMPP Policies -Examination of Alternatives
2	Location of the Project	-Location of Coal Deposit -Climate -Access to the location (Rail, Road, Air), Availability of Power Supply and Water etc.,

Sl. No.	CHAPTERS	CONTENTS
3	Leasehold area	<ul style="list-style-type: none"> -Mine lease area -Prominent physiographic features, drainage pattern, natural water course, -Rainfall data, highest flood level -Existing Surface features -Ownership and occupancy of Land -Forest type, name and other details. -Major shifting or diversion involved viz., Road, nala etc., - Type-wise & purpose wise land requirement,
4	Linkages	<ul style="list-style-type: none"> -Coal Consumer Details -Quantity and phasing of coal requirement -Grade/Quality parameters of coal required -Mode of Transportation -Fuel Supply Agreement
5	Geology	<ul style="list-style-type: none"> -Regional Geology -General Information of coal field -Geological structure of the coal field -Hydro-geological condition of the coal field -Characteristics of the coal for establishing physico-mechanical properties -Seam Characteristics of coal -Reserves (seam wise/sector wise/grade wise) -Quality Characteristics of Coal.
6	Project Size/Capacity	<ul style="list-style-type: none"> -Basis of the size/ capacity of the project -Optimum exploitation of extractable reserves -Comparison with international capacity norms -Scale of Economies -Life of the mine furnishing the assumptions made and detailed computations.
7	Technology and Method of Mining	<ul style="list-style-type: none"> - Selection of Clean and State of Art Technology -Analysis of Alternative Technologies
8	Method of Mining	<ul style="list-style-type: none"> -Sequence of Mining Operations and Method of Mining selected -Justification of choice for opencast viz-a-vis Underground mining (indicating min. and max depth of mining operation) -The Proposed mine boundaries of the area under consideration and justification for fixing the boundaries in terms of conservation, mineability and other constraints <u>Opencast Mining:</u> -The Choice of size and mode of entry/box cut etc., -Geological Reserves considered for mining vis-a-vis extractable reserves. -Detailed breakup up of blocked reserves and losses in a tabular form.

Sl. No.	CHAPTERS	CONTENTS
		<ul style="list-style-type: none"> -The Volume and the type of Over Burden (OB) to be handled alongwith the phasing of OB removal -Estimated cut-off ratio as well as average stripping ratio in the initial years and after attaining of the peak capacity. -Haul road layout -The method of removing OB and winning of coal. -Method of land reclamation -The HEMM configuration and justification for the capacity and nos. of dragline, shovels, dumpers, surface miners -Drilling and Blasting Techniques -Arrangements for transport of Coal -Arrangements for maintaining the quality of coal
9	Estimation of extractable reserves and Coal Quality	<ul style="list-style-type: none"> -To indicate sector wise, grade wise, seam wise extractable reserves and coal quality considering the following : <ul style="list-style-type: none"> A) By excluding bands having more than 1m thickness B) By excluding all bands C) By excluding the optimum band thickness to yield raw coal production (ie., without washing of coal) in line with requirements including %age ash content. This optimum thickness is to be decided by the consultant. -To identify year-wise coal quality, UHV and ash% and production plan for the same. -Arrangements for maintaining the desired coal quality.
10	Estimation of waste Quantities and Cut-off ratio, Average Stripping Ratio,	<ul style="list-style-type: none"> -Estimates of total over burden volume (OBR) parting wise/sector wise. -Estimation of Top OB, partings & bands Sectorwise; -Estimation of Average Stripping Ratio Sector-wise & Overall; -Estimation of overall cut-off ratio.
11	Plant and Machinery	<ul style="list-style-type: none"> -Choices of Equipment and specifications of construction requirements -Complete list of capital equipment (by type and size) of main Units -Requirements of buildings and structures by type and size -Broad mine layout

Sl. No.	CHAPTERS	CONTENTS
		<ul style="list-style-type: none"> -Justification for the choice of size and specifications proposed for important items of equipment and plant structures. - Workshop and Stores ---Details of HEMM workshop, E&M workshop & stores & equipment provisioning -Pumping & Drainage--- Estimation of pumping requirements, Location of sumps, provision of different types of pumps, pipes & fittings, -Equipment required reclamation and timelines for deployment
12	Coal Handling and Transportation arrangements	<ul style="list-style-type: none"> -Arrangements for transport of coal -Details of CHP including location, capacity, basis of sizing, cost, number of shifts per day, weighing arrangements and main equipments etc., -Coal conveyor from stockyard to the loading point with study of alternatives viz., pipe conveyor or open type belt conveyor. Silo, MGR, Railway siding etc., - Dust suppression & control measures -Fire fighting arrangements -Telecommunication arrangements
13	Civil construction	Service and residential building, roads & culverts (approach roads, colony roads, haul roads, roads for magazine & diversion roads & other roads), water supply & sewerage (potable & industrial water demands & supply, source of water supply, sewerage disposal system, STP, ETP etc.)
14	Source of Equipment / Services and Scheduling	<ul style="list-style-type: none"> -Possible source of supply of capital equipment, Construction equipment, Services etc., -Basic Engineering, Detailed Engineering, -Schedule of Tendering, Awarding, Manufacture, Supply, Services -Preparedness of Tender Documents
15	Power and Water Supply	<ul style="list-style-type: none"> -Power and Water requirement during construction phase of the project covering Quantity, Sources, Transmission / Transportation, Commitment from Utilities -Power and Water requirement during operation phase of the project covering Quantity, Sources, Transmission / Transportation, Commitment from Utilities
16	Mine Closure Plan	<ul style="list-style-type: none"> -Final Mine Closure Plan -Description as per MoC guidelines -Cost / Expenses involved -Prevailing practices and recommendations.
17	Safety Measures	<ul style="list-style-type: none"> - Possible dangers of inundation from surface water, danger from underground water sources, fire,

Sl. No.	CHAPTERS	CONTENTS
		spontaneous heating gas and explosion -Specific Precautionary measures -Disaster Management
18	Environmental Aspects	-EIA studies and EMP including socio-economic impact - Rehabilitation of project affected persons - Over burden dumps (internal & external) -Waste disposal / reclamation, -Detailed land use data
19	Fly Ash Utilisation	-Utilisation of fly ash generated from Power Plant -Possibility of Fly-ash disposal into the mine voids -Prevailing Rules and Regulations -Infrastructure required for transportation and utilisation of fly ash
20	Construction/ Project Implementation and its schedule	-Status of preparedness -Implementation Plan, Mode of Implementation - Construction Methodology and Technology -Construction Period -Manpower requirement during construction and planning and organisation structure -Infrastructure back-up - construction power, water, Roads, augmentation / strengthening of road / rail connectivity to project, Telecommunication facilities, colony/housing etc., --Standards and Practices followed
21	Production scheduling	-Annual production scheduling to maintain quantity and quality for whole life of mine. a. Yearwise/seam wise/grade wise break up of annual coal production. b. Year wise/parting wise break up of Annual OB/Top soil removal -Fixation of annual production capacity (coal, OBR & SR) & assessment of customer's requirement -Equipment scheduling for whole life of mine. -Annual lead chart (In pit lead for coal and OB transportation) -Annual explosive requirement and planning for Magazine. -Manpower planning (category wise/grade wise) and their annual phasing and organisation structure -Standards and Practices followed
22	Project Cost / Capital Cost	-Initial Capital expenditure, Basis of cost estimation, base date, year-wise phasing, debt, equity, IDC and financial charges, -Inflation Effects -Sustainable Capital Expenditure. -Working Capital Requirement.

Sl. No.	CHAPTERS	CONTENTS
		-Mine Closure expenses -Standards and practices followed.
23	Financial Analysis	-Commercial Profitability of the proposed project. -IRR. Breakeven Point, Payback period etc., -Cost of Production with various components (viz., operating cost, taxes & duties, CSR, depreciation, interest on loan, replacement cost etc.,) -Inflation Effects
24	Economic Analysis	-To determine whether the project is worthwhile from the point view of entire economy. Indirect costs and benefits - quantifiable and non-quantifiable. -Comparisons with selling price of CIL and other similar projects based on domestic coal and imported coal.
25	Sensitivity Analysis	The following cases to be covered: (a) Capital cost escalations by 10 %, 20%, 30 % (b) Operating costs increase by 10 %, 20% and 30 % (c) Production at 60%, 75%, 85% and 100%

1.5 EIA & EMP STUDIES, ENVIRONMENT CLEARANCE, WILD LIFE MANAGEMENT PLAN, WATER MANAGEMENT PLAN, CONSENT TO ESTABLISH, SOCIO ECONOMIC STUDIES & R&R PLANS, CSR PLAN.

The broad scope of work of the Consultant shall be to undertake EIA/EMP studies and other related studies and assist and advise the Client in obtaining approvals in respect of Environmental Clearance, Consent to Establish, Water allocation, R&R and CSR plans, Wild Life plans and other related clearances for Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks.

The broad scope of services shall include but not limited to the following:

- EIA and EMP Studies
- Ecological Studies
- Preparation of Wild life Management Plan
- Socio Economic Studies including Rehabilitation and Resettlement Plan and detailed CSR Plans
- Hydrology and Hydro-Geology Studies
- Preparation of Water Management Plan

(A) ACTIVITIES TO BE CARRIED OUT FOR EIA & EMP STUDIES AND OBTAINING ENVIRONMENTAL CLEARANCE.

The consultant shall undertake detailed EIA&EMP studies for getting environmental clearance from MoEF as per EIA Notification, 2006 and amendments thereof and in compliance with Terms of Reference of MoEF. The study area will comprise of core zone (i.e. Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks allocated to 4000 MW Odisha Ultra Mega Power Project and also the coal conveyor corridor from the three mine blocks to the loading point of MGR corridor) and buffer zone (10 Km all around the periphery of the core zone). Initially, the Environment clearance for Meenakshi coal block will be taken up and subsequently the Environment clearance for three coal blocks together will be taken up. However, base line data generation and other activities will be done simultaneously for all the study area. **The EIA-EMP should be prepared by organization, which must be in the accreditation list of EIA consulting organization by QCI/NABET for accreditation of EIA consultant organization for large open cast mining projects of Category 'A' as per EIA notification.** The consultant shall make itself informed with the EIA Notification, 2006 and amendments thereof, Model ToR for EIA/EMP of mining of Minerals and the guidelines/manuals issued by MoEF/SPCB/State Government while undertaking the following scope of works

- i) Formulation & Submission of an application in Form – 1 to MoEF /EAC for proposed project.
- ii) Preparation & Presentation of Terms of reference (TOR) at MoEF
- iii) Assisting in obtaining approval of TOR by MoEF
- iv) Base line data generation – As per EIA notification 2006 and its amendments till date and TOR issued by MoEF.
- v) Preparation of Land Use Plan (Existing land use details) i.e., details of Land-use breakup of the lease area and study area should be based on land use - details of agricultural land, forest land, wasteland, grazing land, surface water bodies, settlements, etc

- vi) Carrying out EIA & preparing EMP as per MoEF Guidelines.
- vii) Preparation of Draft EIA report after incorporating compliances with all the requirements of TOR as stipulated by MoEF from time to time.
- viii) Preparation of application, executive summary in English & Oriya and submission of draft EIA/EMP Report to OPCB for Public hearing.
- ix) Providing all assistance for conducting Public hearing and Presentation of the EIA during public hearing.
- x) Preparation of minutes of public hearing and obtaining Signature(s)
- xi) Finalisation / revision of EIA/EMP Report based on public hearing feedback.
- xii) Assisting in submission of minutes of Public hearing & video by OSPCB to MoEF.
- xiii) Preparation of final EIA report after public hearing and incorporating all issues raised during the hearing.
- xiv) Assisting in submission of final EIA/EMP (with adequate number of copies in English and regional languages) by project proponent to Public Hearing committee, SPCB and Expert Appraisal Committee (EAC) of MOEF.
- xv) The consultant shall undertake any additional studies if required or as suggested by MoEF/SPCB/During Public Hearing without any additional cost.
- xvi) Assisting in appraisal of EIA/EMP by MoEF and submit all clarifications/ replies to queries from the SPCB/ MOEF.
- xvii) Make EIA/EMP Presentation to Expert Appraisal committee of MoEF.
- xviii) The Consultant shall provide necessary assistance including follow up and also obtaining the necessary approvals and Environment Clearance from MoEF.

As the Environment clearance for Meenakshi coal block will be taken up on priority basis and subsequently the Environment clearance for three coal blocks together will be taken up, approval of ToR, Finalization of EIA & EMP Report, conducting public hearing, Environment clearance and consent to establish will be done twice.

Apart from data generated, the EIA study will have to be done using data to be collected by the Consultant from field and other relevant sources as desired for the study area comprising of the following.

- i) Details of fauna (wild & domestic), flora within a distance of 10 km. radius from the project site (including forest details/type) and get it duly authentication by local Forest department.
- ii) Major habitat within 10 km. radius.
- iii) Major industries within 10 km. radius.
- iv) Sensitive place / historical monuments and sanctuaries, national park, biosphere reserve, tiger reserve/elephant reserve/wild life migratory routes in core and buffer zone.
- v) Land use pattern and land use categories such as agricultural (irrigated/non irrigated, number of crops), barren, forest etc. existing in the in core and buffer zone.
- vi) Demography and socio- economic data based on last available census data for entire study area.
- vii) Relevant meteorological data for previous decades, as per availability from Indian Meteorological department (IMD).
- viii) Study of present environment protection and mitigation measures in nearby operating similar project if any.

- ix) Geo- hydrological aspects based on available data from various sources.
- x) Identification of water bodies, hills, roads, etc. and land use within 10 km. radius and collecting data regarding discharge of stream and flood levels etc. from existing records if any river lies in study area.
- xi) Any other data required as per the model TOR of MoEF.

The environmental impacts would be anticipated in core and buffer zone on.

- Topography
- Climate
- Water quality (Surface/ Ground)
- Hydro-geological regime
- Air quality
- Noise levels
- Flora and fauna (terrestrial, aquatic)/biodiversity
- Traffic density
- Land use
- Socio- economic conditions
- Habitat
- Health, culture human environment including public health, occupational health and safety
- Sensitive places/ historical monuments
- Aesthetics and visual intrusion
- solid waste from mining and processing operation.

The impact would be anticipated based on experience of similar projects and success of this mine operation during the past and all other points suggested/ prescribed by competent committee of MoEF.

Based on the baseline data quantified and impact predicted, the EMP should include the following details:

- i) Study of mine plan prepared for the project.
- ii) The baseline data generated and collected as mentions above about present environment scenario.
- iii) Identification, prediction and evaluation of anticipated environmental impact due to the proposed mine, related facilities and activities.
- iv) EMP for aspects like effluent, solid, hazardous waste etc.

A minimum of following aspects on proposed environmental safeguards and monitoring mechanism would be covered in the EIA report to be prepared.

- i) Reclamation of areas disturbed during construction but not required for any activity during operation.
- ii) Measures to control the surface and ground water pollution due to various
- iii) effluents to be discharged
- iv) Measures to control air pollution due to proposed activities/ operation.
- v) Green belt development
- vi) Measures to control noise pollution and mitigate adverse impact on workers and
- vii) habitat in core and buffer zone

- viii) Pronounce the improvement in socio-economic conditions and benefits to the
- ix) people on implementation of the project
- x) Measures to control health hazard of workers and surrounding population
- xi) Total and specific cost of implementation of control measures
- xii) Environmental monitoring, implementation organization and feedback mechanism to effect mid course corrections.
- xiii) Identification of flora species which can be planted in and around the project
- xiv) Mine reclamation activities

(B) PREPARATION OF WILDLIFE MANAGEMENT PLAN AND OBTAINING NOC FROM CHIEF WILD LIFE WARDEN

The consultant shall undertake to prepare mitigative Wildlife Management Plan to obtain NOC from Chief Wildlife Warden/concerned authority & to prepare Flora/Fauna Management Plan & to obtain approval from appropriate Statutory Authorities as per the latest guidelines issued by PCCF (Wildlife) and instruction issued by PCCF. The study area will comprise of core zone (i.e. Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks allocated to 4000 MW Odisha Ultra Mega Power Project and also coal conveyor corridor from the three mine blocks to the loading point of MGR corridor) and buffer zone (10 Km all around the periphery of the core zone). The scope include the following details.

- i) Preparation of a map on original Survey of India toposheet (s) in 1:50000 scale indicating the location of Reserve Forest, protected area (National /Wildlife sanctuary), migratory corridors etc. located within applicable distance as per law from Forest land/Project facilities proposed to be diverted mainly indicating distance from the project facilities from NP/Sanctuary/ Corridor along with other features existing on data.
- ii) Preparation of latest Forest cover map of the area located within applicable distance from the Forest land proposed to be diverted by using suitable high resolution remote sensing satellite imaginaries duly certified by the concerned DFO.
- iii) Obtaining NOC of the PCCF Wildlife/ Warden, Govt. of Odisha on adverse effect, if any, of the proposed diversion of the forest land as well as proposed diversion in land use in the project, on wildlife along with appropriate mitigation
- iv) Prescription for Management of forest area proposed to be diverted as per latest working plan duly approved by Central Government.
- v) Photographs of the representative spots in forest area proposed to be diverted along with a map showing location of such representative spots with coordinates taken by GPS.
- vi) Shall generally quantify the losses caused due to establishment of the project like biomass/fodder/timber/ small timber, water etc.
- vii) Obtaining list of Flora & Fauna found in the project area duly verified by the Botanical Survey of India / Zoological Survey of India/DFO, or as applicable and its mitigation plan due to destruction for the project.
- viii) Prepare a comprehensive forest rehabilitation and conservation covering the project as well as the surrounding area.
- ix) Prepare comprehensive biodiversity Management Plan to mitigate the possible impacts of mining on the surrounding forest and wildlife.

- x) Obtaining status of surrounding projects with details in Toposheet duly certified by concerned authorities.
- xi) Obtaining approval for concerned statutory authorities as per laws/ guidelines as on date.
- xii) Any other items required as per latest PCCF (Wildlife) guideline & PCCF guideline & Forest laws not specifically mentioned are deemed to be as a part of the scope.

(C) TASKS TO BE UNDERTAKEN FOR OBTAINING CONSENT TO ESTABLISHMENT OF INDUSTRIES.

Initially, the consent to establish for Meenakshi coal block will be taken up and subsequently for three coal blocks together will be taken up. The scope include the following details

- i) Preparation of Application to OPCB with draft EIA/EMP and submission of the same.
- ii) Meeting of Technical Committee of OPCB & making presentation of EIA/EMP
- iii) Compliance, if any & submission of revised EIA/EMP
- iv) Assist in Grant of Consent to Establishment by OPCB
- v) Assist in Grant of Consent to establish for silos/ coal loading point for MGR as per guidelines for environmental management in mineral stack yards and railway sidings issued by State Pollution Control Board, Odisha.

(D) TASKS TO BE UNDERTAKEN FOR HYDROLOGY AND HYDRO-GEOLOGY STUDIES

The hydrology and hydro-geological study will be done on priority basis for the study area comprising of comprise of core zone (i.e. Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks and also coal conveyor corridor from the three mine blocks to the loading point of MGR corridor). The scope include the following details

- i) The hydro-geological study will be based on historical data of stream discharges leading to the determination of water budget for surface/groundwater regime. Aquifers will be identified with respect to strait graphical sequence. The recharge-discharge of the area and the net flow of the area will be presented.
- ii) The report will be based on latest available one-year pre-monsoon and post-monsoon baseline data covering information on groundwater situation, aquifer characteristics and water level conditions. The predicted impact of the project on groundwater regime and detailed remedial / conservation measures such as artificial recharge of groundwater, etc. will also be covered.
- iii) The report will be based on actual field inventory out of existing wells, with supplementary information from secondary sources. For estimation of groundwater resource, the designated study area will be sub-divided into command and non-command areas, watershed-wise (in case of hard rock / consolidated formations) / block-wise /mandal-wise in case of alluvial / unconsolidated formations). For

estimating ground water resources in the area the latest Ground Water Estimation Committee recommendations will be followed.

(E) TASKS TO BE UNDERTAKEN FOR USE OF GROUND WATER AND SURFACE/SUB-SURFACE WATER

The consultant shall prepare water management plan for the study area comprising core zone (i.e. Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks and also coal conveyor corridor from the three mine blocks to the loading point of MGR corridor). Initially, for Meenakshi coal block will be taken up and subsequently for three coal blocks together will be taken up. The scope includes the following details.

- i) Generation of required data, preparation and submission of report as per guidelines of State and Central Government and to provide logistic support for obtaining permission to use ground water for the project from the appropriate authority concerned.
- ii) Generation of required data, preparation and submission of report as per guidelines of State and Central Government and to provide logistic support for obtaining permission for drawl of surface/sub-surface water to use for the project from the appropriate authority concerned.
- iii) Preparation of Water Management Plan including source, location, suitability of source and quantity available and required.
- iv) Impact of mining on hydrology, modification of natural drainage, diversion and channelling, construction of bund/embankment of the existing rivers/water courses flowing though the ML and adjoining the lease and the impact on the existing users and impacts of mining operations thereon.
- v) Detailed water balance along with flow chart of water use for mining operation should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. Details of STP in colony and ETP in mine. Recycling of water to the maximum possible extent.
- vi) Source of water for various uses in mine, sanction of the competent authority in the State Govt. and impacts vis-a-vis the competing users.
- vii) Impact of mining and water abstraction/use in mine on the hydrogeology and groundwater regime within the core zone and 10km buffer zone including long term modelling studies on groundwater regime

(F) TASKS TO BE UNDERTAKEN FOR SOCIO ECONOMIC STUDIES, PREPARATION OF R&R PLAN AND CSR PLAN

The consultant shall undertake detailed socio economic studies, preparation of R&R Plan, CSR Plan in accordance with prevailing National R&R policy/ Government of Odisha R&R policy viz. "ORISSA RESETTLEMENT AND REHABILITATION POLICY-2006" / R&R policy formulated for the project. The consultant should undertake socio-economic studies for the study area comprising of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks area, MGR corridor for coal transportation, Coal Conveyor corridor and additional area required for township, road, workshop, mine infrastructure etc.

Socio economic studies shall be conducted taking note of guidelines issued by Govt. of Odisha for conducting socio economic survey and socio-cultural, resource mapping and infrastructural survey in the project area. Further, the bidder shall ensure that the socio economic survey and socio-cultural, resource mapping and infrastructural survey in the project area is carried out by empanelled agencies of Govt. of Odisha. The identified agency for conducting socio economic survey and socio-cultural, resource mapping and infrastructural survey in the project area shall be appointed with the consent of PFCCCL. The bidder shall finalize the socio economic study report in order to expedite EC and other clearance. However, at the time of obtaining approvals for R&R and CSR Plans, the SES shall be completely updated with the assistance of identified agencies.

The consultant will cover the following aspects in the socio economic study:

- a) Socio-economic survey / census of the affected people including entitlement matrix
- b) General infrastructure survey and resource mapping
- c) Cultural property survey / social property survey and social mapping
- d) Preparation of village's profiles and family/individual PAP profile for all the affected villages and families.
- e) Details on the land holding house ownership
- f) Interest expressed by the displaced and affected families for settling down at Resettlement & Rehabilitation site (in case R&R site is not identified at the time of studies, SES may be completed in order to expedite EC and other clearances. Subsequently, the information needs to be collected and report needs to be updated)
- g) Displacement of human settlements
- h) Impact on present status of livelihood area
- i) Impact on the cropping pattern and crop productivity in the buffer zone
- j) Establish a social-inventory of the affected villages.
- k) Impoverishment Risk Analysis of PAP.
- l) Identity indicators for monitoring the standard of living of PAP in future.
- m) Identify the forest dwellers/forest dwelling schedule tribes/ other traditional forest dwellers as per the "Scheduled Tribes and Other Traditional Forest Dweller (Recognition of Forest Rights) Act, 2006".

The scope of consultant shall also cover the following aspects in the preparation of R&R Plan & CSR Plan.

- i. To prepare an appropriate R&R action plan for the rehabilitation of PAP's along with various community development activities plan in accordance with National R&R policy/ Government of Odisha R&R policy/ R&R policy formulated for the project, its schedule, Monitoring Indicators, along with Roles and Responsibilities of Key stakeholders.
- ii. R&R plan with data on the existing socio-economic status of population in the study area and broad plan for resettlement of the displaced population.
- iii. Requirement of Land and identification of R&R Site and Obtaining Revenue Records of R&R site.

- iv. Alternate live hood concerns for displaced people, civil and housing amenities to be offered.
- v. Schedule for the implementation of the project specific R&R plan
- vi. Details of cost estimates (capital and recurring) for project specific R&R plan and monitoring mechanism for implementation of the plan.
- vii. Preparation of CSR Plan and Cost Estimate
- viii. Approval of R&R plan including CSR plan & budget and R&R sites by Rehabilitation Periphery Development & Advisory Committee of Govt. of Odisha/appropriate authority.

(G) The following maps / toposheets and schematic diagrams are essential for the presentation and the same shall be prepared by the Consultant and arrange for the presentation:

- i) Land use maps (1: 50,000 scale) based on recent satellite imagery indicating the topographical and land use features of the study area (10km buffer zone surrounding the core zone) should be furnished. In case of ecologically sensitive areas as defined in the EIA Notification 2006 – Appendix I Form 1 – III Sensitivity of (for e.g. Areas near Wildlife Sanctuaries/Tiger Reserves/National Parks/Archaeological monuments, areas falling near/within elephant habitats/migratory corridors), a 15km map of the buffer zone should be presented. Satellite imagery should also be provided.
- ii) Land use Map of the study area (core zone and 10km of the buffer zone) on the topo sheet (1: 50,000 scale) indicating the broad topographical features of the land use (agricultural land, forestland, grazing land, wasteland and surface water bodies) and not based on land ownership of the core zone and buffer zone should be furnished. The maps should also contain the other features such as major roads, Highways, Railway lines, other mines and industries, habitations, etc.
- iii) In case the features are not clear in the topo sheet, map of the study area (core zone and buffer zone) superimposed on the topo sheet (1: 50,000 scale) preferably on Computer-Aided-Design (CAD) should be presented.
- iv) Landuse map of the coalfield showing major landuse features including forests and drainage and location of project within the coalfield along with locations of other coal mines, main coal transportation routes, etc should be shown.
- v) A land use map based on toposheet of the study area (1: 50,000 scale) indicating the hydrological features (rivers, canals, streams, nallas, water tanks, etc.) within the core zone and buffer zone should also be provided.
- vi) A more detailed area drainage contour map of the core zone and 2-5 km of the buffer zone (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in a separate map.
- vii) In case of any proposed diversion of nallah / canal/river, the proposed route of diversion/modification of drainage and their realignment, construction of embankment etc. should also be shown (in dotted lines) on the map.
- viii) Similarly if the project involves diversion of any road/railway line passing through the ML/ project area, the proposed route of diversion (in dotted lines) and its realignment should be shown.
- ix) A separate map of the core zone indicating the proposed locations of quarry area, ext. OB dumps, and other mining operations should be shown on the map. For projects where the Mining Plan is under finalisation, the progressive mine development and final mine closure plan should also be shown as figures.

- x) A schematic diagram of the route of coal transportation from mine face to end user along with km distance should be shown.
- xi) Allocation of non-coal bearing zone should be shown.

(H) **OVERALL RESPONSIBILITY OF THE CONSULTANT**

- i) All required assistance by the appointed agency till Consent to Establish and Environment Clearance is received.
- ii) To provide required inputs for finalizing Geological Report, mining plan, feasibility report, Mining Lease, Prospecting License etc.
- iii) Coordinating, attending meetings, conferences making presentations and completing all other activities required for completing the above scope of work.
- iv) At each stage, as required and desired by PFCCL, the Consultant would be required to interact, attend review meetings and make presentations to PFCCL / any other agency at a time and place intimated by PFCCL.
- v) Carrying out all related activities required for completion of the assignment.
- vi) The Bidder shall carry out all the studies as indicated in the scope of work as per the latest rules and regulation/ norms/ amendment/ guidelines whenever issued by the statutory bodies during currency of the contract shall be within the scope of services.
- vii) The Consultant shall provide necessary assistance including follow up and also in obtaining the necessary approvals/clearances

1.6 LAND ACQUISITION AND FOREST CLEARANCE

The scope of work of the Consultant shall include assisting and advising the Client in land acquisition within coal block area and outside coal block area and to obtain forest land diversion clearance and other related clearances in respect of the land pertaining to Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha.

The three coal blocks Meenakshi, Meenakshi-B, and Dipside of Meenakshi is located in the Hemgiri Tehsil of district Sundargarh in the state of Odisha. Total Land requirement of coal block area is approx. 1308 ha (492 ha for Menakshi, 486 ha for Meenakshi-B and 330 ha for Dip Side of Meenakshi coal blocks). Additional land requirement of non coal bearing area is 56.2 ha. The coal block area involves 102 ha of Reserve/ Protected Forest, 332 Ha Revenue Forest, 236 Ha of Govt Land and 638 Ha of Private Land. The additional land requirement involves 33 ha for township, road, workshop, mine infrastructure etc. and 23.2 ha for conveyor corridor.

Land acquisition involves tenancy land within & outside coal block boundary , Transfer / lease of Government land within & outside coal block boundary , diversion of forest land (including revenue forest land) within and outside coal block boundary.

A. Scope of Land Acquisition

- a) The scope includes collection of land Records (RoR) and preparation of Land Schedule (including details land ownership such as tenancy land, Govt. land, revenue land, Forest (Reserve Forest, Protected Forest, Revenue Forest) Land etc.,
- b) Subsequently, Bidder shall finalise land schedule based on the cadastral maps showing coal block boundary as well as on the basis of ROR data. Land schedule shall be prepared separately for all types of land e.g Tenancy Land, Government land, Forest land (Reserve Forest, Protected Forest, Revenue Forest etc.) separately for these 3 coal blocks. Schedule shall be segregated village wise or otherwise as required for acquisition / transfer / lease / diversion of the LAND.
- c) The consultant shall prepare Family Tree Survey & Yadast Survey, Asset Valuation, Preparation of Statement for compensation and assist in obtaining certification from the concerned authority.
- d) Bidder shall follow-up with Directorate of Mines, Revenue Dept and Forest Dept. Govt. of Odisha for vetting / certification of Land schedule.
- e) Bidder shall collect and identify land included in the Section-11(1) notified by Govt. of India particularly in Garjanbahal, Bangurkela and Kiripsira Villages. Based on this, bidder to segregate land pertaining to three coal blocks which are included in the Section -11(1) notified by Govt. of India particularly in Garjanbahal, Bangurkela and Kiripsira Villages and prepare details in this regard.
- f) Bidder to identify balance land to be acquired (particularly in Garjanbahal, Bangurkela, Kiripsira, Ghumudasan, Manoharpur, Kutabaga, Durubaga, Sahaspur Villages and other villages if any and prepare details in this regard.

- g) Bidder shall carry out all necessary works including liasoning with all concerned authorities for facilitating notification/s under various sections under CBA (A&D) Act, 1957 till the land is transferred.
- h) Bidder to identify forest land involved and their details
- i) Bidder to identify land for other requirements outside coal block area e.g. permanent infrastructure, offices, residence / Colony, land for road / railway track diverted, Sewage Treatment Plant etc and will facilitate all necessary works including liasoning with all concerned authorities for facilitating notification/s under various sections under “ LA Act , 1894” /“The Right to fair compensation and transparency in land acquisition , Rehabilitation & Resettlement Act , 2013” , in order to acquire the said land.
- j) Bidder shall prepare proposal for transfer / lease of Government Land, follow up the proposal at all levels i.e. revenue block , district , State level etc including liasoning with authorities, guiding preparation of document etc .
- k) Bidder shall prepare of Land Allocation Letters wherever required.
- l) Bidder to undertake preparation of proposal for diversion of forest land, transfer / lease of Government land and acquisition of priority tenancy land for MEENAKSHI Coal block, on priority basis. Proposal for MEENAKSHI B & DIP SIDE of MEENAKSHI shall be taken up subsequently
- m) Bidder shall coordinate with MOP, MOC, PFCCL, MCL, Revenue department, Forest Department and other authorities, as & when necessary.
- n) As per MoE&F and MoC directives, 200 Ha of Medium Density Forest (MDF) land is to be surrendered. The Forest land to be surrendered is comprising of 150 Ha MDF land and 50 Ha MDF Land from Meenakshi - B coal block and Dipside of Meenakshi Coal Block respectively. The Consultant shall coordinate with CMPDI in identifying MDF area to be surrendered and mark-up the same on Maps in association/coordination with CMPDI.

B. Acquisition of Land Pertaining to Coal Blocks Area under CBA (A&D) Act, 1957:

Land pertaining to Coal Block area is proposed to be acquired under Coal Bearing Areas (Acquisition and development) Act, 1957. However, MoC has already notified following lands under Section -11(1) of CBA (A&D) Act 1957, for vesting the rights to MCL.

S.NO.	NAME OF VILLAGE	Area in Acres
1.	Garjanbahal in Hemgiri Tahsil, Sundargarh District	798.35
2.	Bangurkela in Hemgiri Tahsil, Sundargarh District	1055.96
3.	Kiripsira in Hemgiri Tahsil, Sundargarh District	1681.11

Bidder to facilitate preparation of proposal and submission of application to MOC for transfer of “Land already notified by MOC for vesting with MCL and falling inside coal block boundary of these 3 blocks.”

In case of refusal of MOC for transfer of land, Bidder shall facilitate preparation and submission of application to MOC for notification of this land under Section 4(1), 7(1), 9(1) & 11(1) of CBA (A&D) Act 1957 by MOC.

Bidder shall prepare proposal for remaining land within the coal block boundary for all 3 blocks for notification of the balance land under Section 4(1), 7(1), 9(1) & 11(1) of CBA (A&D) Act 1957 by MOC.

Bidder shall be responsible for preparation of proposal for notification under Section-4(1) of CBA Act, 1957 including required drawing / document / text etc duly authorized by appropriate authority and facilitate submission of the same to MOC (through MOP) . Bidder shall assist PFCCL for follow up with Ministry for notification. Responsibility for furnishing the correct data of land area, schedule of the villages and land details on the revenue record shall lie with bidder.

Bidder shall prepare document & facilitate submission of this proposal for notification under Section 7(1) of the CBA Act to MOC for notification. Objection under Section 8(1) of CBA Act against acquisition of the proposed land will be adjudicated by the office of coal controller. The Bidder shall assist PFCCL in settlement of all the objections / disputes.

Bidder shall prepare the proposal for notifications under Section 9(1) and 11(1) complete with all required document / drawing / text etc including land plan & other details and facilitate submission of proposals to MOC for notifications. Bidder shall be responsible for addressing all the issues arising in the process.

Bidder shall be responsible for collection of land document for priority area of Meenakshi coal block (required for mining during first five years) and transfer of land.

B. Acquisition of Land for Other Requirements:

Land is proposed to be acquired under “LA Act, 1894” or “The Right to fair compensation and transparency in land acquisition, Rehabilitation & Resettlement Act, 2013”:

Bidder to identify land for other requirements outside coal block area e.g. permanent infrastructure, offices, residence / Colony, land for road / railway track diverted, Sewage Treatment Plant etc and will facilitate all necessary works including Liaoning with all concerned authorities for facilitating notification/s under various sections under “LA Act, 1894” / “The Right to fair compensation and transparency in land acquisition, Rehabilitation & Resettlement Act, 2013”.

Bidder shall prepare proposal with required document / drawing / text etc for acquisition of land for above mentioned requirement. Subsequently, bidder shall facilitate notification under Section – 4/6, 7/17, 9, 11, 12 etc

The Consultant shall be responsible for addressing all the issues arising the process of land acquisition.

D. Transfer / Lease of Government Land:

Bidder shall be responsible for fast initiation of proposal for Government land TRANSFER / LEASE and ensure issuance of Government order in this respect.

The scope shall include:

- (a) Facilitate preparation of land schedule for all types of Government land including Jungle-Jhari land along with necessary village wise revenue map showing the land under acquisition and application for transfer / lease of government land.
- (b) Follow up the proposals at all levels i.e revenue block, district, State level etc including liasoning with authorities concerned etc.

E. Preparation of Forest Diversion Proposal (FDP) and Obtaining Forest Clearance (Stage -1 & Stage-2)

The Consultant shall to undertake for preparation of a Complete and Comprehensive Forest Diversion Proposal (FDP) and obtain forest clearance (both stage-1 and stage-2) for the forest area within coal block area of the three coal blocks as well as area outside the coal block area for construction of coal conveyor corridor (from three coal blocks to loading point of MGR Corridor) as per the Forest Conservation Act, 1980 with all amendments thereafter, “Scheduled Tribes and Other Traditional Forest Dweller (Recognition of Forest Rights) Act, 2006” and as per prevailing GOI Guidelines and current practice and procedure applicable under the laws of State of Orissa Forest Dept.

The scope shall include:

- a) Bidder to prepare proposal for diversion of forest land as per MOEF guideline. Proposal preparation shall include Identification of forest land, field survey / enumeration of trees, Listing of tree details, collection of consent letter of Village forest committee , preparation of village map , location map on toposheet, cost-benefit analysis, NOC from DC for Jungle-Jhari land, settlement of issues pertaining under compliance of FRA – 2006, etc.
- b) Bidder shall carry out all necessary works including enumeration of trees for facilitating preparation of application for diversion of forest land, follow up & liasoning with all concerned authorities to ensure smooth movement of this proposal at District, State, Regional and at Delhi level as required for Stage-1 & 2 clearance, preparation of compliance report as necessary, permission for diversion of forest land and tree felling etc.
- c) Bidder shall identify the forest dwellers/forest dwelling schedule tribes/ other traditional forest dwellers as per the “Scheduled Tribes and Other Traditional Forest Dweller (Recognition of Forest Rights) Act, 2006” and obtain No Objection Certificate from the concerned authorities.
- d) Bidder to follow up processing of proposal through forest officials / Secretaries at district / state levels and forwarding proposal to MOEF, Delhi, facilitate

inspection by Regional Office, presentation preparation / attending FAC meeting at MOEF Delhi to facilitate Stage-1 clearance.

- e) Bidder to follow up processing of proposal from MOEF, Delhi back to district level, facilitating preparation of compliance report of Conditionalities of Stage-1 clearance and help in processing the proposal back to MOEF, Delhi through State level.
- f) Obtaining forest land diversion clearance and tree felling permission from State / District level
- g) Bidder is expected to ensure continual follow up / responsibility in expediting forest land diversion proposal from the date of submission of proposal to DFO till obtaining forest land diversion clearance / tree felling permission and take all necessary even if not specifically mentioned above.
- h) Facilitating issuance of Final Clearance by MOEF, Delhi

The Forest Diversion Proposal shall also include the following activities:

- a) Generation of data & collection of documents for preparation of application
- b) Submission of Forest Diversion application to CCF/Nodal, Bhubaneswar.
- c) Follow up with CCF Nodal for onward forwardal of the application to DFO through Regional CCF.
- d) TREE ENUMERATION
 - Assist and follow up for Forest area demarcation & enumeration of trees by Forest Ranger & Revenue staffs along with user agency
 - Follow up with Ranger to submit joint trees enumeration report to DFO
 - DFO/RCCF to inspect forest land and assess correctness of tree enumeration etc.
- e) GRAM SABHA RESOLUTION
 - Preparation and submission of Application to Collector for issue of Certificate under Forest Rights Act
 - Assist and follow up with BDO/Tehsildar to convene Gram Sabha for identifying beneficiaries, organise such Gram Sabha and pass resolution for issue of NOC
 - Follow up with Collector to issue certificate
- f) Follow up with DFO to recommend the proposal and forwarding the same to RCCF
- g) Follow up with RCCF to recommend the proposal and forwarding the same to the CCF.
- h) Follow up with CCF to recommend the proposal and forwarding the same to the Forest Department, Govt. of Odisha.
- i) Follow up with Forest Department, Govt. of Odisha to recommend the proposal and forwarding the same to MoEF
- j) Follow up with MoEF to send FDP to RCCF, BBSR Regional Office for inspection & submission of report

- k) Follow up with Regional Office to inspect & send recommendation
- l) Follow up with MoEF to place the Forest Diversion Proposal before FAC
- m) Presentation to FAC
- n) Follow up for Recommendation by FAC
- o) Follow up with MoEF for acceptance of FAC recommendation and to approve FDP
- p) Obtain Stage-I Clearance from MoEF
- q) Submit compliance of conditions of Stage-I Clearance
- r) Obtain Stage-II clearance from MoEF

F. DGPS Survey Work

The scope of work involves DGPS survey for Coal Block Boundary Demarcation and Demarcation of forest patches. Coal Block Boundary shall be prepared separately for each of the three coal blocks as well as for all the three blocks together. DGPS survey is proposed to get conducted by ORSAC as per the guidelines of MoEF, ORSAC and Govt. of Odisha.

Steel and Mines Dept., Govt. of Odisha, circular No. 4132/SM dated 8th May 2013 has issued guidelines for DGPS/ETS survey of coal block and preparation of digital geo-reference map. As per this, Odisha Space Application Centre (ORSAC), the State Nodal Agency will carryout / vet the DGPS/ETS survey of the coal block boundary including preparation of cadastral based geo-reference coal block map. Further, Steel and Mines Dept., Govt. of Odisha, circular No. IV(Coal)10/2013/5832/SM dated 22nd June 2013 has advised CMPDI to participate in the process of demarcation of coal blocks by ORSAC.

Bidder shall prepare application for submission to ORSAC to carryout Cadastral based digital geo-referenced coal block map generated through DGPS/ETS survey. Consultant shall co-ordinate with ORSAC and CMPDI. All assistance to be extended by Consultant for finalization of Coal Blocks Boundary and certification of DGPS/ETS surveyed maps by ORSAC in coordination with CMPDI.

The consultant shall prepare application for submission to ORSAC to carryout DGPS/ETS surveyed maps of forest area proposed to be diverted. Consultant shall co-ordinate with ORSAC, Forest Dept. of Odisha and CMPDI. All assistance to be extended by Agency for finalisation of Boundary of all patches of forest area and certification of DGPS/ETS surveyed maps by ORSAC in coordination with CMPDI. Consultant to carry out this activity, as per Guidelines issued by MoE&F, GoI and Govt. of Odisha.

As per MoE&F and MoC directives, 200 Ha of Medium Density Forest (MDF) land is to be surrendered. The Forest land to be surrendered is comprising of 150 Ha MDF land and 50 Ha MDF Land from Meenakshi - B coal block and Dipside of Meenakshi Coal Block respectively. The Consultant shall coordinate with CMPDI, Forest Dept. of Odisha and Agency engaged for undertaking Exploration, in identifying MDF area to be surrendered and mark-up the same on Maps in association/coordination with CMPDI.

Fee/payments towards conducting the DGPS/ETS survey of the coal block boundary including preparation of cadastral based geo-reference coal block map will be paid by PFCCL directly to ORSAC.

To enable ORSAC to conduct DGPS survey, Bidder shall undertake following activities and provide necessary inputs:

- Collection of all revenue maps/cadastral sheets covering coal block boundary from State Revenue department
- Collection of forest maps demarcating the classified forest area from DFO office
- Digitisation & Mosaicing of all revenue maps/cadastral sheets & marking of forest land on that
- Field survey (DGPS/ETS) based on CMPDIL certified map for demarcating block boundary & forest boundary
- Construction / erection of pillars for block boundary & forest boundary
- Preparation of Land Schedule based on surveyed block boundary as well as ROR data
- Liaisoning with CMPDIL, Deputy Director of Mines, Divisional Forest Officer (DFO), Tahasilder, allocatees of coal block having common boundary etc for presence of their representative during demarcation and getting their certification for block boundary demarcation and land schedule.

1.7. OVERALL RESPONSIBILITY:

- a) All required assistance shall be provided by the appointed agency till the possession of complete land (forest land and non forest land) is taken over.
- b) Agency to provide necessary inputs to agency appointed for EIA/EMP studies in obtaining approval for EC, Consent to Establish, Water Allocation, Wildlife Management Plan, R&R Plan, CSR Plan.
- c) Agency to coordinate with MCL
- d) Agency to provide required inputs for finalising Coal Boundary Plan, Exploration Plan, Geological Report, mining plan, Pre-feasibility Report, feasibility report, Mining Lease, Prospecting Licence. etc.,
- e) All related co-ordination works are to be undertaken by the Bidder.
- f) The Consultant shall provide necessary assistance including follow up and also obtaining the necessary approvals / clearances.

Bidders have the option to quote for individual parts i.e. the Bidder can bid for Part-A or Part-B or both Part-A and Part-B.

2.0 COMPLETION SCHEDULE

The schedule for completion of various activities are as follows:

S.No.	Activity / Deliverables	Completion Time (from Date of Issuance of LoA)
Part-A (Meenakshi B and Dipside of Meenakshi Coal Block)		
1	Exploration Scheme/Plan	1 month

S.No.	Activity / Deliverables	Completion Time (from Date of Issuance of LoA)
2	Topographical Survey	2 months
3	Drilling and Sampling Analysis	6 months (to complete within overall period of 8 months along with GR)
4	Geological Report (GR) and 3-D Geological Model	8 months
Part-B		
1	Pre-Feasibility Report for Meenakshi Coal Block	1 month
2	Mining Plan for Meenakshi Coal Block	3 months
3	Feasibility Report for Meenakshi Coal Block	4 months
4	Approval of MoC for Mining Plan for Meenakshi Coal Block	5 months
5	Combined Pre-Feasibility report for all the three Coal Blocks	3 months
6	Combined Mining Plan for all the three Coal Blocks	9 months
7	Combined Feasibility Report for all the three Coal Blocks	10 months
8	Approval of MoC for Combined Mining Plan for all the three Coal Blocks	11 months
9	EIA/EMP Studies, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan for obtaining EC and Consent to Establish for Meenakshi Coal Block	12 months
10	EIA/EMP Studies, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan for obtaining EC and Consent to Establish for all the three Coal Blocks	18 months
11	Obtaining Consent to Establish for loading & unloading operations, including silos, at the beginning of MGR	12 months
12	DGPS Survey from ORSAC and finalisation of coal block boundary plan	3 Months
13	Land Acquisition of Meenakshi Coal Block	18 months
14	Land Acquisition of Meenakshi-B and Dip Side of Meenakshi Coal Blocks	24 months
15	Land Acquisition for other requirements	18 months

S.No.	Activity / Deliverables	Completion Time (from Date of Issuance of LoA)
16	Diversion of Forest land for coal blocks, conveyor corridor and land for other requirements and obtaining forest clearance from the concerned authority.	18 months

Any activity not mentioned here but required as per the scope of work for completing the assignment, shall be completed within the above completion schedule by the consultant.

The above completion schedule shall be adhered to under all circumstances. PFCCL may, if satisfied, may grant time extension for any delay in completion of any of the above activities for the reasons not attributable to the Consultant.

3.0 DELIVERABLES

All the deliverables shall be submitted as per the following:

S.No	Deliverables
Part-A (Meenakshi B and Dipside of Meenakshi Coal Block)	
1	Exploration Plan
2	Topographical Survey
3	Progress Report
4	Interim Report based on drilling & sampling analysis for completed boreholes
5	Geological Report
6	3D Geological Modelling
Part-B	
For Meenakshi Coal Blocks, Conveyor corridor, other areas	
1	Pre-Feasibility Report
2	Mining Plan
3	Feasibility Report
4	EIA/EMP Study Report
5	Socio-Economic Studies
6	R&R Plan and CSR Plan
7	Wildlife Management Plan
8	Hydrology and Hydro-Geological Report
9	Water Management Plan
10	Consent to establish for coal block as well as for loading / unloading operations including Silos at the beginning of MGR
11	Coal Block Boundary Plans and Boundary Plans for Forest Area
12	All documents required for acquisition of land under CBA (A&D) Act, 1957 / LA Act and submission to concerned authorities
13	All documents for submission of application to concerned authorities for forest clearance as per the guidelines issued by MoEF/State Govt. Authorities
14	Progress Report
For Combined all the Three Coal Blocks Together	
1	Pre-Feasibility Report

2	Mining Plan
3	Feasibility Report
4	EIA/EMP Study Report
5	Socio-Economic Studies
6	R&R Plan and CSR Plan
7	Wildlife Management Plan
8	Hydrology and Hydro-Geological Report
9	Water Management Plan
10	Consent to establish for coal blocks as well as for loading / unloading operations including Silos at the beginning of MGR
11	Coal Block Boundary Plans and Boundary Plans for Forest Area
12	All documents required for acquisition of land under CBA (A&D) Act, 1957 / LA Act and submission to concerned authorities
13	All documents for submission of application to concerned authorities for forest clearance as per the guidelines issued by MoEF/State Govt. Authorities
14	Progress Report

All the deliverables shall be submitted as per the following:

- (i) Draft report (including editable soft copy) - 5 copies
- (ii) Final report (including editable soft copy) - 10 copies

As per requirements of MoEF/MoC or any other Govt. agencies, additional copies of the final reports shall be submitted by the Consultant on request of PFCCL.

The consultant shall submit the above deliverables as per the scope of works indicated in this tender document. Any deliverable not mentioned here but required as per the scope of work for completing the assignment, shall be submitted by the consultant.

Further, on issuance of Letter of Award (LoA), the selected consultant is required to prepare and finalize in consultation with the PFCCL a detailed implementation schedule along with the deliverables covering all activities to meet the overall time schedule of the assignment.

4.0 EARNEST MONEY DEPOSIT (EMD)

The Consultant shall submit EMD as per the following along with the Technical Bid. Any Bid submitted without earnest money shall be summarily rejected and no claim shall be entertained on such rejected tenders.

- **For Part-A:** The bidder should enclose separate crossed demand draft of any nationalized bank or scheduled bank or bank guarantee worth Rs 15,00,000/- (Rupees Fifteen Lakhs only) in favour of PFC Consulting Ltd. payable at New Delhi along with the documents of technical Bid.
- **For Part-B:** The bidder should enclose separate crossed demand draft of any nationalized bank or scheduled bank or bank guarantee worth Rs 3,00,000/- (Rupees Three Lakhs only) in favour of PFC Consulting Ltd. payable at New Delhi along with the documents of technical Bid.

In case the bidder is submitting EMD in the form of Bank Guarantee, the same shall be valid for a period of 6 months.

The EMD of the unsuccessful bidders will be returned within 15 days of signing of the contract agreement with the successful bidder and receipt of Contract Performance Guarantee (CPG).

The EMD of successful bidder will be refunded on submission of Contract Performance Guarantee (CPG).

5.0 ELIGIBILITY CRITERIA

The bidder should meet the following eligibility requirements:

5.1 For Part-A

The bidder should satisfy the following minimum eligibility criteria of having:

- i) Successfully completed drilling and exploration work of at least 10,000 meters per annum for mines in any of the last 5 years from the bid due date.
- ii) Successfully completed at least 1 (one) consultancy assignment on preparation of Geological Report of a coal/lignite block in the last 5 years from the bid due date.
- iii) Minimum average Annual Turnover of Rs. 10 crore of the company / all consortium partners taken together (in case of a consortium) in last three financial years. (i.e. 2010-11, 2011-12 and 2012-13)

The Bidder is required to submit the documentary evidence for meeting the above eligibility criteria as per the format enclosed at Form No.2A. The Bidder may tie up with other agencies and form a consortium for carrying out the complete scope of works. In such cases the credentials of the tied up agency/ Consortium partners can be used for meeting the eligibility criteria.

The bidder may participate with the technical and financial support of its Parent Company or its Group Company. In such cases the credentials of the Parent Company or its Group Company can also be considered for meeting the eligibility criteria, provided the Bidder submits a letter of comfort / support letter from the Parent Company or its Group Company duly signed by the Authorized Signatory. The letter of comfort / support letter shall be valid till the completion of the works. The successful bidder shall submit a Board Resolution from the Parent / Group Company to confirm the same after issuance of LoA and before signing of the contract agreement.

5.2 For Part-B

The bidder should have following minimum experience of having successfully completed the following work during last 5 years from the bid due date:

- i) At least One (1) consultancy assignment covering preparation of mine plan for open cast coal/lignite mines including approval from statutory authority, wherever applicable.
- ii) The identified RQP should also have prepared minimum One (1) mining plan of open cast coal/lignite mines (approved by MoC).
- iii) At least one (1) consultancy assignment covering preparation of feasibility report for open cast coal/lignite mine.
- iv) At least one (1) consultancy assignment for EIA/ EMP studies of open cast coal / lignite mining project of mining lease area more than 150 hectares and obtained Environmental Clearance (EC) from Ministry of Environment and Forests (MoEF) for the same.
- v) Should have accreditation/provisional accreditation under open cast mining of minerals for category “A” projects from National Accreditation Board of Education & Training (NABET) / Quality Council of India (QCI) for conducting Environmental Studies (EIA/EMP) for Environment Clearance.
- vi) In case the bid is on Consortium basis, the Lead Partner shall be a mining consultant.

The Bidder is required to submit the documentary evidence for meeting the above eligibility criteria as per the format enclosed at Form No.2B. The Bidder may tie up with other agencies and form a consortium for carrying out the complete scope of works. In such cases the credentials of the tied up agency/ Consortium partners can be used for meeting the eligibility criteria.

The bidder may participate with the technical support of its Parent Company or its Group Company. In such cases the credentials of the Parent Company or its Group Company can also be considered for meeting the eligibility criteria, provided the Bidder submits a letter of comfort / support letter from the Parent Company or its Group Company duly signed by the Authorized Signatory. The letter of comfort / support letter shall be valid till the completion of the works. The successful bidder shall submit a Board Resolution from the Parent / Group Company to confirm the same after issuance of LoA and before signing of the contract agreement.

6.0 CONSORTIUM

- 6.1 The Bidder may tie up with other agencies and form a consortium for carrying out the complete scope of works. In such cases the credentials of the tied up agency/ Consortium partners can be used for meeting the eligibility criteria. However, the Consortium partners should be jointly and severally responsible for completion of the works.
- 6.2 The Consortium should have proper and legally enforceable working Agreement as a part of the arrangement as per format provided in Form 8 and such Agreement shall identify the Lead Partner.
- 6.3 The roles & responsibilities to be handled by each consortium member shall be submitted by the Bidder
- 6.4 In case of Part-B of the tender, the Lead Partner shall be a mining consultant.

- 6.5 The offer shall be submitted by the Lead Partner of the Consortium.
- 6.6 The Lead Partner shall be responsible for completion of the assignment on behalf of all the Consortium members and in case any consortium member abandons or defaults in its obligations, the Lead Partner shall be responsible for successful completion of the work on its own or by identifying another consortium member with the approval of PFCCL
- 6.7 The bid may be rejected in case the documents in support of the status of bidder are not clear or if the supporting documents are not enclosed with the technical bid.

7.0 TIE UP WITH RQP

The bidder shall furnish a letter from RQP expressing his consent to undertake the work for preparation of mining plan.

8.0 TIE UP WITH LABORATORY FOR ANALYSIS OF COAL CORE

For Part-A, in case the bidder does not own a laboratory, he shall furnish a letter from a laboratory expressing its consent to undertake the analysis of coal core along with accreditation certificate from Govt. / NABL.

If the Bidder owns a laboratory, he shall furnish a accreditation certificate of the laboratory.

9.0 SUB-CONTRACTING

9.1 Bidder may engage a sub-consultant for the performance of any part of the sub activity, provided that:

- 9.1.1 That the selection of the sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by PFCCL prior to the engagement of the sub-consultant, and
- 9.1.2 That the Consultant shall remain fully liable for the performance of the services by the sub-consultant and its personnel pursuant to this Contract.

10.0 Period of Engagement

The period of engagement would be till the completion of various activities and obligations under this assignment.

11.0 Basis of Offer

- 11.1 Bidders shall quote prices in INR. The price should be quoted on a lump sum basis inclusive of all taxes and duties etc other than service tax as may be applicable.
- 11.2 Bidders have the option to quote for individual parts. i.e. the Bidder can bid for Part-A or Part-B or both Part-A and Part-B. Bidders wishing to offer any discount for of Part-A or Part-B or both Part-A & Part-B together shall specify the applicable discount separately in the Financial Proposal.

- 11.3 For Part-A: Bidders shall quote lumpsum price as indicated in Form-6A for complete scope of works and shall also furnish break-up prices as mentioned as part of Form-6A-1.
- 11.4 For Part-B: Bidders shall quote lumpsum price for complete scope of works including the breakup of price for each section as indicated in Form-6B. It may be noted that price for all the sections have to be provided.
- 11.5 The bidder shall indicate the break-up price in conformity with the best industry practices. In case, PFCCL notices the break-up prices are not proportionately distributed as per the industry practices and not in accordance with the scope involved for that work, PFCCL reserves the right to change the break-up prices at time of issuance of LOA / before signing of contract agreement keeping the lumpsum price same. In such cases, the bidder would furnish details of cost of resources and manpower to be deployed in support of quoted price.
- 11.6 The price quoted by the bidders (Part A and Part B) shall be on firm basis.
- 11.7 No escalation for any reason whatsoever shall be allowed over and above the bid price. Service tax, if any, and educational-cess or any such tax/levy calculated as a percentage of the service tax at applicable rates, on the date(s) of payment(s) shall be paid over and above the bid price (price to be quoted as per Form-6A and 6B). Income tax at source will be deducted by PFCCL as per the applicable law and regulation and TDS certificate shall be issued to the successful bidder by PFCCL.
- 11.8 The bidder shall quote prices taking into consideration of the complete scope of work, any item left out and not specifically mentioned but are required for completion of the work shall be carried out by the bidder without any additional cost to PFCCL.
- 11.9 Any statutory fees/payments to the Government authority(ies) shall be made by PFCCL.
- 11.10 All travel and boarding / lodging related expenses incurred by the Consultant's personnel for journeys to site or PFCCL Office or anywhere in connection with the consultancy services/study under Scope of this Specification will be borne by the Consultant and PFCCL will not take any responsibility whatsoever on this account.
- 11.11 The Consultant has to make his own independent arrangements for transportation, storage facilities, Tools, tackles, machinery, equipment, etc. and the manpower required to execute the contract. The Consultant shall make necessary arrangements for preserving the borehole cores till the completion of exploration.

12.0 Presentation

- 12.1 The intending bidders should send a letter to Sh. Shwetabh, Deputy Manager expressing their interest to make a presentation for the assignment. Accordingly, the bidder would be intimated a time slot to make a presentation on the assignment.
- 12.2 The Bidders must submit their bid according to clause 14.0 addressed to Sh. Shwetabh Verma, Deputy Manager in PFCCL Office at First Floor, Urjanidhi, 1, Barakhamba Lane, Connaught Place, New Delhi – 110001 latest by **11:00 hrs(IST) on 10.03.2014**

- 12.3 The Bidders who have submitted their bid would make a presentation in PFCCL Office at First Floor, Urjanidhi, 1, Barakhamba Lane, Connaught Place, New Delhi – 110001 on **10.03.2014** starting from **11:30 hrs (IST)** onwards as per the time slots allocated to the bidders.
- 12.4 The bidder should submit a hard copy of the presentation duly signed by authorized signatory on each page. The presentation material should also contain a list of team members to be deployed for the assignment. The material should not contain any cost/price information, whatsoever and the bidder shall not disclose any cost/price information during the presentation.
- 12.5 At least 2 members of team proposed for the assignment along with the geologist and the laboratory in-charge should be present during the presentation if the bidder is bidding for Part-A.
- 12.6 At least 4 members of team proposed for the assignment along with the identified RQP as well as the EIA/EMP representative should be present during the presentation if the bidder is bidding for Part-B.

13.0 Presentation Evaluation

- 13.1 The presentation would be evaluated on the following:
- i) Focusing on extent and depth of domain knowledge of the firm relevant to the assignment being bid for during the past 5 years from the date of issue of the tender). **Max marks 50**
 - ii) Performance during presentation to explain the extent and depth of the knowledge of the bidder with respect to the requirements of assignment being bid for: **Max. Marks 40**
 - iii) Presentation skills of the team. **Max. Marks 10**

In order to qualify for the technical proposal to be opened and evaluated, the bidder should score **at least a total of 70 marks overall**.

- 13.2 The bidders qualifying at the presentation stage would be informed within a week's time after the presentation.
- 13.3 The Technical and Financial proposal of the non qualified bidders at presentation stage will be returned to the bidder's representative present after the declaration of the presentation evaluation results. In case the bidder's representative not available, the technical and financial proposal will be returned through courier/speed post. Any loss/damage/non receipt of documents will be the responsibility of the bidder.

14.0 Submission of Bid

- 14.1 The Bid shall consist of two parts i) "Technical Proposal" and ii) "Financial Proposal" must be submitted in separate sealed envelopes in the following manner:
- i) The **first Envelope** sealed and marked as "EMD for consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP

Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha) for PART (Part-A and/or Part-B) from ----- (Name of the Bidder)"

ii) **The second Envelope** sealed and marked as "TECHNICAL PROPOSAL for consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha) for PART (Part-A or / and Part-B) from ----- (Name of the Bidder)" should contain following:

- i) The Bidder should agree to the entire scope of work and deliverables (given in the Covering Letter Form-1). No proposal for deviation / part scope of work will be considered.
- ii) **All the documentary evidence required for meeting the eligibility criteria as per clause 5.0.**
- iii) **All the documentary evidence required for completing technical evaluation as per clause 15.0.**
- iv) In case of Consortium, the Consortium Agreement / other relevant details as per clause 6.0 and Form 8 shall be submitted
- v) Details of past experience are to be provided in Technical Bid as per format provided at Form-2. Documentary evidence (e.g. Copy of work Order/Letter of Award/LoI/Purchase Order and Completion certificate/ /proof of final payment/ any other relevant documents as a proof for completion of the assignment) to be provided in support of past experience.
- vi) Details of key personnel proposed to be deployed are to be provided in Technical bid as per format provided at Forms-3&4
- vii) The Bidder should submit a Letter of Authority in favour of the authorised signatory submitting the Bid as per Form -5.
- viii) Adequacy of the proposed Methodology, work Plan, resources and manpower for undertaking the Scope of Works and deliverables as per Form - 7.
- ix) Copy of accreditation certification from NABET/QCI under Mining of Minerals- Category-A.
- x) In case of Part-B, Consent letter from RQP for preparation of Mining Plan.
- xi) In case of Part-A, Consent letter/ ownership details and accreditation certificate from tied up laboratory for analysis of coal core.

14.2 No offer should be sent by Fax or E-mail.

14.3 PFCCCL may call for any clarifications/ information if required.

14.4 This envelope should not contain any cost/price information, whatsoever.

14.5 The Forms mentioned in clause 14.1 above along with relevant documents, including covering letter will form part of tender documents. Each of the above Forms and also

other documents to be submitted as per the bidding documents are to be duly signed on each page and stamped as required by the authorized representative of the bidder, which shall constitute the bid.

- 14.6 The **third Envelope** - sealed and marked as "FINANCIAL PROPOSAL for consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha) for PART (Part-A and /or Part-B) from ----- (Name of the Bidder)" should contain the detailed price offer for the consultancy services as per as per format provided at Form-6 of Bid Document.
- 14.7 The **First envelope** sealed and marked as "EMD", **Second envelope** marked as "TECHNICAL PROPOSAL" and the **Third envelope** sealed and marked as "FINANCIAL PROPOSAL" shall be submitted together in a sealed cover marked as Technical and Financial proposal on the cover with superscription i.e. Name of the Package, Bidders Name & Address.
- 14.8 Above mentioned sealed envelopes mentioned above are to be submitted latest **upto 11:00 hrs (IST) on 10.03.2014** in the office of:

Sh. Shwetabh Verma
Deputy Manager
PFC Consulting Limited,
1st Floor, Urjanidhi, 1, Barakhamba Lane,
Connaught Place,
New Delhi -110 001
Tel No: 01123456123
Email: odishaumpp_coalblock@pfcindia.com

- 14.9 Bidders are instructed not to approach via e-mail, fax, and telephone or contact any official in PFCCCL as regards to this bid after the submission of the bids, apart from communications by PFCCCL in writing, and any bidder doing so shall be summarily rejected.

15.0 Bid Opening and Evaluation of Proposals

15.1 Opening of Technical Proposal

The first envelope containing the Technical Proposal will be opened in the presence of the authorized representatives of the bidders, who wish to be present.

15.2 Evaluation of Technical Proposal

The Technical proposal would be opened and seen for the following:

A) Responsiveness Check

The responsiveness check will be with respect to the following:

- i) The Technical Proposal should contain Form-1, Form-2, Form-3, Form-4, Form-5, Form -7 and Form-8 (in case of Consortium) duly filled and signed by the authorised signatory. The Authority Letter shall be submitted as per Form-5.
- ii) The Bidder should agree to the entire scope of work and deliverables (given in the Covering Letter Form-1). No proposal for deviation/ conditional scope of work will be considered.
- iii) Details of past experience and other relevant documents for meeting the eligibility requirements are to be provided in Technical Bid as per format at Form-2. Documentary evidence (e.g. Copy of work Order/Letter of Award/LoI/Purchase Order or any other related documents etc. and proof of satisfactory completion for assignments handled from their Clients.) to be provided in support of past experience.
- iv) Adequacy of the proposed Methodology, Work Plan, Resources and manpower and capability know-how are to be provided in responding to the Scope of Work as per Form - 7.
- v) Details of composition of Team and Team Leader proposed to be deployed are to be provided in Technical bid as per format provided at Form- 4.
- vi) Requisite Earnest Money Deposit in form of crossed demand draft of any nationalized bank or scheduled bank or bank guarantee in favour of PFC Consulting Ltd. Payable at New Delhi
- vii) Copy of accreditation certification from NABET/QCI under Mining of Minerals-Category-A, if bid for PART-B.
- viii) In case of Part-B, Consent letter from RQP for preparation of Mining Plan.
- ix) In case of Part-A, Consent letter/ ownership details and accreditation certificate from tied up laboratory for analysis of coal core.

PFCCL may call for any clarifications/ information if required

Bid of any firm not meeting any or all the above criteria, the technical evaluation of the firm will not be carried out and the bid shall be rejected outright.

B) Evaluation (100 marks)

The Technical Proposal would be evaluated on the following basis:

- i) The bidder's relevant experience during last five years till the bid due date will be considered as per relevant documentary evidence submitted by the bidder as per Form 2A and 2B.
- ii) Experience of the bidders would be evaluated on the following basis:
- iii) **For Part-A**

Sl no	Work	Marks allotted			Max Marks
1	Drilling and Exploration work completed annually in any one year for mines.	At least 10,000 mts of drilling work – 10	At least 20,000 mts of drilling work - 15	At least 30,000 mts of drilling work – 20	20

Sl no	Work	Marks allotted			Max Marks
2	Possession of hydraulic drilling rigs having capacity to drill upto 350 mts (in nos.)	At least 5 Nos.- 10 marks	At least 8 Nos. - 13 marks	At least 10 Nos. - 15 marks	15
3	Undertaken work related to preparation of Geological Report of coal/lignite block with each assignment covering an area of at least 3 Km ²	At least 3 Km ² - 5 marks	At least 5 Km ² - 10 marks	At least 7 Km ² - 15 marks	15
4	Owning / having tied up laboratory for analysis of coal core	Max Marks 10			
5	Technical capability of the bidder to undertake drilling of upto 15,000 mts, sampling analysis and preparation of Geological Report, etc.	Max Marks 15			
6	Methodology, work plan, resources and manpower proposed for undertaking the tasks as per scope of work and deliverables	Max marks 25			

Note: The bidders are required to submit the documentary evidence in support of claiming the above experience and details shall be furnished as per Form-2A.

The Bidder obtaining 70% marks or more would be technically qualified for opening of “Financial Proposal”.

iv) **For Part-B**

Sl no	Work	Marks allotted			Max Marks
1	Undertaken work related to preparation of mining plan for open cast coal/lignite mines including approval from statutory authority, wherever applicable.	01 work-06	02 works-8	3 or more works- 10	10

Sl no	Work	Marks allotted			Max Marks
2	Undertaken work related to preparation of mining plan by the identified RQP for open cast coal/lignite mines including approval from statutory authority, wherever applicable.	01 work-03	02 works-4	3 or more works- 5	5
3	Undertaken work related to preparation of feasibility report for open cast coal/lignite mine	01 work-06	02 works-8	3 or more works- 10	10
4	Undertaken work related to EIA/ EMP studies of at least one coal mining project of mining lease area more than 150 hectares and obtained Environmental Clearance (EC) from MoEF for the same	01 work-10	02 works-13	03 or more works- 15	15
5	Undertaken work related to land acquisition under CBA / LA Act.	01 work-06	02 works-8	3 or more works- 10	10
6	Undertaken work related Forest Land Diversion clearance work.	01 work-06	02 works-8	3 or more works- 10	10
7	Capability and know-how of the bidder as well the identified RQP to undertake preparation of mining plan and feasibility report with production capacity upto 20 MTPA and capability in carrying out EIA/EMP study for coal block area of 13.08 km ²	Max Marks 15			
8	Methodology, work plan, resources and manpower proposed for undertaking the tasks as per scope of work and deliverables	Max marks 25			

Note: The bidders are required to submit the documentary evidence in support of claiming the above experience and details shall be furnished as per Form-2B.

The Bidder obtaining 70% marks or more would be technically qualified for opening of “Financial Proposal”.

15.3 Opening of Financial Proposal

The second envelope marked as “Financial Proposal” would be opened only for the technically qualified bidders. The date, time and venue of opening of the “Financial Proposal” of the technically qualified bidders will be intimated. The Financial Proposal will be opened in the presence of the authorized representatives of the bidders, who wish to be present. During the opening of Financial Proposals, the prices and discounts will be read out.

15.4 Financial Proposal Evaluation

Financial Proposals of only such bidders will be opened who have been declared Technically Qualified. Financial Proposal of other Bidders will be returned unopened.

The assignment will be awarded to the technically qualified bidder who has quoted lowest Lump Sum price, in Indian Rupees, without condition(s) or alternate price bid. Conditional Financial Proposals will be rejected out rightly.

15.5 The evaluation of PART-A and PART-B will be separate. Financial bid Evaluation will be done for each Part-A and Part-B independently on lumpsum price only.

Bidders who offered any discount for Part-A or Part-B or both Part-A & Part-B together shall be considered during financial evaluation in such combinations to determine the lowest evaluated price. The lowest evaluated bidder(s) after considering the discount offered in those combinations will be selected for award of contract.

16.0 Team Composition and Team Members

The team composition and team members to be deployed for the assignment shall be provided as per format provided at Form -4. The team leader should have at least experience of 15 years in the relevant area. The senior level member should have at least experience of 10 years in the relevant area mentioned in the scope of works and middle level team members shall have at least 5 years of experience in the relevant area mentioned in the scope of works. For Part-A, the Geologist shall have at least 8 years’ experience in detailed exploration for coal/ lignite including formulation of GR.

17.0 Submission of Progress Report and Progress Review Meetings

The Consultant shall submit progress report every fortnight clearly specifying the progress achieved during the period and targets for the next 15 days to achieve the schedule targets as per schedule. If the work is not progressing as per schedule, then the

consultant shall clearly pin point the cause of the delay along with remedial measures so that no further delay should take place. The consultant shall attend the weekly progress review meeting at the PFCCL office for reviewing the progress as per the schedule.

18.0 Contract Performance Guarantee (CPG)

In the event of an award, the selected bidder (Consultant), within thirty (30) days of issue of Letter of Award from PFCCL, will be required to arrange submission of CPG in the form of a Bank Guarantee (BG) equivalent to 10% (Ten Percent) of the total consultancy fee separately for Part-A and Part-B. The CPG should be as per PFCCL's proforma.

The CPG for Part-A should be kept valid upto 21 (twenty one) months from the Letter of Award which may be extended further if demanded by PFCCL. The CPG for Part-B should be kept valid upto 27 (twenty seven) months from the Letter of Award which may be extended further if demanded by PFCCL.

19.0 Liquidated Damages

For any delay attributable to the Consultant, beyond the Scheduled dates/ period of completion of various activities as per the agreed work schedule, the Consultant shall pay to owner, liquidated damages and not as penalty, an amount worked out at the rate of 0.5% (half percent) of total cost of services per fifteen days or part thereof. However, the total liability of the consultant under this clause shall not exceed 10% (ten percent) of the total cost of services as awarded.

20.0 Contract Agreement

- 20.1 In the event of award, the selected bidder ("Consultant") will be required to enter in to a Contract Agreement with the PFCCL within 10 (ten) working days from the date of the Letter of Award (LOA) or within such extended time, as may be granted by the PFCCL.
- 20.2 Formal Contract Agreement will be executed on Non-judicial stamp paper of Rs. 100/- (Rs. one hundred only) as per the format provided by PFCCL. Two sets of Non-Judicial Stamp papers of Rs.100/- each and water mark papers to be purchased by the Consultant from Delhi State.
- 20.3 The Agreement will be signed in two originals and the consultant shall be provided with one signed original Agreement
- 20.4 The date of the contract agreement in no case shall alter the date of start or completion period of the work.
- 20.5 Till the time a 'Contract Agreement' is prepared and executed, the Letter of Award shall be read in conjunction with the Bidding Documents and will constitute a binding contract.

21.0 Validity of Bid

Bidders shall keep their bids /proposals valid up to 120 (One hundred Twenty) days from the date of opening of the Financial Proposal. Bidders may be required to further extend the validity of Bid as per the requirement of PFCCL.

22.0 Terms of Payment

22.1 Part A

Sl. No. (A)	Milestone (B)	Amount in INR (C)	Percentage (%) of Col (C)
1.	Advance against submission of Bank Guarantee (BG)	[lump sum price quoted by the bidder in Form 6A]	10
2.	Submission of Exploration Scheme/Plan and its acceptance	[price quoted by the bidder in Form 6A1 – for S No. 4]	80
3.	Assisting the client and upon obtaining consent for entry and drilling in forest and non-forest area	[price quoted by the bidder in Form 6A1 – for S No. 2]	80
4.	Submission of Topographical Survey Report and its acceptance	[price quoted by the bidder in Form 6A1 – for S No. 3]	80
5.	On submission of Geological Mapping and receipt of report	[price quoted by the bidder in Form 6A1 – for S No. 5]	80
6	Submission of Final Geological Report (GR) and its acceptance	[price quoted by the bidder in Form 6A1 – for S No. 8]	80
7	Submission of Final 3-D Geological Model and its acceptance	[price quoted by the bidder in Form 6A1 – for S No. 9]	80
8.	Housekeeping	[price quoted by the bidder in Form 6A1 – for S No. 13]	80
9.	On completion of drilling for each borehole (in meters) and receipt of report	[unit rate quoted by the bidder in Form 6A1 – for S No. 1,6, 7, 10,	80
10.	Geo-physical logging (in meters) for each completed borehole and receipt of report		80

Sl. No. (A)	Milestone (B)	Amount in INR (C)	Percentage (%) of Col (C)
11.	On completion of analysis of samples and receipt of report (for each type of analysis)	11, 12, & 14]	80
13.	On receipt of MoC approval for Mining Plan	[lump sum price quoted by the bidder in Form 6A]	10

22.2 Part B

Sl. No. (A)	Milestone (B)	Amount in INR (C)	Percentage (%) of Col (C)
1.	Pre-Feasibility Report (on receipt of ToR from MoEF)	[as quoted by the bidder in Sl. No.1 & 4 of Form 6B]	100
2.	Mining Plan		
2A.	Advance against submission of Bank Guarantee (BG)	[as quoted by the bidder in Sl. No.2 & 5 of Form 6B]	10
2B.	Submission of Draft Mining Plan		30
2C.	Submission of Final Mining Plan and its acceptance		30
2D.	Approval of Mining Plan from MoC *Note: In case of modification due to suggestions of MoEF during EC, the same shall be incorporated in the Mining Plan		30*
Sub Total			100
3.	Feasibility Report		
3A.	Advance against submission of Bank Guarantee (BG)	[as quoted by the bidder in Sl. No. 3 & 6 of Form 6B]	10
3B.	Submission of Draft Feasibility Report		30
3C.	Submission of Final Feasibility Report and its acceptance		40
3D.	On receipt of EC from MoEF		20
Sub Total			100

Sl. No. (A)	Milestone (B)	Amount in INR (C)	Percentage (%) of Col (C)
4.	EIA/EMP Studies, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan and obtaining EC and Consent to Establish for Meenakshi Coal Block		
4A.	Advance against submission of Bank Guarantee (BG)	<i>[as quoted by the bidder in Sl. No. 7 of Form 6B]</i>	10
4B.	Submission of Draft EIA/EMP Studies, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan etc. and their acceptance		20
4C.	Public Hearing		10
4D.	Obtaining Consent to Establish from SPCB		10
4E.	Obtaining EC from MoEF		30
4F.	On approval for wildlife management plan, water management plan, R&R plan, CSR plan etc., consent to establish for coal loading/unloading at silo/MGR		20
Sub Total			100
5.	EIA/EMP Studies , Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan and obtaining EC and Consent to Establish for all the three Coal Blocks		
5A.	Advance against submission of Bank Guarantee (BG)	<i>[as quoted by the bidder in Sl. No. 8 of Form 6B]</i>	10
5B.	Submission of Draft EIA/EMP Studies, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan etc. and their acceptance		20
5C.	Public Hearing		10
5D.	Obtaining Consent to Establish from SPCB		10
5E.	Obtaining EC from MoEF		30
5F.	On approval for wildlife management plan, water management plan, R&R plan, CSR plan etc.		20
Sub Total			100

Sl. No. (A)	Milestone (B)	Amount in INR (C)	Percentage (%) of Col (C)
6.	Land Acquisition of Coal Blocks under CBA (A&D) Act, 1957		
6A.	Advance against submission of Bank Guarantee (BG)	<i>[as quoted by the bidder in Sl. No. 9 & 10 of Form 6B]</i>	10
6B.	Submission of application to MoC for land acquisition		10
6C.	Issuance of Section 7 Notification		10
6D.	Issuance of Section 9 Notification		10
6E.	Issuance of Section 11 Notification		10
6F.	Finalization of compensation and valuation of assets		20
6G.	Obtaining physical possession of land		30
Sub Total			
7.	Land Acquisition for other requirements		
7A.	Advance against submission of Bank Guarantee (BG)	<i>[as quoted by the bidder in Sl. No. 11 of Form 6B]</i>	10
7B.	Submission of application to State Govt. for land acquisition under Land Acquisition Act		30
7C.	Issuance of notification for intent to acquire land		10
7D.	Issuance of notification for Declaration of acquisition of land		10
7E.	Finalization of compensation		20
7F.	Physical Possession of land		20
Sub Total			
8.	Forest Land Diversion of all the three Coal Blocks, conveyor corridor and for other requirements		
8A.	Advance against submission of Bank Guarantee (BG)	<i>[as quoted by the bidder in Sl. No. 12 of Form 6B]</i>	10
8B.	Submission of Forest Diversion Proposal to Forest Department, Govt. Of Odisha		40
8C.	Obtaining Stage-1 Forest Clearance from MoEF		25
8D.	Obtaining Stage-2 Forest Clearance from MoEF		25
Sub Total			

- 22.3 Interest free advance shall be given on submission of Bank Guarantee for an equivalent amount for Part-A and Part-B separately. For Part-A, validity period should be kept for 14 (fourteen) months from the Letter of Award which may be extended further if demanded by PFCCL. For Part-B, validity period should be kept 27 (twenty seven) months from the Letter of Award which may be extended further if demanded by PFCCL.
- 22.4 Service tax, if any, and educational-cess or any such tax/levy calculated as a percentage of the service tax at applicable rates, on the date(s) of payment(s) shall be paid over and above. Income tax at source will be deducted by PFCCL as per the applicable law and regulation and TDS certificate shall be issued to the successful bidder by PFCCL.
- 22.5 Any statutory fees/payments to the Government authority(ies) shall be made by PFCCL. Any payment to ORSAC shall be made directly by PFCCL.
- 22.6 All travel, boarding and lodging related expenses incurred by the Consultant's personnel for journeys to site or PFCCL Office or anywhere in connection with the consultancy services/study under Scope of this Specification will be borne by the Consultant and PFCCL will not take any responsibility whatsoever on this account.
- 22.7 The consultant shall submit the bills in duplicate to PFCCL, as per terms of payment indicating the milestone/activity achieved.
- 22.8 In respect of consortium, normally all the bills shall submitted by lead partner and payments will be made to the lead partner only. However, consortium partners may also submit bills directly to PFCCL along with certification of Lead partner and instructions to make payment directly to the consortium partners. In such cases, PFCCL shall make payments directly to the consortium partner.

23 Other Terms & Conditions

- i) The overall responsibility in obtaining the necessary approvals / clearances / consents from the concerned authorities lies with the Consultant. The Consultant shall provide necessary assistance including follow up and also obtain the necessary approvals / clearances.
- ii) The financial proposal by the bidders shall be in Indian Rupees as per format enclosed (Form 6) with no escalation provision for any reason whatsoever till the completion of the Assignment.
- iii) The Consultant shall make available the services of the identified personnel as may be required for successful completion of the assignment and or as may be required by PFCCL on specified dates, venues and time in order to meet the obligations of PFCCL.
- iv) All claims shall be raised by the Consultant as per the terms of payment after being due, and would be accepted for payment based on satisfactory progress and quality of the work at the sole discretion of the competent authority.

- v) In case there is a delay by the Consultant in accomplishing the deliverables which in the opinion of PFCCL is attributable to the Consultant, PFCCL reserves the right to get such specific work(s) done through any other Agency(ies) at the risk and cost of the Consultant for timely completion of the deliverables.
- vi) In case the performance of the proposed team member(s) is not satisfactory, the Consultant will be asked to change/replace the team member(s) within three days of receipt of such request from PFCCL with a member acceptable to PFCCL.
- vii) Bidder may engage a sub-consultant for the performance of any part of the sub activity, Provided that:
 - a. That the selection of the Sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by PFCCL prior to the engagement of the sub-consultant, and
 - b. That the Consultants shall remain fully liable for the performance of the Services by the Sub-consultant and its Personnel pursuant to this Contract;
- viii) PFCCL reserves the right to cancel the contract at any stage of the work, in case any information given at the time of submission of the bid in respect of team / team member(s) is found to be incorrect.
- ix) Given the nature of the work being entrusted, the firm would have to give an undertaking to the effect that the contents/ essence of any reference/ documents given would not be disclosed to any third person without the express approval of PFCCL, failing which the engagement of the firm could be terminated.
- x) If due to any reason or decision of the Govt/PFCCL, the Assignment is dropped and the Consultant is directed to discontinue work, the “Drop Dead Fee” would be limited to the payments received by the Consultant and the claims already raised, as per the payment terms relating to the Assignment, till the point of calling off the Assignment or as mutually agreed.
- xi) **Conflict of Interest:** Organizations would not be hired for any work whose interests are in conflict with their prior or current obligations to the other organizations/ clients or that may place them in a position of being unable to carry-out the work assigned to them at any point of time during the currency of engagement by PFCCL or above all enable them to pose a threat to PFCCL’s consulting business in future. Without limitation on the generality of the foregoing, organisations would not be hired, under the circumstances set forth below:
Organisations who have business or family relationship with member(s) of PFC’s and/or PFCCL’s employees or persons positioned in or on the Board of these two organisations by whatever process, would not be engaged. A declaration to this effect would be taken from the organisation when being engaged, and if found incorrect, the organisation would be debarred from any further engagement by PFCCL ever.

- xii) The Consultant shall keep PFCCL, both during and after the term of this Contract, fully and effectively indemnified against all losses, damage, injuries, deaths, expenses, actions, proceedings, demands, costs and claims, including, but not limited to, legal fees and expenses, suffered by PFCCL or any Third Party, where such loss, damage, injury or death is the result of a wrongful action, negligence or breach of contract by the Consultant, or the Consultant's personnel, including the use or violation of any copyright work or literary property or patented invention, article or appliance
- xiii) No offer should be sent by Fax or E-mail.
- xiv) Offers received in the designated office after the due time and date mentioned above shall not be considered.
- xv) PFCCL reserve the right to accept or reject all Proposals/Offeres or annul the bid Process or modify/ change the content of the bid document without assigning any reason.
- xvi) PFCCL reserve the right to accept or reject any lower offer and / or split the work between more than one bidder without assigning any reason thereof.
- xvii) PFCCL shall not entertain any claim of any nature, whatsoever, including without limitations, any claim of expenses in relation to the preparation, submission or any other activity relating to bidding or any other expense till award of contract.

Yours sincerely,
FOR and on behalf of PFC Consulting Ltd.

(sd/-----)
Dy. Manager

Encl.: As Above

BID FORMS AND PROFORMA

FORM – 1: COVERING LETTER

From: To:
Name: Shwetabh Verma
Designation: Deputy Manager
Address: PFC Consulting Ltd.
First Floor, Urjanidhi,
1, Barakhamba Lane,
Connaught Place,
New Delhi – 110 001

Sir,

Sub: Consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)

1. We _____(Name of consulting organization) herewith enclose Technical and financial proposal for selection of our organisation as consultant on lump sum basis for **Consultancy assignment for preparation of Geological Report, Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)** for Part _____ (Part A or / and Part B). *[Bidder may show his intent for the Part for which he is bidding]*
2. We are submitting our bid consisting of:
 - i) **Technical Bid** in a sealed envelope consisting of:
 - a) Requisite Earnest Money Deposit in form of crossed demand draft of any nationalized bank or scheduled bank or bank guarantee in favour of PFC Consulting Ltd. payable at New Delhi
 - b) Form-1, Form-2, Form-3, Form-4, Form-5 and Form -7 duly filled and signed by authorised signatory and authority letter as per Form-5.
 - c) The Bidder should agree to the entire scope of work (Part-A or/and Part-B) and deliverables (given in the Covering Letter Form-1). No proposal for deviation / part scope of work will be considered.
 - d) **All the documentary evidence required for meeting the eligibility criteria as per clause 5.0.**
 - e) **All the documentary evidence required for completing evaluation as per clause 15.0.**
 - f) In case of Consortium, the Consortium Agreement / other relevant details as per clause 6.0 and Form 8 shall be submitted.
 - g) Details of past experience are to be provided in Technical Bid as per format provided at Form-2. Documentary evidence (e.g. Copy of work Order/Letter of Award/LoI/Purchase Order and Completion certificate/ /proof of final payment/ any other relevant documents as a proof for completion of the assignment) to be provided in support of past experience.

- h) Details of key personnel proposed to be deployed are to be provided in Technical bid as per format provided at Forms-3&4
 - i) The Bidder should submit a Letter of Authority in favour of the authorised signatory submitting the Bid as per Form -5.
 - j) Adequacy of the proposed Methodology, work Plan, resources and manpower, capability know-how for undertaking the Scope of Works and deliverables as per Form - 7.
 - k) Copy of accreditation certification from NABET/QCI under Mining of Minerals- Category-A.
 - l) In case of Part-B, Consent letter from RQP for preparation of Mining Plan.
 - m) In case of Part-A, Consent letter/ ownership details and accreditation certificate from tied up laboratory for analysis of coal core.
- ii) **Price Offer** (as per format provided at Form 6 of Bid document) in a sealed envelope
3. _____ [Name and contact information of one of the team member] shall be the Team Leader for the assignment.
4. We declare that the quoted lump sum fee is firm and shall remain valid for the entire period of the consultancy assignment excluding statutory costs, if any. We further declare that the above quoted fee includes all taxes, duties & levies etc. other than service tax payable by us under this consultancy assignment.
5. We hereby confirm that if any Income Tax, Surcharge or any other Corporate Tax is attracted under the law, we agree to pay the same to the concerned authorities.
6. We confirm that the prices and other terms and conditions of this proposal are valid for a period of 120 days from the date of opening of the Financial Proposal.
7. We declare that the services will be rendered strictly in accordance with the specifications. We confirm our acceptance/compliance to the `Deliverables` and `Terms of payment` clauses as stipulated in the bid documents. We confirm that Contract Performance Guarantee for ten (10) % of the total consultancy fee in the form of bank guarantee shall be provided by us as per the prescribed format in case of placement of award.
8. We hereby declare that only the company, persons or firms interested in this proposal as principal or principals are named herein and that no other company, person or firm other than one mentioned herein have any interest in this proposal or in the contract to be entered into, if we are awarded this contract.
9. We declare that the services will be rendered strictly in accordance with the specifications and we do not have any deviation to any of the terms and conditions of the bidding documents.
10. We confirm and certify that all the information / details provided in our bid are true and correct.

11. We give our unconditional acceptance to the Bid Documents issued by PFCCL, as amended. We shall execute the Contract Agreement as per the provisions of the Bid Document.
12. Further, we confirm that we agree to and seek no deviations from the scope of work, time schedule, deliverables, payment terms and all other terms and conditions as contained in the 'Bid Document'. The proposal is unconditional.
13. We also declare that by taking this assignment we do not have any conflict of Interest with any of our prior or current obligations to other organisations/clients and also do not have business or family relationship with member(s) of PFC's and/or PFCCL's employees or persons positioned in or on the Board of these two organisation by whatever process and if found incorrect, we may be debarred from any further engagements by PFCCL forever.
14. We certify that all the information provided in our bid, including the information regarding the team members, are true. We understand that any willful misstatement in the bid may lead to disqualification or cancellation of award if made or termination of contract. We also understand that in such a case we may be debarred for future assignments with PFCCL for a period of maximum three years from the date of such disqualification.
15. Further, we undertake that in the event of our appointment as consultant, given the nature of the work being entrusted, the contents/ essence of any reference/ documents given would not be disclosed to any third person without the express approval of PFCCL, failing which the engagement of the organisation would be terminated.

Signature of Authorized Person

Name

Designation & Company seal

Date:

Place:

FORM – 2A: EXPERIENCE OF ORGANISATION FOR PART-A

1. Brief Description of the Organisation:
2. Outline of experience on assignments:

Sl. No.	Name of Assignment with work order no. and date	Annual drilling meterage carried out / Preparation of Geological Report	Client	Date of Commencement	Date of Completion	Scope in brief
1						
2						
3						
4						

1. It is hereby certified that the above mentioned details are true and correct.
2. It is hereby certified that our company has actually carried out and completed the above mentioned work/assignments

Signature of Authorized Signatory

Full Name

Address

Note:

1. **The Bidder's relevant experience from last five years from the date of issue of the tender will be considered.**
2. **Please attach documentary proof for claimed experience; the proofs could be namely, Copy of work Order/Letter of Award/LoI/Purchase Order/ or any other representative documents etc.**
3. **Please attach copy of documentary proof of satisfactory completion for assignments handled from their Clients.**
4. **Please attach the copy of audited balance sheet for the last three financial years i.e. 2010-11, 2011-12 and 2012-13.**
5. **Please attach documentary proof for ownership of drilling machines indicating make, size and number.**
6. **Please attach a copy of letter from a laboratory expressing his consent to undertake the analysis of coal core along with accreditation certificate from Govt. / NABL.**

FORM – 2B: EXPERIENCE OF ORGANISATION FOR PART B

1. Brief Description of the Organisation:
2. Outline of experience on assignments:

Sl. No.	Name of Assignment with work order no. and date	Details of work undertaken	Name of Client	Date of Commencement	Date of Completion	Scope in brief
1						
2						
3						
4						

1. It is hereby certified that the above mentioned details are true and correct.
2. It is hereby certified that our company has actually carried out and completed the above mentioned work/assignments

Signature of Authorized Signatory

Full Name

Address

Note:

1. **The Bidder's relevant experience in respect of mining plan, feasibility report, EIA/EMP studies, land acquisition and forest clearance from last five years from the date of issue of the tender will be considered.**
2. **Please attach documentary proof for claimed experience; the proofs could be namely, Copy of work Order/Letter of Award/LoI/Purchase Order/ or any other representative documents etc.**
3. **Please attach copy of documentary proof of satisfactory completion for assignments handled from their Clients.**
4. **Please attach the copy of Environment Clearance/ Forest Clearance issued by MoEF for the assignments for which experience is being claimed.**
5. **Please attach a copy of accreditation certification from NABET/QCI under Mining of Minerals- Category-A.**
6. **Please attach a copy of letter from RQP expressing his consent to undertake the work for preparation of mining plan.**

FORM – 3: COMPOSITION OF TEAM AND THE TEAM LEADER TO BE DEPLOYED

	Name
	<u>Team Members</u>
	Team Leader
1	
	Senior Level Members
1	
2	
	Middle level Members
1	
2	
3	

Signature of Authorized Signatory

Full Name

Address

FORM – 4: CURRICULUM VITAE FOR EACH MEMBER OF CONSULTANT'S TEAM

Name: _____

Profession/ Present Designation: _____

Total post qualification experience: _____ Years with organisation: _____

Educational Qualification: _____

(Under this heading, summarise college/ university and other specialized education of staff member, giving names of colleges, etc. degrees obtained.)

Experience:

(Under this heading, list of positions held by staff member since graduation, giving dates, names of employing organisation, title of positions held and location of assignments.)

Language:

(Indicate proficiency in speaking, reading and writing of each language by 'excellent', 'good' or 'poor')

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to disqualification of the firm.

Signature of Team member

Full Name

Date

Signature of Authorised Signatory

Full Name

Date

For Part-A:

Please indicate the nos of Geologist having more than 8 years' experience in Detailed exploration for coal/ lignite including formulation of GR who are to be engaged for carrying out the works.

For Part B:

Please indicate details of experience of RQP.

FORM – 5: AUTHORISATION LETTER
(ON THE LETTER HEAD OF THE ORGNISATION /FIRM)

We authorize _____ [Name of the person], who is employed and holding the position of [Designation] in our Company, to submit bid on our behalf and do all such acts, deeds and things necessary in connection with or incidental to submission of Bids for [Name of the Bid]. The Signature of the Authorized Person is also attested herewith.

Signature of Authorized Person:

Full Name:

Designation:

Signature:

Full Name:

Designation:

Address:

(Seal)

**FORM – 6A: SCHEDULE OF PRICE BID
(FOR PART-A)**

(To be submitted as Financial Proposal in Third Envelope)

Sub: Consultancy assignment for preparation of Geological Report in respect of Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)

I _____ (Name) on behalf of _____ (Name of the Consultancy Organisation) herewith submit the Financial Proposal **Consultancy assignment for preparation of Geological Report in respect of Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)**

S.No. (A)	Description (B)	Unit (C)	Amount in INR (D)
1.	Complete scope including exploration scheme/plan, topographical survey, obtaining statutory permissions & clearances, drilling, sampling & analysis, geological modeling and Geological Report taking note of items and quantity specified in Form 6A-1 for Meenakshi-B, and Dipside of Meenakshi Coal Blocks.	Lump Sum Price (Arrived at Form 6A-1)	
		Bidder shall quote the prices taking note of items and quantity specified in the Form 6A-1	

Note:

1. The bidder shall indicate the break-up price in conformity with the best industry practices. In case, PFCCCL notices the break-up prices are not proportionately distributed as per the industry practices and not in accordance with the scope involved for that work, PFCCCL reserves the right to change the break-up prices at time of issuance of LOA / signing of contract agreement keeping the lumpsum price same. In such cases, the bidder would furnish details of cost of resources and manpower to be deployed in support of quoted price.
2. The price offer for the Assignment should be quoted on a lump sum basis inclusive of all taxes and duties etc other than service tax as may be applicable. Any statutory fees/payments to the Government authorities shall be made by the Client. No escalation for any reason whatsoever shall be allowed over and above the bid price.
3. The bidder shall quote prices taking into consideration of items and quantities stated in the above table. In case, charges towards any other item/work is involved the same shall be built into the items in the table. For any item left out and not specifically mentioned but are required for completion of the work shall be carried out by the bidder without any additional cost to PFCCCL.
4. Service tax, if any, and educational-cess or any such tax/levy calculated as a percentage of the service tax at applicable rates, on the date(s) of payment(s) shall be paid over and above the bid price (price to be quoted as per Form-6). Income tax at source will be

deducted by PFCCL as per the applicable law and regulation and TDS certificate shall be issued to the selected bidder by PFCCL.

5. All related travel expenses incurred by the Consultant's personnel for journeys to site or PFCCL Office or anywhere in connection with the consultancy services/study under Scope of this Specification will be borne by the Consultant and PFCCL will not take any responsibility whatsoever on this account.
6. Income tax at source will be deducted by PFCCL as per the applicable law and regulation and TDS certificate shall be issued to the consultant by PFCCL
7. The financial proposal with condition(s) or alternate price bid will be summarily rejected.
8. Any statutory fees/payments to the Government authorities shall be made by the Client.

Seal

Authorised Signatory
Full Name,
Address

Form 6A-1

Sl. No. (A)	Item (B)	Unit (C)	Quantity (D)	Unit Rate(Rs) (E)	Total (Rs) (D)x(E)
1	Drilling–NQ/BQ size including mobilization a) Core Drilling b) Non-Core Drilling	Meter Meter	13400 1600		
2	Preparation of application to forest authorities for entry and drilling holes in forest area and Preparation of application to Steel and Mines Dept, Govt of Odisha for entry and drilling holes in non-forest areas and assist PFCCCL in obtaining these consent / approvals	Lumpsum	One		
3	Survey Work: Topographic Survey and Contouring at 2 meter interval, Borehole fixation, its connection, coordinate determination and coal-grid and latitude & longitude connection	Sq. Km	13.08		
4	Preparation of exploration Plan (Meenakshi – B & Dip Side of Meenakshi)	Sq. Km	8.16		
5	Geological mapping (Meenakshi – B & Dip Side of Meenakshi)	Sq. Km	8.16		
6	<i>Geological Activities</i>				
a	Core logging	Meter	13400		
b	RQD – For Coring Bore Holes (3 bore holes per Sq. Km)	Meter	4800		
c	Physico-Mechanical Tests & Studies including Transportation of Bore Hole Core for Physico-Mechanical tests to Geo-Technical Lab	No. of boreholes involved	For two bore holes		
7	Bore hole Geophysical Logging (SP,SPR, Density, Cliper, Natural Gamma, Neutron & Resistivity)	Meter	15000		
8	Preparation of GR including Dove tailing of old data	No.	One		
9	3 D Geological Modeling including Dove tailing of old data	No.	One		
10	<i>Sampling & Analytical Studies</i>				
a.	Determination of Moisture % and Ash % (Band by Band analysis)	Sample	13400		
b.	Proximate analysis on Air dried basis	Sample	13400		

	(M%, A%, VM% & FC %)				
c.	Overall analysis of Coal Samples	Sample	8040		
d.	Total Sulphur & Sulphur Distribution (Organic, Inorganic, Sulphate)	Sample	84 each		
e.	Ultimate analysis (C,H,N,S)	Sample	112		
f.	Ash Analysis (SiO ₂ ,Al ₂ O ₃ ,Fe ₂ O ₃ ,TiO ₂ ,CaO,MgO, Na ₂ O, K ₂ O, SO ₃ , P ₂ O ₅)	Sample	84		
g.	Analysis of Alpha Quartz	Sample	6		
h.	Ash Fusion Temperature (AFT)	Sample	84		
i.	Bulk density	Sample	24		
j.	Gross Calorific Value (GCV)	Sample	13400		
k.	Hard Groove Index (HGI)	Sample	24		
l.	Caking Index	Sample	12		
m.	Swelling No & Swelling Index	Sample	12 each		
n.	Washability Tests	Sample	28		
o.	Petrographic Tests	Sample	140		
11	Transportation of coal samples to the Analytical Lab for analysis	Sample	13400		
12	GI Core Boxes (1mt long with 6 riffles alongwith cover)	Nos	2250		
13	House keeping Charges	LS	1		
14	Preparation of samples	Sample	13400		
Total lump sum price (sum of 1 to 14)					
Note: The above lumpsum price should match with the quoted lumpsum price in Form 6A					

Note:

1. The bidder shall indicate the break-up price in conformity with the best industry practices. In case, PFCCL notices the break-up prices are not proportionately distributed as per the industry practices and not in accordance with the scope involved for that work, PFCCL reserves the right to change the break-up prices at time of issuance of LOA / before signing of contract agreement keeping the lumpsum price same. In such cases, the bidder would furnish details of cost of resources and manpower to be deployed in support of quoted price.
2. The bidder shall quote prices taking into consideration of items and quantities stated in the above table. In case, charges towards any other item/work is involved the same shall be built into the items in the table. For any item left out and not specifically mentioned but are required for completion of the work shall be carried out by the bidder without any additional cost to PFCCL.

**FORM – 6B: SCHEDULE OF PRICE BID
(FOR PART-B)**

(To be submitted as Financial Proposal in Third Envelope)

Sub: Consultancy assignment for preparation of Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)

I _____ (Name) on behalf of _____ (Name of the Consultancy Organisation) herewith submit the Financial Proposal **Consultancy assignment for preparation of Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)**

Sl. No	Description	Total Lumpsum Price in INR
(A)	(B)	(C)
1.	Pre-Feasibility Report for Meenakshi Coal Block	
2.	Mining Plan for Meenakshi Coal Block	
3.	Feasibility Report for Meenakshi Coal Block	
4.	Combined Pre-Feasibility report for all the three Coal Blocks	
5.	Combined Mining Plan for all the three Coal Blocks	
6.	Combined Feasibility Report for all the three Coal Blocks	
7.	EIA/EMP Studies, Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan and obtaining EC and Consent to Establish for Meenakshi Coal Block complete in all respect as per scope of work	
8.	EIA/EMP and Wild Life Management Plan, Water Management Plan, Consent to Establish, Socio Economic Studies & R&R Plans, CSR Plan and obtaining EC and Consent to Establish for all the three Coal Blocks complete in all respect as per scope of work	
9.	Land Acquisition of Meenakshi Coal Block complete in all respect as per scope of work	
10.	Land Acquisition of Meenakshi-B and Dip Side of Meenakshi Coal Blocks complete in all respect as per scope of work	
11.	Land Acquisition for other requirements complete in all respect as per scope of work	

Sl. No	Description	Total Lumpsum Price in INR
(A)	(B)	(C)
12.	Forest Land Diversion of all the three Coal Blocks, conveyor corridor and for other requirements complete in all respect as per scope of work	
	Total (Sum of 1to12)	

Note:

1. The bidder shall quote the lump sum price by considering complete scope of works of Part-B in all respect.
2. The bidder shall indicate the break-up price in conformity with the best industry practices. In case, PFCCL notices the break-up prices are not proportionately distributed as per the industry practices and not in accordance with the scope involved for that work, PFCCL reserves the right to change the break-up prices at time of issuance of LOA / before signing of contract agreement keeping the lumpsum price same. In such cases, the bidder would furnish details of cost of resources and manpower to be deployed in support of quoted price.
3. The price offer for the Assignment should be quoted on a lump sum basis inclusive of all taxes and duties etc other than service tax as may be applicable. Any statutory fees/payments to the Government authorities shall be made by the Client. No escalation for any reason whatsoever shall be allowed over and above the bid price.
4. The bidder shall quote prices taking into consideration of the complete scope of work, any item left out and not specifically mentioned but are required for completion of the work shall be carried out by the bidder without any additional cost to PFCCL.
5. Service tax, if any, and educational-cess or any such tax/levy calculated as a percentage of the service tax at applicable rates, on the date(s) of payment(s) shall be paid over and above the bid price (price to be quoted as per Form-6). Income tax at source will be deducted by PFCCL as per the applicable law and regulation and TDS certificate shall be issued to the selected bidder by PFCCL.
6. All travel, boarding and lodging related expenses incurred by the Consultant's personnel for journeys to site or PFCCL Office or anywhere in connection with the consultancy services/study under Scope of this Specification will be borne by the Consultant and PFCCL will not take any responsibility whatsoever on this account.
7. Income tax at source will be deducted by PFCCL as per the applicable law and regulation and TDS certificate shall be issued to the consultant by PFCCL
8. The financial proposal with condition(s) or alternate price bid will be summarily rejected.
9. Any statutory fees/payments to the Government authorities shall be made by the Client. In addition to this any payment to ORSAC will be made directly by the Client.

Seal

Authorised Signatory
Full Name,
Address

**FORM -7A (Part-A): THE PROPOSED METHODOLOGY, WORK PLAN, RESOURCES
AND MANPOWER FOR UNDERTAKING THE TASKS AS PER SCOPE OF WORK
AND DELIVERABLES**

Bidder`s Name & Address

To
PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Ltd.)
First Floor, "Urjanidhi", 1-Barakhamba Lane
Connaught Place
New Delhi-110 001

Dear Sir,

We hereby enclose a brief write up on the proposed methodology to be adopted for **preparation of Geological Report in respect of Meenakshi-B and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)** indicating the following:

- i) Approach Methodology and Work Plan in responding to scope of work and deliverables
- ii) Resources available for performing the assignment.
- iii) Key Personnel and their Task Assignment for Completing the Assignment

Authorised Signatory:

Full Name:

Address:

(Seal)

**FORM -7B (Part-B): THE PROPOSED METHODOLOGY, WORK PLAN, RESOURCES
AND MANPOWER FOR UNDERTAKING THE TASKS AS PER SCOPE OF WORK
AND DELIVERABLES**

Bidder`s Name & Address

To
PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Ltd.)
First Floor, "Urjanidhi", 1-Barakhamba Lane
Connaught Place
New Delhi-110 001

Dear Sir,

We hereby enclose a brief write up on the proposed methodology to be adopted for **preparation of Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)** indicating the following:

- i) Approach Methodology and Work Plan in responding to scope of work and deliverables
- ii) Resources available for performing the assignment.
- iii) Key Personnel and their Task Assignment for Completing the Assignment

Authorised Signatory:

Full Name:

Address:

(Seal)

FORM -7C (Part-A): TECHNICAL CAPABILITY FOR UNDERTAKING DRILLING OF UPTO 15,000 MTS, SAMPLING ANALYSIS AND PRPERATION OF GEOLOGICAL REPORT

Bidder`s Name & Address

To
PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Ltd.)
First Floor, "Urjanidhi", 1-Barakhamba Lane
Connaught Place
New Delhi-110 001

Dear Sir,

We hereby enclose a brief write up on the proposed technical & financial capability for undertaking drilling of upto 15,000 mts, sampling analysis and preparation of Geological Report for **preparation of Geological Report in respect of Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha).**

Authorised Signatory:

Full Name:

Address:

(Seal)

FORM -7D (Part-B): CAPABILITY AND KNOWHOW FOR UNDERTAKING PREPARATION OF MINING PLAN AND FEASIBILITY REPORT WITH PRODUCTION CAPACITY UPTO 20 MTPA AND CAPABILITY IN CARRYING OUT EIA/EMP STUDIES FOR COAL BLOCK AREA OF 13.08 KM²

Bidder`s Name & Address

To
PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Ltd.)
First Floor, "Urjanidhi", 1-Barakhamba Lane
Connaught Place
New Delhi-110 001

Dear Sir,

We hereby enclose a brief write up on the proposed capability and knowhow for undertaking preparation of mining plan and feasibility report with production capacity upto 20 MTPA **and capability in carrying out EIA/EMP studies for coal block area of 13.08 km² for preparation of Mining Plan, Feasibility Report, EIA/EMP Studies, Land Acquisition, Forest Clearance in respect of Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha).**

Authorised Signatory:

Full Name:

Address:

(Seal)

Form-8

Format for Consortium Agreement

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

THIS Consortium Agreement executed on this day of..... Two thousand between M/s..... a company incorporated under the laws of and having its Registered Office at..... (hereinafter called the "Party 1" or "Lead Member", which expression shall include its successors, executors and permitted assigns) and M/s..... a Company incorporated under the laws of and having its Registered Office at (hereinafter called the "Party n", which expression shall include its successors, executors and permitted assigns) and for the purpose of submitting Bid in response to

NOW THEREFORE, THIS INDENTURE WITNESSTH AS UNDER:

In consideration of the above premises and agreement all the parties in this Consortium do hereby mutually agree as follows:

1. In consideration of the selection of the Consortium as the selected bidder by the PFC Consulting Limited (PFCCCL), we the Members of the Consortium and parties to the Consortium Agreement do hereby unequivocally agree that M/s..... (Insert name of the Lead Member), shall act as the Lead Member as defined in the Bid document for self and on behalf of (the names of all the other Members of the Consortium to be filled in here)
2. The Lead Member is hereby authorized by the Members of Consortium and parties to the Consortium Agreement to bind the Consortium and receive instructions from PFCCCL on behalf of other Members.
3. The Lead Member shall be liable and responsible for ensuring the performance of individual and collective commitment of each of the Members of the Consortium. Each Consortium Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this agreement.
4. It is expressly understood and agreed between the Members that the responsibilities and obligations of each of the Members shall be as delineated as follows:

Name of Members	Roles & Responsibility of Members
Party 1 (Lead Member)	
....	
Party n	

5. It is further agreed by the Members that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities and liabilities of the Members, with regards to all matters relating to the Bid documents.
6. It is clearly agreed that the Lead Member shall ensure performance under the Agreements and if one or more Consortium Members fail to perform its /their respective obligations under the Agreement(s), the same shall be deemed to be a default by all the Consortium Members.
7. This Consortium Agreement shall be construed and interpreted in accordance with the Laws of India and courts at New Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.
8. It is hereby agreed that if the Bidding Consortium is qualified to submit a Bid, the Lead Member shall furnish the EMD as stipulated in the Bid Documents, on behalf of the Consortium Members.
9. It is hereby agreed that in case of selection of Bidding Consortium as the selected bidder, the parties to this Consortium Agreement do hereby agree that they shall furnish the requisite Bank Guarantee & contract performance guarantee to PFCCL.
10. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Consortium Members respectively from time to time.
11. Lead Member is authorized to submit the bid on behalf of all the consortium members and also to sign all relevant documents on behalf of all consortium members for the purpose of bidding.
12. This Consortium Agreement
 - (a) has been duly executed and delivered on behalf of each party hereto and constitutes the legal, valid, binding and enforceable obligation of each such party,
 - (b) sets forth the entire understanding of the parties hereto with respect to the subject matter hereof;
 - (c) may not be amended or modified except in writing signed by each of the parties and with prior written consent of PFCCL:

IN WITNESS WHEREOF, the parties to the Consortium Agreement have, through their authorised representatives, executed these present and affixed Common Seals of their respective companies on the Day, Month and Year first mentioned above.

Common Seal of
 has been affixed in my/our
 presence pursuant to the
 Board of Director's resolution
 dated

For and on behalf of
 Consortium Member (Party 1)
 M/s.....
 (Signature of authorized
 representative)

(Name:
 Designation:
 Place:
 Date:)

Common Seal of
 has been affixed in my/our

For and on behalf of
 Consortium Member (Party n)

presence pursuant to the
Board of Director's
resolution dated

M/s.....
(Signature of authorized
representative)

(Name:
Designation:
Place:
Date:)

WITNESS (by the person(s) authorized & in whose presence common seal has been affixed)

1. (Signature)

Name

Designation.....

2. (Signature).....

Name

Designation.....

Attested:
(Signature)
(Notary Public)
Place:
Date:

Note : For Part-B, Lead partner shall be mining consultant.

The stamp paper of appropriate value shall be in the name of Bank issuing the guarantee.

PERFORMA OF BANK GUARANTEE TOWARDS EARNEST MONEY DEPOSIT (EMD)

(On non-judicial stamp paper of appropriate value)

To,
PFC Consulting Ltd.
(A Wholly Owned Subsidiary of PFC Ltd)
1st Floor, Urjanidhi '1', Barakhamba Lane
Connaught Place
New Delhi-110001

Dear Sir,

M/s.----- upon being issued the tender document for ----- under Tender No.----- approached us with the request to furnish PFC Consulting Limited at----- a Bank Guarantee for Rs.----- only (Rupees----- only) towards **Earnest Money Deposit (EMD)**. At their request and in consideration of the promises we ----- have agreed to give guarantee as hereinafter mentioned.

1. We-----hereby agree and undertake that if in your opinion any default is made by the said M/s. ----- in performing any of the terms and/or conditions of the tender or if in your opinion he commits any breach of terms and /or conditions of the tender or there is any demand by you against the said M/s.-----then on notice to us by you we shall on demand without demur and without reference to the said M/s. -----immediately pay to you, in any manner in which you may direct, the said amount of Rs. -----only (Rupees-----only) or such portion thereof as may be demanded by you not exceeding the said sum and as you may from time to time require. Our liability to pay is not dependent or conditional on your proceeding against the said M/s.----- and we shall be liable to pay the aforesaid amount as and when demanded by you merely on a claim being raised by you and even before any legal proceedings are taken against the said M/s.-----
2. You will have full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the contract with the said M/s.-----and to enforce or to forbear from endorsing any power or rights or by reason of time being given to the said M/s.-----which under law relating to sureties would but for the provision have the effect of releasing us.
3. Your right to recover the said sum of Rs.-----only (Rupees-----from us in manner aforesaid will not be affected or suspended by reason of the fact that

any dispute or disputes have been raised by the said M/s.-----
-----and/or that any dispute or disputes are pending before any officer, tribunal or court.

4. Our guarantee herein contained shall not be determined or affected by the liquidation or winding up of dissolution or change or constitution or in solvency of the said M/s.-----
-----but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liability or liabilities.
5. Our liability under this guarantee is restricted to Rs. ----- only (Rupees-----
-----only). Our guarantee shall be valid upto----- and we are liable to pay the guaranteed amount or any part thereof under the Bank Guarantee only and only if you serve upon us a claim or demand or a suit/action to enforce a claim under guarantee is filed against us on or before-----

Yours faithfully, -----

Bank (Signature of a person duly authorized to sign on behalf of the Bank).

The stamp paper of appropriate value shall be in the name of Bank issuing the guarantee.

PROFORMA FOR BANK GUARANTEE FOR CONTRACT PERFORMANCE
(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

The non-judicial stamp paper should be in the name of issuing bank

Ref. No. Bank Guarantee No..... Date.....

To,

PFC Consulting Ltd.,
Urjanidhi, 1-Barakhamba Lane,
Connaught Place, New Delhi – 110 001

Dear Sirs,

In consideration of the PFC Consulting Limited (hereinafter referred to as the `Owner` which expression shall unless repugnant to the context or meaning there of include its successors, administrators and assigns) have awarded to M/swith its Registered/Head Office at

.....
(hereinafter referred to as the `Consultant` which expression shall unless repugnant to the context or meaning there of include its successors, administrators and assigns) by issue of Owner's Letter of Award (LoA) Nodated

and the same having been unequivocally accepted by the Consultant resulting into a contract valued at Rs.(Rupees ----- only).....for the Scope of Work given in LoA and the Consultant having agreed to provide a Contract Performance Guarantee for the faithfully performance of the entire contract equivalent to% (per cent) of the said value of the contract to the Owner.

We(name and address), having its Head Office at(herein after referred to as the `Bank`, which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Owner, on demand any and all monies payable by the Consultant to the extent ofas aforesaid at any time upto.....

(days / month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to the Consultant any such demand made by the Owner on the Bank shall be conclusive and binding notwithstanding any difference between the Owner and Consultant or any dispute pending before any court, tribunal or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee. The Owner shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee from time to time to extend the time for performance of the contract by the Consultant. The Owner shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Consultant, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Owner and the Consultant or any other course of or remedy

or security available to the Owner. The Bank shall not be released of its obligations under these presents by any exercise by the Owner of its liberty with reference to the matters aforesaid or any of them or by reason of any other acts of omission or commission on the part of the Owner or any other indulgence shown by the Owner or by any other matters or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank.

The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Owner may have in relation to the Consultant liabilities.

Notwithstanding anything contained herein above our liability under this guarantee is restricted toand it shall remain in force upto and includingand shall be extended from time to time for such period (not exceeding one year), as may be desired by M/swhose behalf this guarantee has been given.

Dated this Day of 2014.....at

WITNESS:

(Authorised Signatories of the Bank)

1.

.....
(Signature)

.....
(Signature)

.....
(Name)

.....
(Name)

.....
(Official address)

.....
(Designation with Bank Stamp)

No/Signature no.

Attorney as per Power of Attorney

2.

Dated

.....
(Signature)

.....
(Name)
(Official address)

Note:

1. This sum shall be ten percent (10% of the total Contract Price).
2. For Part-A, validity period of BG should be for 21 (twenty one) months. For Part-B, validity period of BG should be for 27 (twenty seven) months.

The stamp paper of appropriate value shall in the name of Bank issuing the guarantee.

PRO FORMA OF BANK GUARANTEE FOR ADVANCE PAYMENT

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

The non-judicial stamp paper should be in the name of issuing bank

Ref:_____

Bank Guarantee:_____

Date:_____

Dear Sir,

In consideration of M/s_____ (Hereinafter referred as the `Owner`, which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, and assigns), having awarded to M/s._____(hereinafter referred to as the `Consultant` which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a Contract by issue of Owner's Letter of Award (LoA)/ Contract Agreement No._____ dated_____ and the same having been unequivocally accepted by the Consultant resulting in a Contract valued at Rs. _____(Rupees ____ only) for the Scope of Work as per LoA.

Contract (hereinafter called the `Contract`) and the Owner having agreed to make an advance payment to the Consultant for performance of the above Contract amounting to _____ (in words and figures) as an advance against Bank Guarantee to be furnished by the Consultant.

We_____ (Name of the Bank) having its Head Office at_____ (hereinafter referred to as the Bank), which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators executors and assigns) do hereby guarantee and undertake to pay the Owner immediately on demand any or, all monies payable by the Consultant to the extent of_____ as aforesaid at any time upto @ _____ without any demur, reservation, contest, recourse or protest and/or without any reference to the Consultant. Any such demand made by the Owner on the Bank shall be conclusive and binding notwithstanding any difference between the Owner and the Consultant or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Owner discharges this guarantee.

The Owner shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary the advance or the extend the time for performance of the Contract by the Consultant. The Owner shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Owner and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any convenience, contained or implied, in the Contract between the Owner and the Consultant any other course or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these present by any exercise by the Owner of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of \the Owner or any other indulgence shown by the Owner or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Owner may have in relation to the Consultant's liabilities.

Notwithstanding anything contained herein above our liability under this guarantee is limited to _____ and it shall remain in force upto _____ and including @ _____ and shall be extend from time to time for such period (not exceeding one year), as may be desired by M/s. _____ on whose behalf this guarantee has been given.

Date this _____ day of _____ 2014 _____
at _____

WITNESS

(Signature)

(Signature)

(Name)

(Name)

(Official Address)

Designation (With Bank Stamp)

Attorney/signature No. _____
Dated _____

Strike out, whichever is not applicable

@ For Part-A, validity period of BG should be for 14 (fourteen) months. For Part-B, validity period of BG should be for 27 (twenty seven) months.

Note:1 The stamp papers of appropriate value shall be purchased in the name of bank who issues the 'Bank Guarantee'.

CONTRACT AGREEMENT

CONTRACT AGREEMENT FOR CONSULTANCY SERVICES

This CONTRACT (hereinafter, together with all Appendices attached hereto and forming an integral part hereof, called the "Contract") is made this day of the month of _____ 2013, between:

PFC Consulting Limited (a wholly owned subsidiary of Power Finance Corporation Limited, a Government of India Company) incorporated under the Indian Companies Act 1956, having its registered office at first Floor, 'Urjanidhi, 1-Barakhamba Lane, Connaught Place New-Delhi-110001 hereinafter referred to as "Owner" (which expression shall unless repugnant to the context or the meaning thereof include its successors and permitted assigns)

AND

_____ a Company incorporated under the Indian Companies Act, 1956, having its registered office at _____

_____.hereinafter called the "Consultant" (which expression shall unless repugnant to the context or the meaning thereof include its successors and permitted assigns)

WHEREAS the Owner is in the process of appointment of Technical Consulting Organization for providing consultancy services for undertaking various consultancy works related to coal mining for Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha.

AND WHEREAS the Owner is intending to hire an experienced and qualified Consultant who has undertaken similar projects and is capable of providing consultancy services in conjunction with other specialist consultants, and personnel for providing "Services" and advice in regard to the "Consultancy Service Package" for the Project.

AND WHEREAS the Consultant, have represented to the Owner that they have the requisite experience, professional skills, adequate manpower and technical resources and personnel, to render the Services required by the Owner in a timely and efficient manner.

AND WHEREAS based on above representations of the Consultant, the Owner has agreed to appoint the Consultant to render services on the terms and conditions hereafter contained:

NOW THEREFORE THIS AGREEMENT WITNESSES THAT, IN CONSIDERATION OF THE PREMISES AND THE MUTUAL COVENANTS HEREIN CONTAINED, IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

1.0 GENERAL PROVISIONS

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract, Appendices, Schedules and Exhibits shall have the following meanings:

- (a) "Approvals" shall mean all consents, licenses and approval of any local, municipal, State or National Authority necessary to carry out the services for each and every phase of the Project.
- (b) "Contract" means this Contract together with all Appendices, Attachments, Exhibits and Schedules and including all modifications made in accordance with the provisions of Clauses 12 hereof between the Owner and the Consultant.
- (c) "Consultant" means _____ Company and also includes any other consultants or sub-consultants as may be appointed by the Consultant herein with the written approval of the owner, for providing of the services to the Owner in Award of the Project.
- (d) "Confidential Information" means any material, proprietary, non-public information acquired, developed, disclosed or exchanged among the parties pursuant to this Agreement.
- (e) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause 3.1 hereof;
- (f) "Personnel" means persons hired by the Consultant or by his Sub -consultant as employees, for the purposes of rendering services or any part thereof; Personnel includes:
- (i) "Local Personnel" mean such persons who at the time of being so hired have their domicile in India and;
 - (ii) "Foreign Personnel" mean such persons who at the time of being so hired had their domicile outside India
- (g) "Parties" means the Owner or the Consultant, as the case may be;
- (h) "Contract time" means the duration of time of the Contract as referred to Clause 3.
- (i) "No claim Certificate" means certificate issued by the Owner after the Contract has expired and the consultant has performed all his Services as per the terms and conditions envisaged in this Contract and all undisputed payments of remuneration and reimbursable expenditures payable by the Owner to the Consultant has been made.
- (j) "Project" means "undertaking various consultancy works related to coal mining for Meenakshi, Meenakshi-B, and Dipside of Meenakshi Coal Blocks (allocated to 4000 MW Ultra Mega Power Project near Bhedabahal in the State of Odisha)".
- (k) "Services" means the works to be provided/performed by the Consultant and/or, the Sub-Consultants for completion of various tasks as described in Appendix A hereto;
- (l) "Starting Date" means the date referred to in Clause 3.3 hereof;

(m) "Sub Consultant" means any person/entity to whom the Consultant subcontracts for any part of the Services in accordance with the provisions of Clause 5.5 hereinafter; and

(n) "Third Party" means any person or entity other than the Owner, the Consultant or his Sub-consultant.

2.0 LOCATION FOR PERFORMANCE OF THE SERVICES:

(a) The Consultant shall render/perform services at Delhi/Odisha and at the Project site at **Meenakshi, Meenakshi- B and Dipside of Meenakshi coal blocks near sundargarh.**

(b) The Consultant also undertakes to perform/render services at other location or elsewhere as required for the Odisha of project or as specified by the Owner from time to time. The Owner shall not bear any extra expenses/cost if, any, incurred by the consultant for providing services at other location.

3.0 COMMENCEMENT, COMPLETION, AND TERMINATION OF CONTRACT

3.1 Commencement of Contract

This contract shall come into force from the date (“effective date”) on which the Owner and the Consultant have signed the present contract.

3.2 Termination of Contract for Failure to Become Effective

a) If this Contract has not become effective within 15 days from effective date the Owner has the right to declare the same to be null and void, and in the event of such a declaration the consultant shall not have any claim against the Owner.

b) In case the contract is rendered null and void on account of failure/inaction on the part of the consultant, the consultant shall be liable to pay damages to the Owner.

3.3 Commencement of Services

The Consultants shall begin carrying out the Services immediately viz. from the date of issue of Letter of Award (the "Starting Date"), or on such date as the Parties may agree in writing

3.4 Expiration of Contract

Unless terminated earlier pursuant to Clause 10 hereof, this Contract shall expire after the consultant has performed all his Services as per the terms and conditions envisaged in this Contract and the Owner has issued a ‘No claim Certificate’ to the Consultant.

The Owner shall issue the “No claim certificate” after being satisfied that the Consultant has performed/rendered all the services to the satisfaction of the Owner, as per the contract and all undisputed payments of remuneration and reimbursable expenditures payable by the Owner to the Consultant has been made.

4.0 Contract Performance Guarantee

4.1 The Consultant within 30 days from the date of issue of Letter of Award shall furnish a Performance Guarantee in the form of Bank Guarantee as per Performa attached as Section-2 of bid document, from any Bank towards performance of the Contract. The guarantee amount shall be equal to ten percent (10%) of the contract price in accordance with the terms and conditions specified in the contract and in the Bid Documents. The guarantee shall be valid until after expiry of a period of 6 months from the date of issue of No Claim Certificate by the Owner.

4.2 The Contract Performance Guarantee is intended to secure the performance of the entire contract and shall not be construed as limiting the damages stipulated in other clauses in the Bid Documents.

4.3 The Performance Guarantee will be returned to the Consultant without any interest at the end of the Guarantee Period.

5.0 OBLIGATIONS OF THE CONSULTANTS

5.1 Standard of performance

The Consultant shall perform the Services and carry out his obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted techniques and practices used with professional engineering and consulting standards recognized by professional bodies, and shall observe sound management, and technical and engineering practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods in award of project. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Owner, and shall at all times support and safeguard the Owner's legitimate interests in any dealings with Consultants/Sub-consultants or Third Parties.

5.2 COMPLIANCE WITH RULES AND REGULATIONS

The Consultant agrees that it shall be responsible and liable to comply with and also undertakes to ensure and be responsible for compliance by the Sub consultants, agents of the Consultants and Sub-consultants and Personnel, with all the rules and regulations of various concerned government authorities and departments for the services rendered under this agreement.

5.3 CONFLICT OF INTEREST

The consultant shall hold the Owner's interest paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their corporate interests.

5.4 Benefit from Commissions, Discounts etc.

Payment to the Consultant shall constitute the Consultant's only payment in connection with this Contract or the Services, and the Consultant shall not accept for their own

benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Consultant shall use their best efforts to ensure that the Personnel, any Sub-Consultants, and agents of either of them similarly shall not receive any such additional benefits.

5.5 Consultants and Affiliates not to be otherwise interested in Project

The Consultant agrees that, during the term of this Contract, the Consultant, Sub Consultant, Personnel and/or any entity affiliated with the Consultant or Sub-Consultant shall not provide services resulting from or directly related to the Consultant's Services for the preparation or implementation of the project to any third party. In the event of breach of the aforesaid condition the Owner shall be entitled to disqualify such Consultant or the Sub Consultant or any of their Personnel from providing services to the Owner and further claim damages for breach.

5.6 Prohibition of Conflicting Activities

The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Contract.

5.7 Insurance to be taken out by the Consultant

The Consultant shall take out and maintain, and shall cause its Sub-Consultants to take out and maintain, at their own cost, insurance against risks etc.

5.8 Liability of the Consultants

The Consultant and each of his Members (consultant personnel, sub-consultant, sub-consultant personnel) shall be jointly and severally liable to the Owner for the performance of the Services under this Contract and further for any loss suffered by the Owner as a result of a default of the Consultant or his members in such performance, subject to the following limitations:

- (a) The Consultant shall not be liable for any damage or injury caused by or arising out of the act, neglect, default or omission of any persons other than the Consultants, its Sub-consultants or the Personnel of either of them; and
- (b) The Consultant shall not be liable for any loss or damage caused by or arising out of circumstances of Force Majeure.

5.9 Consultant Action Requiring Owner's Prior Approval

The Consultant shall obtain the Owner's prior approval in writing before taking any of the following actions:

- (a) appointing personnel to carry out any part of the Services, including the terms and conditions of such appointment ;
- (b) entering into a subcontract with the Sub consultant for the performance of any part of the Services, it being understood:
 - (i) That the selection of the Sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by the Owner prior to the award of the subcontract, and
 - (ii) That the Consultants shall remain fully liable for the performance of the Services by the Sub-consultant and its Personnel pursuant to this Contract;

5.10 Reporting Obligations

The Consultant shall submit to the Owner the reports and documents specified in Appendix B hereto, in the form, in the numbers and within the time periods set forth in the said Appendix, including any supporting data required by the Owner.

5.11 Documents Prepared by the Consultants to Be the Property of the Owner

All plans, drawings, specifications, designs, reports and other documents prepared by the Consultants in performing the Services shall become and remain the property of the Owner, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Owner, together with a detailed inventory thereof.

6.0 CONSULTANTS' PERSONNEL

6.1 Agreed Personnel

The Consultant hereby agrees to engage the personnel and sub-consultants listed by title as well as by name in **Appendix C** in order to fulfill his contractual obligations under this contract.

6.2 General

The Consultants shall employ and provide such qualified and experienced Personnel as are required to carry out the Services.

6.3 Description of Personnel

- (a) The titles, job descriptions, minimum qualifications and estimated period of engagement in the carrying out of the Services of each of the Consultants' Personnel are described in **Appendix C**.
- (b) If required to comply with the provisions of **the** Contract, adjustments with respect to the estimated periods of engagement of Personnel set forth in **Appendix C** may be made by the Consultant by written notice to the Owner, provided:

- (i) that such adjustments shall not alter the originally estimated period of engagement of any individual by more than 10% or one week, whichever is larger.
 - (ii) that the aggregate of such adjustments shall not cause payments under this Contract to exceed the ceilings set forth in **Clause 8** of this Contract. Any other such adjustments shall only be made with the Owner's written approval.
- (c) If additional work is required beyond the scope of the Services specified in **Appendix A**, the estimated periods of engagement of Personnel set forth in **Appendix C** may be increased by agreement in writing between the Owner and the Consultants, provided that any such increase shall not, except as otherwise agreed, cause payments under this Contract to exceed the ceilings set forth in **Clause 8** of this Contract.

6.4 Removals and/or Replacement of Personnel

- a) Except as the Owner may otherwise agree, no changes shall be made in the Personnel. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the Personnel, the Consultants shall forthwith provide as a replacement a person of equivalent or better qualifications.
- (b) If the Owner:
 - i) finds that any of the Personnel has committed serious misconduct or has been charged with having committed a criminal action, or
 - (ii) has reasonable cause to be dissatisfied with the performance of any of the Personnel,

then the Consultants shall, at the Owner's written request specifying the grounds therefore, forthwith provide as a replacement a person with qualifications and experience acceptable to the Owner.

- (c) The new personnel provided as a replacement shall be governed by the same the terms and conditions of employment as the replaced personnel.
- (d) The Consultants shall bear all additional travel and other costs arising out of or incidental to any removal and/or replacement.

7.0 OBLIGATIONS OF THE OWNER

Payment

In consideration of the Services performed by the Consultants under this Contract, the Owner shall make to the Consultants such payments and in such manner as is provided by **Clause 8** of this Contract.

8.0 PAYMENTS TO THE CONSULTANTS

8.1 The Lump-sum cost of services payable in Indian Rupees is set forth in **Appendix E**. If due to any reason or decision of the PFCCL/ Govt./ the Regulator, the Assignment is dropped and the Consultant is directed to discontinue work, the “Drop Dead Fee” would be limited to the payments received by the Consultant and the claims already raised, as per the payment terms relating to the Assignment, till the point of calling off the Assignment or as mutually agreed.

8.2 Mode of Payment

Payments will be made by the Owner to the consultant in accordance with the terms of payment as per Letter of Award. Any deviation in the payment terms is not permitted.

8.3 The Consultant shall submit the bills in duplicate to PFCCL addressed to CEO, PFCCL or to an executive authorized by CEO, PFCCL, indicating the stage achieved, out of the ones indicated above.

8.4 The Owner shall cause the payment of the Consultant as per the above given schedule of payment within sixty (60) days of the receipt of the bills raised along with supporting documents. However, it is agreed between the parties that the Owner may restrict or withhold the payment if the performance or progress of the services rendered by the Consultant or his members (sub consultants) is not satisfactory and not in accordance with the work program/schedule.

8.5 The final payment under this Clause shall be made only after satisfactory completion of the activities mentioned in the Terms of Reference (**Appendix-A** and **Appendix-B**) and after the issuance of No Claim Certificate.

8.6 All payments under this Contract shall be made to the account of the Consultants with:

Account No _____ Bank,

9.0 Suspension

The Owner may, by written notice of suspension to the Consultants, suspend all payments to the Consultant and invoke Performance Bank Guarantee hereunder:

(k) if the Consultant fails to perform any of its obligations under this Contract, including carrying out of the Services, provided, that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultant of such notice of suspension

or

(ii) if at any stage it is found that the Consultant has provided any wrong information/ false information/ mis-represented the fact.

10.0 Termination

10.1 By the Owner

The Owner may terminate this contract, by issuing a written notice not less than thirty (30) days, from the date of occurrence of any of the events as specified in sub clause (a) to (e) of this Clause.

The Owner may terminate this contract, by issuing a written notice not less than sixty (60) days, from the date of occurrence of the event as specified in sub clause (f) of this Clause.

- (a) if the Consultants fail to remedy a failure in the performance of their obligations hereunder, as specified in a notice of suspension pursuant to Clause 9 hereinabove, within thirty (30) days of receipt of such notice of suspension or within such further period as the Owner may have subsequently approved in writing;
- (b) if the Consultant fail to comply with any final decision reached as a result of arbitration proceedings pursuant to **Clause 18** hereof;
- (c) if the Consultant submit to the Owner a statement which has a material effect on the rights, obligations or interests of the Owner and which the Consultants know to be false;
- (d) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (e) if Consultant become Bankrupt and the company has been wound up through liquidation proceedings.
- (f) if the Owner, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.

10.2 Cessation of Rights and Obligations

Upon termination of this Contract pursuant to Clauses 10 hereof, or upon expiration of this Contract pursuant to Clause 3 hereof, all rights and obligations of the Parties hereunder shall cease, except

- (a) such rights and obligations as may have accrued on the date of termination or expiration,
- (b) the obligation of confidentiality set forth in Clause 16 hereof,
- (c) any right which a Party may have under the Applicable Law.

10.3 Cessation of Services

Upon termination of this Contract by notice to pursuant to Clauses 10 hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum.

10.4 Payment upon Termination

Upon termination of this Contract pursuant to **Clause-10** hereof, the Owner shall make the following payments to the Consultant:

- (a) remuneration pursuant to **Clause 8** hereof for Services satisfactorily performed prior to the effective date of termination;
- (b) reimbursable expenditures pursuant to Clause 8 hereof for expenditures actually incurred prior to the effective date of termination; and
- (c) except in the case of termination pursuant to paragraphs (a) to (b) of **Clause 10.1** hereof, reimbursement of cost duly supported by the documentary evidence incident to the prompt and orderly termination of the Contract.

11.0 Force Majeure

11.1 Definition

- (a) For the purposes of this Contract, "Force Majeure" means an event or circumstance or combination of events and circumstances, the occurrence of which is beyond the reasonable control of either party and which materially affects the performance by either Party of its obligations under this agreement, provided such material and adverse effect could not have been prevented, overcome or remedied in whole or in part by the affected party and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.
- (b) It is however agreed that 'Force Majeure' shall not mean or include:
 - (1) any event caused by the negligence or intentional action of a Party or such Party's Sub-consultants or agents or employees, nor
 - (2) any event which a diligent Party could reasonably have been expected take into account at the time of the Award of this Agreement, and avoid or overcome in the carrying out of its obligations hereunder.
- (c) The Consultant shall not be paid /reimbursed any further price or cost or any additional cost in re-activating the services after the end of Force Majeure event.

11.2 No Breach of Contract

Neither party shall be responsible or be liable for, or deemed to be in breach hereof because of any failure or delay in complying with its obligations under or pursuant to this Agreement due to one or more events of Force Majeure or its effects or any combination thereof, provided that the Party affected by such an event has taken all reasonable

precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract. However it is agreed that in no event shall Force Majeure shall exclude any Party's obligation to pay monies under this Agreement.

11.3 Measures to be taken

- (a) A Party affected by an event of Force Majeure or any combination of events shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- (b) A Party affected by an event or any combination of events of Force Majeure shall notify the other Party of such event as soon as possible, and in any event not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- (c) The Parties shall take all reasonable measures to minimise the consequences of any event of Force Majeure.

11.4 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

11.5 Consultation

Not later than thirty (30) days after the Consultant, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

12.0 Amendment/Modification

This Agreement may not be altered, modified, revoked or cancelled in any way unless such alteration, modification or cancellation is in writing and duly signed by or on behalf of the parties which shall not be effective until the consent of the parties has been obtained. However, it is agreed between the parties that each Party shall give due consideration to any proposals for modification made by the other Party.

13.0 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof. Any dispute between the parties as to matters arising pursuant to this Contract which cannot be settled amicably shall be resolved as per the Indian Arbitration Act, 1996 as amended from time to time.

14.0 FAIRNESS AND GOOD FAITH

14.1 Good Faith

The Parties hereunder undertake to act in good faith with respect to their performance, obligations and rights under this Agreement and further undertake, during the tenure of this Agreement, to take all reasonable measures, to ensure the achievement/realization of the objectives of this Agreement.

14.2 Operation of the Contract

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but on failure to agree on any action pursuant to this clause shall give rise to a dispute subject to arbitration in accordance with clause 18 hereof.

15.0 TAXES AND DUTIES/CHANGE IN LAW.

It is hereby agreed between the parties that the Consultant and its personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the Owner shall deduct the taxes, duties and levy whatsoever as may be lawfully imposed.

16.0 Confidentiality

The Consultant, their Sub-consultants and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or Confidential Information relating to the Project, Services, under this Contract or any information pertaining to the Owner's business or operations without the prior written consent of the Owner.

17.0 Law Governing Contract

This Agreement, its meaning and interpretation, and the relation between the Parties shall be governed by Indian Laws or any statutory modifications thereof, and shall be subject to the exclusive jurisdiction of the Courts of **Delhi** in any matter arising under this Agreement and or in matters pertaining to the conduct of arbitration, enforcement of the award or obtaining of interim relief(s) etc.

18.0 SETTLEMENTS OF DISPUTES/ ARBITRATION.

18.1 The parties shall endeavor to resolve amicably, in the first instance, all disputes, controversies or differences which may arise between the Parties, out of or in relation to or in connection with this Agreement, or for breach thereof.

18.2 In the event, the parties are unable to resolve such dispute/difference amicably within **ninety (90)** days after the same has arisen then the dispute shall be referred to arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration and such arbitration shall be conducted in accordance with the rules of ICA. The place of arbitration shall be New Delhi or any other place mutually agreeable by the parties and the language of arbitration shall be English

The Arbitration shall be conducted by panel of 3 Arbitrators, one to be appointed by each party and third Arbitrator to be appointed by two Arbitrators as the Chairman of the Tribunal.

The Parties agree that the arbitrator's decision shall be final and conclusive. The costs of arbitration (including without limitation, those incurred in the appointment of the arbitrators) shall be borne equally by the Parties hereto; however each Party shall pay its respective legal charges. The Award shall be final and binding and non-appeal able. Judgment on the award may be entered and enforced in any court of competent jurisdiction. By Odisha and delivery of this Agreement, each Party agrees and consents to the jurisdiction of the aforesaid arbitration panel and solely for the purpose of enforcement of an arbitral award, as referred to hereinabove, in any court of competent jurisdiction for itself and in respect of its property and waives in respect of both itself and its property, any defense it may have to or based on sovereign immunity, jurisdiction, improper venue or inconvenient forum.

19.0 GENERAL PROVISIONS

19.1 Language

This Contract has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

19.2 Headings

The headings shall not limit, alter or affect the meaning of this Contract.

19.3 Notices

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, or facsimile to such Party at the following address:

1. For the Owner: **PFC Consulting Limited.**
(A Subsidiary of Power Finance Corp. Ltd.)
First Floor, 'Urjanidhi', 1, Barakhamba Lane,
New Delhi - 110001

Attention: Mr. _____

Facsimile: 011-23456170,

2. For Consultants:

Attention:

Facsimile: _____ **Email :** _____

19.4 Notice will be deemed to be effective as follows:

- (a) in the case of personal delivery or registered mail, on delivery;
- (b) in the case of facsimiles, forty eight (48) hours following confirmed transmission.

19.5 A Party may change its address for notice hereunder by giving the other Party notice of such change pursuant to this Clause.

19.6 Authority of Consultant in Charge

The Consultant hereby authorize : Mr./Ms. _____ to act on their behalf in exercising all the Consultants' rights and obligations towards the Owner under this Contract, including without limitation the receiving of instructions and payments from the Owner.

19.7 Authorised Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract, may be taken or executed:

- (a) on behalf of the Owner by _____ or his designated representative;
- (b) on behalf of the Consultants _____ or his designated representative.

19.8 WAIVER OF RIGHT.

The failure of either party to enforce at any time or for any period of time, the provisions hereof shall not be construed to be waiver of any provision or of any right and shall not preclude such party from subsequently enforcing such provisions or right.

19.9 SEVEREABILITY CLAUSE

If any provision of this Agreement shall be determined to be void or unenforceable, such provision shall be amended or deleted in so far as is reasonably consistent with the provisions of this Agreement and to the extent necessary to conform to applicable law and the remaining provision of this Agreement shall remain valid and enforceable in accordance with their terms.

19.10 This Agreement may be executed in any number of counterparts which together shall constitute a single agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

FOR AND ON BEHALF OF
[OWNER]

By :
Authorized Representative

FOR AND ON BEHALF OF
[CONSULTANTS]

By :
Authorized Representative

LIST OF APPENDICES

Duties of the Consultants

Description of the Services

- A - Detailed descriptions of the Services to be provided as per scope of work and deliverables indicated in Bid invitation Letter of Bid Document, letter of the bidding ; dates for completion of various tasks; place of performance for different tasks; specific tasks to be approved by Owner; etc.

Reporting requirements

- B - Format, frequency and contents of reports; persons to receive them; dates of submission; etc.

Consultants' Personnel

- C - Titles and names, [if already available], detailed job descriptions and minimum qualifications of Personnel to be assigned to work in India, and man-months for each.

Duties of the Owner

- D - Services, facilities, to be made available to the Consultants by the Owner.

Cost of services

- E - **Cost of services**

Letter of Award

APPENDIX -A

DESCRIPTION OF THE SERVICES

The consultant has to provide services as detailed below as per scope of work and deliverables indicated in Bid invitation Letter of Bid Document/LoA, letter of the bidding ; dates for completion of various tasks; place of performance for different tasks; specific tasks to be approved by Owner; etc. which is required for the successful completion of the assignment

Authorized /designated
Representative of Owner

Authorized /designated
Representative of Consultant

REPORTING REQUIREMENTS

1. The Deliverables, Time Schedule and the Completion period will be as indicated below or as agreed from time to time::

Authorized /designated
Representative of Owner

Authorized /designated
Representative of Consultant

CONSULTANTS KEY PERSONNEL

List of key Personnel to be assigned to the assignment

Authorized /designated
Representative Of Owner

Authorized /designated
Representative of Consultant

DUTIES OF THE OWNER

Owner will provide all assistance to the consultant in facilitating the studies and surveys to be conducted at site.

Authorized /designated
Representative Of Owner

Authorized /designated
Representative of Consultant

(Cost of Services)

(Reference Clause 8.1 of Contract and Form-6 of the Bid Document)

Authorized /designated
Representative of Owner

Authorized /designated
Representative of Consultant