



NTPC Limited

(A Government of India Enterprise)

LARA SUPER THERMAL POWER PROJECT

VILLAGE - CHHAPORA, PO/PS - PUSSORE

RAIGARH

Chhattisgarh- 496440, India

Telephone No. : Fax No. :

Service Purchase Order

PAN No. : AAACN0255D

CIN No. : L40101DL1975GOI007966

Purchase Order No. : 5500045236-037-1047 **Date :** 03.09.2024 **(version : 0)**

To

Vendor Code : 1165082

REGISTRAR GURU GHASIDAS UNIVERSITY

KONI

BILASPUR

Chhattisgarh

India - 495009

Tel: 7000591141

E-Mail : AKS.GGU@GMAIL.COM

Subject: : Study on Assessment of Impact on Ecosystem & Ecological Monitoring and Water Bodies around NTPC Lara Station on Deposit Work basis.

NIT NO. : Dated

Your Offer No. : Offer Submitted

Your Reference : Offer Submitted.

Dear Sir,

This has reference to our above mentioned NIT, Your offer and subsequent discussions. We are pleased to accept your offer opened on and confirm having awarded on you the work of Study on Assessment of Impact on Ecosystem & Ecological Monitoring and Water Bodies around NTPC Lara Station on Deposit Work basis. of total value INR 3,954,500.00 (Rupee THIRTY-NINE LAKH FIFTY-FOUR THOUSAND FIVE HUNDRED ONLY) mentioned in the scope of works, special terms & conditions, Bill of quantities etc.

The duration of the service period shall be from 01.10.2024 to 31.12.2025. Though the duration of contract shall remain same, the actual date of commencement of the contract shall be as per the direction of EIC. Sh Vikas, Engineer (EMG) Emp No 105927 shall be EIC for this work.

This service purchase order along with its annexure is being issued to you in duplicate .We request you to return the duplicate copy of this service purchase order, duly signed on each page by your authorised signatory in token of your unequivocal acknowledgment of the same within 15 days from the date of this service purchase order. If no communication is received within 15 days of receipt of Purchase Order, it will be treated that order has been accepted in entirety.

We thank you for the interest shown by you in our project and the cooperation extended to us. We expect to receive your continued cooperation in future also.

Thanking You,

For & on behalf of NTPC Limited.

Sunil Kumar Jha

ADDL. GENERAL MANAGER

9471701229

SUNILJHA@NTPC.CO.IN

Enclosures :

Name of Work:		(Bill of Quantity) Study on Assessment of Impact on Ecosystem & Ecological Monitoring and Water Bodies around NTPC Lara Station on Deposit Work basis.					
SI No.	Code	Description	Unit	Quantity	Net Price	Amount	Long Text
Delivery/Invoicing Address: 1047 LARA SUPER THERMAL POWER PROJECT VILLAGE - CHHAPORA,PO/PS - PUSSORE RAIGARH Chhattisgarh 496440 India Invoicing to be done on GST No. : 22AAACN0255D4Z5							
10		STUDY ON ASSESSMENT OF IMPACT ON ECOSYST	AU	1.000	3,954,500.00	3,954,500.00	
Tax: IN:Central GST-ND @ 9.00 % Extra IN: StateGST-ND @ 9.00 %							
10 .10		FIRST INSTALLMENT	NO	1	1,500,000.0000	1,500,000.00	
10 .20		SECOND INSTALLMENT	NO	1	1,500,000.0000	1,500,000.00	
10 .30		THIRD INSTALLMENT	NO	1	954,500.0000	954,500.00	
TOTAL OF BOQ PART : 00010						INR 3954500.00	
Amount						3954500.00	
Other Charges						0.00	
Net Amount on BOQ PART : 00010						INR 3954500.00	
Net Total Amount						INR 3,954,500.00	
Less Rebate/Amount						INR 0.00	
Grand Total						INR 3,954,500.00	
INR THIRTY-NINE LAKH FIFTY-FOUR THOUSAND FIVE HUNDRED ONLY							

For & on behalf of NTPC Limited.
Sunil Kumar Jha
ADDL. GENERAL MANAGER
9471701229
SUNILJHA@NTPC.CO.IN

Terms & Conditions
-----**Payment Terms**

Payment Terms & Conditions:

- a) First Installment: Rs. 15 Lakh on Start of Work after Award.
- b) Second Installment: Rs. 15 Lakh after completion & Submission of Half Yearly progress report.
- c) Third Installment: Rs. 9.545 Lakh at the beginning of Second Year

Registrar Guru Ghasidas University, shall be requested to submit utilization of funds and execution certificate in the form as desired by NTPC/ EIC

Invoice to be raised on delivery/invoice address against the given PO line items.

Special Instruction

Registrar Guru Ghasidas University, shall be requested to submit utilization of funds and execution certificate in the form as desired by NTPC/ EIC.

Contract Period: Contract period shall be fifteen (15) months from date of award.

Ø Price variation: Contract price shall remain firm during the period of contract.

Ø CAR Policy shall not be applicable to this work.

Ø Defect Liability period: NIL.

Ø Payment Terms & Conditions:

- a) First Installment: Rs. 15 Lakh on Start of Work after Award.
- b) Second Installment: Rs. 15 Lakh after completion & Submission of Half Yearly progress report.
- c) Third Installment: Rs. 9.545 Lakh at the beginning of Second Year

Break up of Price (For Service Related Lines Only)

SI No.	Service Code	Description	Qty.	UOM	Rate	Premium	Discount	Addl Discount	Net Rate	Value
10 .10		FIRST INSTALLMENT	1	NO	1,500,000. 00	0.00	0.00	0.00	1,500,000 .0000	1,500,000.00
10 .20		SECOND INSTALLMENT	1	NO	1,500,000. 00	0.00	0.00	0.00	1,500,000 .0000	1,500,000.00
10 .30		THIRD INSTALLMENT	1	NO	954,500.00	0.00	0.00	0.00	954,500.0 000	954,500.00

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SCOPE OF WORK

00010 : STUDY ON ASSESSMENT OF IMPACT ON ECOSYST

1) INTRODUCTION:

NTPC is operating Lara Super Thermal Power Project (Lara STPP) in Raigarh district of Chhattisgarh, Stage-I (2 x 800 MW) of the project is in commercial operation (Unit-I since 1st Oct 2019 and Unit-II since 7th Nov 2020). NTPC is expanding the capacity of the project by the addition of 2x800 MW units under Stage-II, for which the environmental clearance has already been accorded by MOEF&CC. The project is located in Armuda, Chhapora, Bodajharia, Devalsura, Mahloi, Riyapalli, Lara, Jhilgitar and Kandagarh villages of Pussore C.D.block in Raigarh district of Chhattisgarh

The interstate boundary of Chhattisgarh and Odisha is at a distance of about 1.5 km east from the project site. The nearest national highway is NH-200, which is about 0.7 km in direction of NE. The nearest railway station is Raigarh railway station at a distance of 14.5 km in NNW direction.

2) OBJECTIVE:

In order to identify the impacts due to the construction and operation of Lara Super Thermal Power Project (2x800 MW) on surrounding ecosystem. A Study is proposed to be undertaken for ecosystem assessment & ecological monitoring in the surrounding area within 10 km of Lara STPP. The aim of the study are

- A) Identification of Terrestrial & Aquatic Ecosystems.
- B) To study of flora & fauna in these ecosystems.
- C) Identification of endangered & threatened species in these ecosystems.
- D) Assessment of Lara STPP impact on these ecosystems.
- E) Preparation of conservation Plan for its implementation by NTPC.
- F) Preparation of annual ecological monitoring plan for long term monitoring.

3) STATUS OF STATUTORY CLEARANCES:

The Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance (EC) for Stage-I of the project vide letter dated 13.12.2012 and for Stage-II of the project, Vide letter no. J-J-13012/11/2018-IA.I (T) Dated 17.07.2023. The Environment Clearance stipulates following Specific Conditions:

3.1 (xvi) "No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/ operation of the power plant. A list of all small and large water bodies shall be prepared after physical survey within 10 km radius of the project. A detailed conservation plan for all these water bodies shall be prepared and submitted before the Regional Office of the Ministry within 3 months. Implementation status of conservation plan be submitted in 6 monthly compliance report".

3.1(xviii) "A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years to assess the impacts of project on the local environment and ecology. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the regional office of MoEF&CC".

8.2 "In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented"

In order to fulfil the requirements of EC condition for its compliance as well as NTPC's concern towards conservation of Ecosystem and its Biodiversity, a detailed study on the above subject within 10 km of the project is proposed to be undertaken by NTPC Lara STPP which covering ecosystem assessment & ecological monitoring, assessment of impact of project on these ecosystems, preparation of conservation and ecological monitoring plan for Lara STPP.

4) SCOPE OF SERVICES:

The study is to be conducted covering study of Terrestrial & Aquatic Ecosystems in the study area of 10 km and assessment of impact of proposed project and its activity on them. Study shall cover all three seasons [Pre-monsoon (summer), monsoon and winter] and data shall be generated on seasonal basis. The study period shall be twelve months.

The Scope of Services for the study will comprise of the following but not limited to these stages: -

Stage 'A'

Description of Project Site and Surrounding

Description of Existing Terrestrial & Aquatic Ecosystems

Assessment of ecosystem & establish ecosystem conditions

Stage 'B'

Project Impact on Terrestrial & Aquatic Ecosystems

Identification of rare, endangered & threatened species

Preparation of Site-specific conservation plan

Preparation of Ecosystem Monitoring Plan

Stage 'C'

Preparation of following Document:

Final Study Report based on the above study for its implementation and long-term monitoring.

5) STAGE 'A':

Description of Project Site and Surrounding:

The salient features of the project and detailed description of environmental condition in the study area of 10 km through primary and secondary data collection.

Description of the Existing Terrestrial & Aquatic Ecosystems:

Identification & enlistment of all Terrestrial & Aquatic Ecosystems of the area, which includes forest area, all small and big surface water bodies etc. Highlight the salient features of the Terrestrial & Aquatic Ecosystems which likely to be affected by the construction & operation of Lara STPP. Which is based on primary data collection and observation during site visits for the above said study.

Assessment of ecosystem & establish ecosystem conditions:

Detailed assessment of Terrestrial & Aquatic Ecosystems. Study of flora & fauna in both ecosystem in the area. Classification of species. Biodiversity Indexing of the study area. Field observations of faunal species including insects, amphibians, reptiles, bird and mammals etc. Water quality monitoring of aquatic ecosystems. These organisms play a vital role in the circulation and recirculation of nutrients in terrestrial & aquatic environments. Description of Ecosystem services available in the area.

Please refer Annexures-I for details of the study.

However, the details presented in Annexure-I&II are only indicative and not exclusive and limited. The consultant shall include all possible sources for data collection and generate relevant primary data as required for the study.

6) STAGE 'B':

Assessment of project impact on Terrestrial & Aquatic Ecosystems

The impacts will be assessed for both construction and operation phases. Both short term and long-term impacts on flora & fauna in the study area. Identification of potential other activities in the study area which likely to impact on it. The detailed methodologies, parameters for assessment of impact of proposed project on these ecosystems for this study will be broadly defined by the consultant. Impacts on ecosystems shall be established qualitatively & quantitatively based on study.

Identification of rare, endangered & threatened species

Identification of rare, endangered and threatened species based on the assessment of the terrestrial & aquatic ecosystem. Identification of key biodiversity spot, natural water bodies in the study area, which need its

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protection.

Preparation of Site-specific conservation plan

Identifying the mitigation measures and preparation of site-specific conservation plan (IN-SITU/EX-SITU BOTH) for protection and conservation of flora & fauna species.

Development of conservation plan for natural water bodies.

Preparation of Ecological Monitoring Plan

The consultant will identify important Bio-indicators based on the study and design a post study ecosystem monitoring program to assess project impact and the effectiveness of environmental protection & conservation measures implemented at site.

7) STAGE: 'C':

Preparation of Study Report

Submission of final Study report based on study of existing ecosystem, its data, Identification & Assessment of impact on these ecosystems. The report will include all references, maps, tables, figures, nomenclature, and photographs.

8) STAGE#A: SUMMARY OF SCOPE:

I) Terrestrial Ecosystem Study:

Characterization of forest types in the study area

Study of flora & fauna in the terrestrial ecosystem.

Documentation of all plant species i.e. Angiosperm, Gymnosperm, Pteridophytes, Bryophytes (all groups).

General vegetation profile and floral diversity covering all groups of flora including lichens and orchids. A species wise list may be provided.

Species composition and its significance, Dominant species in the terrestrial ecosystem, Ecological analysis of the flora & fauna, Structure and Development of vegetation.

Assessment of plant species with respect to dominance, density, frequency, abundance, diversity index, similarity index, importance value index (IVI), Shannon Weiner index etc. of the species to be provided.

Methodology used for calculating various diversity indices along with details of locations of quadrates, size of quadrates etc. to be reported within the study area in different ecosystems, Biodiversity indexing

Identification of Bioindicators

Details of endemic species found in the project area.

Fauna study and inventorisation should be carried out for all groups of animals in the study area. Their present status along with Schedule of the species.

Collection of information on sensitive habitat of ecological importance

Information (authenticated) on Avi-fauna and wildlife in the study area

Identification and assessment of the impact of project activities and its Interactions with the terrestrial ecosystem

Document major human interventions in the terrestrial ecosystem other than the project activities.

Significance, status of the vegetation and identify pockets for conservation if any

Preparation of site-specific protection measures & conservation plans

Preparation of detail long term ecological monitoring program for terrestrial ecosystem.

II) Aquatic Ecosystem Study:

Identification of all small & big water bodies

Study of flora & fauna in the aquatic ecosystem.

Species composition and its significance, Dominant species in the aquatic ecosystem, Ecological analysis of the flora & fauna, Structure and Development of vegetation around the water bodies.

Identification and assessment of the impact of project activities and its Interactions with the aquatic ecosystem

Document major human interventions in the aquatic ecosystem other than the project activities.

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Characteristics of water bodies: Qualitative or Quantitative aspects of Fish and Fisheries, Vertebrates, Invertebrate, Phytoplankton, Zooplankton, Ichthyofauna, Macrophytes and Benthic organisms.
 # Analysis of water quality parameters in all major water bodies (physical, chemical and biological), which is significant, important & bio indicators for assessment of the ecology of the aquatic ecosystem.
 # Identify important parameters, Bio-indicators & establish its relationship with the organism
 # Preparation of site-specific mitigation measures, Protection & Conservation Plan to protect the aquatic ecosystem of the study area.
 # Preparation of detail long term ecological monitoring program for aquatic ecosystem.

Notes: Study shall be done in all three season and an action plan shall be prepared in consultation with the Engineer-in-Charge (EIC) before start of the study.

9) STAGE-A: ESTABLISHMENT OF BASELINE CONDITIONS: PRIMARY DATA COLLECTION/MONITORING SCHEDULE:

(a) Aquatic Ecosystem-Water Quality :

(I) Physical Parameters:

pH, Temp., TS, TDS, TSS & conductivity : IN All Major Water Bodies : Once in each season: [Pre-monsoon (summer), monsoon and winter]

(II) Chemical Parameters:

Total Dissolved Oxygen, Alkalinity, Acidity, Hardness, BOD, COD, NO₃, PO₄, Cl, SO₄, Na, K, Ca, Mg, Silica, oil & grease etc. : IN All Major Water Bodies : Once in each season: [Pre-monsoon (summer), monsoon and winter]

(III) Bacteriological

MPN and Total coliform: IN All Major Water Bodies : Once in each season: [Pre-monsoon (summer), monsoon and winter]

(IV) Heavy metals (As, Hg, Pb, Cd, Cr-6, total Cr, Cu, Zn, Se, Fe) : IN All Major Water Bodies : Once in each season: [Pre-monsoon (summer), monsoon and winter]

(b) Soil Sediment:

(I) pH, conductivity, cation exchange capacity; Total N, P, K, Mercury, sand, silt and clay etc : IN All Major Water Bodies : Once in each season: [Pre-monsoon (summer), monsoon and winter]

(c) Aquatic Ecosystem:

(I) Flora & Fauna which includes aquatic animals, Vertebrates, Invertebrate Phytoplankton, Zooplankton, Ichthyofauna, Macrophytes and Benthic organisms etc. (micro, meo and macro benthos) : IN All Major Water Bodies : Once in each season: [Pre-monsoon (summer), monsoon and winter]

(d) Terrestrial Ecosystem:

(I) Flora & Fauna Species, which includes Forestry & Non-Forestry Species, Density, Diversity etc : IN All Major terrestrial ecosystem: Once in each season: [Pre-monsoon (summer), monsoon and winter]

DETAILED TECHNICAL SPECIFICATION IN WORD FORMAT HAS BEEN ATTACHED.

Payment Terms & Conditions:

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c) Third Installment: Rs. 9.545 Lakh at the beginning of Second Year

Other Terms & Condition:

- a) CAR Policy shall not be applicable to this work.
- b) Total Contract/ Work Period: 15 Months

Prepared By:
SANDEEP MURMU

List of Documents

Please note that below documents are needed to be provided along with Invoice.

S.No.	Document Description
1	Invoice

NTPC VENDOR PAYMENT PORTAL & PAYMENT PROCEDURE

1. For all the cases where payment documents are to be directly submitted to NTPC (excluding Payment through Bank cases), the Invoice and supporting document(s) as required in the Purchase Order have to be Digitally Signed with class II or III digital signature and uploaded in the **&gv_cocd&** Vendor Payment Portal <https://pradip.ntpc.co.in/VendorFinal/Login.jsp>.

In such cases, there will be no requirement of physical copy of invoice & documents except for Lorry Receipts (LRs)/ Delivery Challan, which are normally sent along with the material/ transporter. Bank Guarantees to be sent in original wherever applicable.

2. From 01.01.2020, NTPC will accept only digitally signed Invoice & supporting documents from Vendors for direct payment cases. Submission of documents in physical form shall not be accepted by NTPC unless otherwise asked for in the PO.

For such cases of physical submission, Vendors are required to send complete set of documents including invoice etc. addressed to the "Invoice Receipt Center" of the Delivery/ Invoicing Address as mentioned in the Purchase Order Annexure 1/ BOQ Sheet.

While submitting the Invoice/ Bills & related documents in physical form, Vendors are required to mention the following details on the top of the envelope:

- a. Invoice/Bill reference No.
- b. **NTPC PO No./ Package no.**
- c. **NTPC Vendor Code as per PO**

In addition to above, vendors are requested to mention their correspondence E-mail & Mobile No. in the Covering Letter, through which invoice processing related information/clarification request may be sent.

3. Vendors can track / monitor the status of payments from the Vendor payment portal. Help documents are available in the portal. Vendors are requested to make full use of the Vendor Payment Portal.

4. For payment cases through bank, all original documents are to be submitted in bank as per terms of PO.

Alternate Mode of Payment for Micro Small & Medium Enterprises (MSMEs):

Trade Receivables Discounting System (TReDS) is a regulatory framework put in place by the Reserve Bank of India under the Payment and Settlement Systems Act 2007 (PSS Act) to facilitate the financing of trade receivables (invoices) of MSMEs through invoice financing by multiple financiers.

The Reserve Bank of India has granted approval to Mynd Solutions Pvt Limited, A.TREDS Ltd and Receivables Exchange of India Ltd (RXIL) to set up and operate TReDS platforms. The Respective TReDS platforms names of the above-mentioned entities are M1xchange, Invoicemart and TREDS.

Currently NTPC Limited is transacting with M1xchange and RXIL TReDS platforms. MSME Vendors may choose the TReDS platforms as an alternate payment mechanism.

For queries/ details, the vendor may directly contact M1xchange or RXIL at:-

M1XCHANGE:-

URL: <https://m1xchange.com>
Toll free No.: 1800-103-7261

RXIL:-

URL: <https://www.rxil.in/Home/Index>
Phone: 022-40771424, 40771426
Toll free No.: 1800 1038 311

Vendor must ensure the delivery of material and service before uploading invoices at TReDS portal for discounting. After uploading invoices on TReDS portal, vendor has to upload invoices on NTPC payment portal in case of Non-GeM contract and in case of GeM Contract invoices shall be uploaded on GeM portal, immediately. All relevant documents required for processing of payments as per P.O/Contract terms and conditions shall be made available by the Vendor along with the invoice.