**Annexure-I**

 Payment terms & billing schedule:

|  |  |  |  |
| --- | --- | --- | --- |
| Item Ref. of Work Order | DESCRIPTION | UNIT | QTY |
| 10/10 | Details feasibility study, make-up water adequacy study and recommendations, system adequacy & fluid dynamic study, Design, detail engineering, procurement, providing, fabrication, inspection, transportation, handling, storage, erection, construction, testing and commissioning of induced draft counter flow RCC Cooling Tower of capacity 2625 to 2500 m3/Hr, Cooling tower basin, Extension of cold water basin channel to connect to existing basin channel, Extension of cooling water sump, Supply, installation & commissioning of additional cooling water pump of 3500 m3/ Hr capacity, all related pipe works. Structured RCC section consists of columns, grits, diagonal bracings, lacings, partition panels, walk way assembly, cat walk, ladder, walk way, Hardware, louvers, etc. all complete. Refer Additional Conditions of Contract for broad scope of work.  | EA | 1 |
| **Weightage Breakup of total Price considered 100% for Item 10/10 of Work Order** |
| **Item Description** | **% Weightage** |
| 1. Detail feasibility study for a new cell of Cooling Tower of Capacity 2625 to 2500 m3/hr to be integrated with the existing Cooling tower. Study includes
2. Make-up water adequacy study and recommendations.
3. System adequacy study and recommendation
4. Fluid dynamic study and recommendation
* 100% Payment against submission of all the reports of the above 03 studies.
 | 1% |
| 2. Design & Engineering: Submission of drawings/ documents/ data sheets/ calculations etc. Payment shall be released after approval of submittals by E-I-C. Break up of payment are as below:* 20% on submission of all Drawings and Engineering details.
* 20% on Review and approval of the submittals
* 20% on Mechanical completion of the project
* 20% on successful Commissioning of the project
* 20% on successful PERFORMANCE GUARANTEE TEST RUN and issuance of PROVISIONAL ACCEPTANCE CERTIFICATE.
 | 2% |
| 1. Supply of materials along with test certificates, data sheet, Invoice Reference number and other related documents

Break up of payment are as below:* 40% on receipt of material as site along with test certificates, IRN & acceptance
* 20% on mechanical completion
* 20% on successful Commissioning of the PLANT.
* 20% on successful PERFORMANCE GUARANTEE TEST RUN & Acceptance
 | 17% |
| 1. Construction, Erection & Commissioning of the project.

Break up of payment are as below:* 80% on execution of work, on pro-rata basis. (As per Form SP-6)
* 10% on successful COMMISSIONING of the plant
* 10% on successful PERFORMANCE GUARANTEE TEST RUN and ACCEPTANCE
 | 80% |
| 1. Performance acceptance testing and submission of final documents
 | Release of payment as per terms & condition above.  |
| 1. On submission of final documentation including all as-built drawings, documents etc. along with final bill.
 |

**Annexure-I**

**PREAMBLE TO SCHEDULE OF PRICES**

**SUBJECT:** **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

1. Bidder’s quoted prices shall be strictly as per various FORMS included under Schedule of Prices. Bidder shall quote LUMP SUM PRICE for entire scope of work including Study, Design and Engineering, procurement and supply, construction and commissioning in FORM SP-‘0’. Bidder shall furnish break up of LUMP SUM PRICE separately for Study, Design& Engineering (FORM SP-1), Procurement and Supply (FORM SP-2); and Construction & Installation (FORM SP-3). Bidder shall furnish further break up of lump sum prices as per Form SP-4, SP-5 and SP-6.
2. The LUM SUM PRICE AS PER FORM SP-0 shall be considered as Contract Price/ Contract Compensation, which Owner agrees to pay and the Contractor agrees to accept as full compensation for the Contractor’s full performance of the Work in accordance with the provisions of the Contract Documents. Contract Price shall not be subjected to any adjustment except in case of Change Order or statutory variations or price escalations (as per Clauses of SCC) in accordance with the provisions of the Contract.
3. The price quoted shall be lump sum price on turnkey basic. Unless the basic parameter changes or additional/ extra requirements are made, total payments to be made to the contractor shall be limited to lump sum price indicated, irrespective of the progressive payments made during execution based on the split up of price.
4. Obligation of the Contractor is not limited to the quantities that the Contractor may either indicate in the Schedule of Breakup of Lump sum Prices along with his bid or in further detailed break of lump sum prices furnished along with the bid or after award of work. Contractor shall carry entire scope of work/supplies as detailed in various sections/volumes of the Bidding Document within the quoted Lump sum Price (Contract Price).
5. Lump sum Prices quoted by the Bidder shall include cost of any other supplies/work(s) not specifically mentioned in the Bidding Document but necessary for the efficient, trouble free operation of the Plant and to make this package job complete.
6. Bidder to note that breakup of lump sum price is for interim payment purposes only and total price payable under the Contract shall be restricted to the Lump sum Price/Contract Price.
7. The Price for Design & Engineering Component quoted in FORM-SP1 shall not exceed **5% of the Total Lump sum Price**.
8. The Price for Design & Engineering Component (FORM-SP1) and Supply component (FORM-SP2) shall not exceed **40% of the Total Lump sum Price.**
9. Spares for start-up/commissioning required are in CONTRACTOR's scope and are included in their above quoted Lump sum Prices.
10. In case of any contradiction between lump sum price mentioned in SP-0 and breakup of lump sum price mentioned in SP-1, SP-2, SP-3, SP-4, SP-5, SP-6, precedence shall be applicable in the following order:
	1. SP-0;
	2. SP-1, SP-2, SP-3;
	3. SP-4, SP-5, SP-6;
11. INR = Indian Rupees

# SIGNATURE OF BIDDER: ………………………………………………………..

**STAMP OF BIDDER’S ORGANIZATION:**

**DATE: ………………………………………….**

TOTAL LUMPSUM PRICE

FORM SP-0

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | Indian Rupees |
| In figure | In words |
|  | Total lump sum price on turnkey basis. Details feasibility study, make-up water adequacy study and recommendations, system adequacy & fluid dynamic study, Design, detail engineering, procurement, providing, fabrication, inspection, transportation, handling, storage, erection, construction, testing and commissioning of induced draft counter flow RCC Cooling Tower of capacity 2625 -2500 m3/Hr, Cooling tower basin, Extension of cold water basin channel to connect to existing basin channel, Extension of cooling water sump, Supply, installation & commissioning of additional cooling water pump of 3500 m3/ Hr capacity, all related pipe works. Structured RCC section consists of columns, grits, diagonal bracings, lacings, partition panels, walk way assembly, cat walk, ladder, walk way, Hardware, louvers, etc. all complete. Refer Additional Conditions of Contract for broad scope of work. | LUMPSUM |  |  |

Signature of bidder

**Bidder to note that breakup of lump sum price is for interim payment purposes only and total price payable under the Contract shall be restricted to the Lump sum Price/Contract Price.**

FORM SP-1

BREAK-UP OF LUMPSUM PRICE

(Item No 1. Study, Design Engineering)

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | Indian Rupees |
| In figure | In words |
| 1 | Details feasibility study, make-up water adequacy study and recommendations, system adequacy & fluid dynamic study, Design & Engineering: Submission of reports/ drawings/ documents/ data sheets/ calculations etc. (payment after approval of submittals by E-I-C).  | LUMPSUM |  |  |

Signature of bidder

FORM SP-2

BREAK-UP OF LUMPSUM PRICE

(Item No 2. Supply of Equipment & Materials)

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | Indian Rupees |
| In figure | In words |
| 2 | Supply including - procurement services of all equipment/ materials **(other than supply of materials for civil construction, structural works and general civil works**) ; including all material required for fabrication and transportation, commissioning spares, spares for start-up/ pre-commissioning/ commissioning, consumables required for completing and establishing a fully functional and operative cooling tower under this tender. Transportation, receipt, accounting, storing & preservation of material including all other activities incidental to procurement and supply, complete as per scope of work / supplies detailed in bidding document, drawing, specification and other provision of bidding document and as per direction of engineer in charge. All these equipment / materials to reach at NRL site in good conditions along with test certificates, TPI certificates, IRN & acceptance.  | LUMPSUM |  |  |

Signature of bidder

FORM SP-3

BREAK-UP OF LUMPSUM PRICE

(Item No 3.Construction & Installation)

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | Indian Rupees |
| In figure | In words |
| 3 | Construction, Erection & Commissioning. This includes Construction, fabrication, erection, installation, testing, mechanical completion, pre-commissioning, commissioning, supply of materials (such as civil, structural, general civil which is not included in SL No. 2 above.) required for completing and establishing a fully functional and operative cooling tower under this tender, any balance field engineering, deployment of manpower, tools & tackles, providing construction aids and safety devices for construction, all complete as per bid document and direction of Engineer In Charge.  | LUMPSUM |  |  |

Signature of bidder

**FURTHER BREAK-UP OF PRICE**

 FORM SP-4

BREAK-UP FOR 1.0 STUDY, DESIGN & ENGINEERING

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | INDIAN RUPEES (IN FIGURE) |
| 1.1 | Feasibility study for: 1. Cooling Tower make-up water adequacy study & recommendation
2. System adequacy study & recommendation
3. Fluid dynamic study & recommendation
 | LUMPSUM |  |
| 1.2 | Basic Design engineering  | LUMPSUM |  |
| 1.3 | Detailed engineering and submission of reports/ drawings/ documents/ data sheets/ calculations etc. and get approval of submittals from EIC.  | LUMPSUM |  |
| TOTAL |  |

Signature of bidder

BREAK-UP FOR 2.0 SUPPLY OF EQUIPMENTS/MATERIALS

FORM SP-5

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | INDIAN RUPEES (IN FIGURE) |
| 2.1 | Supply of equipments / materials (Other than material for civil, structural, general civil works, which will be included in SLNo 3). | LUMPSUM |  |
| 2.2 | Fans for cooling tower with drives.  | LUMPSUM |  |
| 2.3 | Gear reducers  | LUMPSUM |  |
| 2.4 | Cooling water pump with motor  | LUMPSUM |  |
| 2.5 | “Fill materials” for Cooling Tower.  | LUMPSUM |  |
| 2.6 | All piping material including pipes, valves, flanges, fittings, fasteners, gaskets and other materials as required for the entire package.  | LUMPSUM |  |
| TOTAL |  |

Signature of bidder

FORM SP-6

BREAK-UP FOR 3.0 GENERAL CONSTRUCTION, ERECTION, COMISSIONING (CIVIL STRUCTURAL WORKS INCLUSIVE OF SUPPLY OF MATERIAL, INSTALLATION ETC)

SUBJECT: **NEW COOLING TOWER CELL, COOLING WATER PUMP AND ASSOCIATED FACILITIES**

Bidding document No: NRL/IHP/CT/2020.

|  |  |  |  |
| --- | --- | --- | --- |
| SL No | Description | Unit of Measure | INDIAN RUPEES (IN FIGURE) |
|  | GENERAL CIVIL, STRUCTURAL WORKS INCLUSIVE OF SUPPLY OF ASSOCIATED MATERIALS INCLUDING (Which is not covered in item 2 above) |  |  |
| 3.1 | Cooling water basin, channel and staircase. | LUMPSUM |  |
| 3.2 | Main supporting structure | LUMPSUM |  |
| 3.3 | Hot water distributor system  | LUMPSUM |  |
|  | INSTALLATION |  |  |
| 3.4 | Installation of Fan gear reducer, drivers and auxiliaries.  | LUMPSUM |  |
| 3.5 | Fill material | LUMPSUM |  |
| 3.6 | Piping works | LUMPSUM |  |
| 3.7 | All electrical & instrumentation works | LUMPSUM |  |
| 3.8 | Pre-commissioning & commissioning of Cooling Tower cell | Included |  |
| 3.9 | The above items also includes minor materials for mechanical equipment, electrical, instrumentation which are required with site installation activities | Included |  |
| 3.10 | Inland transportation (including clearing, forwarding, loading, unloading, packing and handling for trans-shipment) | LUMPSUM |  |
| Note: | The breakup prices given above are exclusive of supply materials covered in point 2 above in “supply of equipment/material” but are inclusive of material civil structural, general civil etc.  |  |  |
| TOTAL |  |

Signature of bidder