

## A – GENERAL

### 1.1 Invitation to Bid

Sealed bids are hereby invited for and on behalf of the Punatsangchhu-II Hydroelectric Project Authority (PHPA-II) from experienced, reputed, competent and financially sound Indian and Bhutanese Contractors/Companies/Firms fulfilling eligibility and qualification requirements specified in the Bidding Documents for the below mentioned Work of Punatsangchhu-II Hydroelectric Project (990 MW) located in Wangdue Phodrang District of Bhutan approx. 80 km. from Thimphu, the Capital of Bhutan.

#### 1.1.1 Scope of Work

The Work which will be put to bid and its approximate value is given as under:

Contract Package Number	Name of Work	Approximate Estimated Value in Nu./Rs. Million	Bid Security Nu./Rs. Million	Period of Completion in months
C-1	Construction of Diversion Tunnel, Dam, Intake, Desilting Arrangement including Hydro-mechanical Works and Highway Tunnel.	13780	50	66

Generally, this Contract comprises, but is not necessarily limited to Work and responsibilities associated with the construction and performance by the Contractor of the following principal features, all of which are described in detail in the Bidding Documents and are summarized herein for convenience:

#### A. River Diversion Works

- (i) Construction of 1 no. Diversion Tunnels, 12m dia. circular and length 783.00m on left bank of river Punatsangchhu.
- (ii) Construction of inlet and outlet portals of diversion tunnel.
- (iii) Construction of 1 no. intermediate adit 7.5m x 7.5m, D-shaped, 131m long

- (iv) Drilling holes for grouting, rock bolting, drainage and probing etc.
- (v) Rockbolting, shotcreting and grouting.
- (vi) Dewatering during construction.
- (vii) Concrete lining of diversion tunnel.
- (viii) Design, fabrication, supply, erection, testing and commissioning of 2 nos. gates each of size 5m x 12m for diversion tunnel at inlet portals.
- (ix) Construction of upstream and downstream, coffer dams for the diversion of river Punatsangchhu including permeation/jet grouting.
- (x) Plugging of intermediate adit and diversion tunnel.

**B. Dam**

- (i) All excavation and concreting works of concrete gravity dam, 86m high, 213.50m long at the top.
- (ii) Providing and fixing water stops.
- (iii) Rockbolting and shotcreting for slope stabilization.
- (iv) Drilling holes for drainage, consolidation and curtain, grouting, rock bolting, probing and instrumentation etc.
- (v) Grouting
- (vi) Laying of stone wire crates, stone pitching, stone masonry etc.
- (vii) Dewatering during construction.
- (viii) Plugging of drift(s) excavated in the abutments for investigation purposes.
- (ix) Design, fabrication, supply, erection, testing and commissioning of 1 no. (one) Vertical lift fixed wheel type gate of size 4m x 4m for auxiliary spillway and 7 nos. (seven) radial gates (size 8m x 13.20m) for sluice spillway including embedments and hoists with supporting structures complete.

**C. Intake Structure**

- (i) All open excavation and concreting works for four intakes.
- (ii) Rockbolting and shotcreting for slope stabilization.
- (iii) Construction of four intake tunnels for conveying water to desilting chambers.
- (iv) Providing and fixing water stops.

- (v) Drilling holes for grouting, rock bolting, probing instrumentation etc.
- (vi) Rockbolting, shotcreting and grouting.
- (vii) Dewatering during construction.
- (viii) Providing and fixing in position, trash racks.
- (ix) Design, fabrication, supply, erection, testing & commissioning of 4 nos. (four) (size 5.5m x 6.4m) vertical lift fixed wheel type gates and 1 set (one) vertical lift fixed wheel emergency gate (size 5.5m x 6.4m) including embedments and hoists with supporting structures complete.

**D. Desilting Arrangement**

- (i) All open excavations and concreting works.
- (ii) Construction of four underground desilting chambers each of 420m length, 19m width at the centre and height 24.70m, having arc shape roof, hoppers at the bottom and collection trench in the centre of each chamber running along the length.
- (iii) Construction of 47.853m long transitions at the start of each desilting chamber from the intake tunnel section to 19m wide chamber.
- (iv) Construction of 22.419m long transitions at the end of each desilting chamber.
- (v) Construction of silt flushing tunnel(s) of size 5.1m x 5.5m, D-Shape, length 300m.
- (vi) Construction of gate shafts for silt flushing tunnels.
- (vii) Construction and maintenance of 7m x 7m D-shaped, 120.6m long adit bifurcating into two adits of 7m x 7m D-Shaped adits of length 385.5m and 343.5m to reach at top and hopper portions of the chambers.
- (viii) Construction and maintenance of 7m x 7m, D-shaped, 452m long access tunnel for gate chambers.
- (ix) Construction of four gate shafts for link tunnels.
- (x) Providing and fixing water stops.
- (xi) Drilling holes for grouting, rock bolting, probing and instrumentation etc.
- (xii) Supporting system including steel supports, rockbolting and shotcreting (fibre reinforced/plain)
- (xiii) Grouting.
- (xiv) Dewatering during construction.
- (xv) Plugging of adit(s).

- (xvi) Design, fabrication, supply, erection, testing and commissioning of 4 nos. (four) vertical lift gates (size 5.0m x 6.40m) for desilting chambers and 4 nos. (four) vertical lift slide gates (size 3.60 m x 2.50 m) for silt flushing tunnels including embedments and hoists with supporting structures complete.

**E. Highway Tunnel**

- (i) A 1500m long of size 11m x 7.48m, D-Shaped Concrete lined Highway Tunnel on the right bank of Punatsangchhu river to facilitate the traffic flow on National Highway
- (ii) Supporting system including steel supports, rockbolting and shotcreting (fibre reinforced/plain)
- (iii) Drilling holes for grouting, rock bolting, drainage, probing, instrumentation etc.
- (iv) Grouting.
- (v) Concrete Lining.
- (vi) Dewatering during construction.
- (vii) Protection works, wherever required.

The estimated quantities for various items of Work detailed above are given in Vol. III “Bill of Quantities” of these documents.

All materials, labour, tools and plant and services necessary for accomplishing the Works of all the features detailed above shall be provided by the Contractor subject to provision mentioned under para 1.2.

The Contractor shall provide assistance to the Engineer-in-Charge for conducting rock mechanics tests and for installing and monitoring of instruments, wherever required. The labour, materials and Constructional Plant of the Contractor, if used by the Engineer-in-Charge for this will be paid at mutually agreed rates.

**1.2 Equipment/Materials/Camps**

1.2.1 Notwithstanding the provisions under para 1.1.1 hereinabove, the PHPA-II will provide to the Contractor at its stores/site, on outright sale, the following construction equipment

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at the cost indicated there against. The equipment sold to the Contractor by the PHPA-II shall be new and the Contractor shall be responsible for the insurance of such equipment till its cost is recovered from the Contractor by the PHPA-II. The cost of such equipment shall be treated as part of advance against Constructional Plant, the recovery of which shall be affected as per Clause – 60 of General Conditions of Contract contained in Chapter – III of this document. The details of the equipment are as under;

<b>Sl. No.</b>	<b>Construction Equipment</b>	<b>Quantity. (Number)</b>	<b>Remarks</b>
1	2 Boom Hydraulic drill jumbo	2	Make, Broad Specifications and Cost of the Construction Equipment enclosed at Annexure-X
2	i) Hydraulic Excavator having bucket capacity 1.5m <sup>3</sup>	1	
	ii) Hydraulic Excavator having bucket capacity 2.2m <sup>3</sup>	1	
3	Wheel Loader with side dump, bucket capacity 2.5m <sup>3</sup>	2	
4	Tippers, 6m <sup>3</sup> capacity	4	
5	Transit Mixer, 6m <sup>3</sup> capacity	3	
6	Shotcreting machine (wet type) 30m <sup>3</sup> /hr. capacity	1	
7	Electric Air Compressors 500 cfm Screw Type	2	
8	Transformer(s) 11/0.433 kV, 630 KVA	1	
9	Dumper, 25T capacity	8	
10	Lining shutter 2x15m with traveler, 12m dia.	1 set	
11	One set of concrete shutter (2 x 15m), 11m dia. with traveler suitable for lining of Highway Tunnel will be handed over to the Contractor by PHPA-II. The usage charges for this shutter shall be Rs. 10 million. After lining of the Highway Tunnel, the	1 set	

Contractor shall handover the shutter to PHPA-II in good working condition. The above usage charges shall be treated as an advance against CPA to be recovered as per Clause – 60 of GCC

- 1.2.2 The PHPA-II will assist the Contractor to procure at the Contractor’s cost, the explosive materials from the State Trading Corporation of Bhutan (STCB), Phuentsholing during currency of the Contract at STCB’s rates from time to time. Supplies will be availed from Explosive Magazine(s) of 50/100 MT capacity near the Project Site at Habesa (18 Km from Wangdue bridge). The Contractor shall be responsible for safe transportation of the explosive material drawn from the above magazine, safe custody in the site magazine and transportation to work site at his cost. The Contractor shall observe all rules regarding handling of such materials as per provision under Chapter-IV of Vol.-II (Technical Specifications).

For information of the Contractor, the current rates of explosive materials supplied by the STCB at the magazine in the Project area are given hereunder;

<b>Sl. No.</b>	<b>Description of Explosive Material</b>	<b>Unit</b>	<b>Rate (Nu.)</b>
1	Emuldyne	MT	61126.12
2	Toeblast (83mm)	MT	46976.30
3	D-Cord II	Per 1000 mtrs.	5802.30
4	Safety Fuse	Per 1000 mtrs. Per Coil	5491.90 60.00
5	LDD (5 M) Long Wire	Per 1000 nos.	15972.11
6	LDD (3 M) Long Wire	Per 1000 nos.	13185.54
7	SED (1.8 M Long Wire)	Per 1000 nos.	8137.42
8	Ordinary Detonator/SOD	Per 1000 nos.	51225.83
9	Powerdet LD 5m Delay 1-15	Per 1000 nos.	71091.75
10	Ordinary detonator	Per 1000 nos.	51225.83
11	Exel MS Det 3m	Per 1000 nos.	64555.00

12	Exel MS Det 4m	Per 1000 nos.	85646.00
13	Exel MS Det 5m	Per 1000 nos.	106737.00
14	Exel MS Det 6m	Per 1000 nos.	127828.00
15	Exel MS Det 7m	Per 1000 nos.	150205.00
16	Exel MS Det 8m	Per 1000 nos.	171292.00
17	Exel MS Det 9m	Per 1000 nos.	192383.00
18	Exel MS Det 10m	Per 1000 nos.	213474.00
19	Exel MS Det 15m	Per 1000 nos.	318928.00
20	Exel MS Det 20m	Per 1000 nos.	424383.00
21	Exel HTD 3m	Per 1000 nos.	64555.00
22	Exel HTD 4m	Per 1000 nos.	85646.00
23	Exel HTD 5m	Per 1000 nos.	106737.00
24	Exel HTD 7m	Per 1000 nos.	150201.00
25	Exel HTD 8m	Per 1000 nos.	171292.00
26	Exel HTD 10m	Per 1000 nos.	213478.00
27	Exel MS Connector	Per 1000 nos.	192186.00
28	SED 1.8mm	Per 1000 nos.	8137.42
29	Powergel C 83mm	Per MT	41835.46
30	Powergel 801 (25mm -40mm)	Per MT	62231.59
31	Powergel 25mm Dia	Per MT	62231.59
32	Powergel 32mm Dia	Per MT	62231.59
33	Powergel 40mm Dia	Per MT	62231.59
34	NED 5 m Delay No.1 TO 15	Per 1000 nos.	71091.75
35	NED 3 m	Per 1000 nos.	42856.42
36	Underground (UG) Bulk explosive	Per MT	76723.00
	Services per Tunnel Charging Unit (TCU)	Per TCU	450000.00

The above rates are exclusive of Central Excise Duty and Bhutan Sales Tax.

1.2.3 A part of Site camps, labour sheds and stores etc. (Approximately 1740m<sup>2</sup> covered area) constructed by the PHPA-II to facilitate initial mobilization shall be handed-over to the Contractor on cost recoverable basis @ Nu./Rs. 11500/- (Nu./Rs. Eleven thousand five hundred) per m<sup>2</sup> of the covered area. The cost on account of providing such facility shall be treated as a part of Mobilization advance, recovery of which shall be effected as per provisions of Clause – 60 of the General Conditions of the Contract.

### **1.3 Eligibility and Qualification Requirements (EQR)**

1.3.1 The bidder should have a proven track record of completing successfully and timely major civil engineering Works pertaining to dam/weirs/barrages and underground construction. The invitation to bid is open only to the eligible Indian/Bhutanese Contractors/Firms/Companies who fulfill the following criteria;

- The bidder should have carried out successfully Works of similar nature and magnitude.
- The bidder should have successfully completed construction of a concrete gravity dam of at least 45m height or a weir/barrage involving 1,75,000m<sup>3</sup> of concreting during the last 10 years as on last date for sale of Bidding Documents.
- The bidder should have successfully carried out concrete lined tunnel works of at least 2km total length with 7m and above excavated diameter during the last ten years.

or

The bidder should have executed at least two caverns of minimum 14m width.

- The bidder should have achieved an annual progress of 100,000m<sup>3</sup> of concrete placement in a dam/weir/barrage, in the last ten years.
- The bidder shall submit documentary evidence to prove his competence/experience in respect of the works of similar nature and magnitude carried out by him successfully.



- The bidder shall have sufficient construction equipment/machinery to carryout the work and shall submit details of such equipments/machinery which he proposes to deploy on the work.
- The bidder shall submit details of works being executed by him presently.
- The bidder shall submit the details along with CV of the technically qualified personnel employed with him who are experienced and competent to execute such work.
- The bidder shall furnish along with their bid, list of sub-vendors / sub-contractors (atleast three) with whom they intend to tie up for hydro-mechanical works. The bidder shall undertake tie up with such firms who have proven experience in the design, manufacturer, supply and erection of hydro-mechanical equipment. The experience of each sub-vendors / sub-contractors proposed for the work shall be furnished with the bid. The sub-contractors / sub-vendors must have experience in design, fabrication and erection of Gates & Hoists of the types and sizes almost similar to those of Punatsangchhu-II Hydroelectric Project.
- The annual turn – over of the bidder from Civil Engineering Works during the last five years shall not be less than Nu/Rs. 2500 million.
- The bidder should have a working capital of Nu./Rs. 430 million.
- The bidder shall provide complete information as asked for in the formats EQR I to EQR VII for enabling the PHPA-II to assess his eligibility. Bids with incomplete information/details are liable to be rejected.

The bidder who fulfills the EQR will be considered as qualified by the PHPA-II whose decision in this regard will be final and without appeal. The PHPA-II will not be bound to give any reason for the acceptance or rejection of any bid on any account, whatsoever.

1.3.2 The bidders shall provide satisfactory documentary evidence of their eligibility under sub-para 1.3.1 above and of their capability and adequacy of resources to carry out the Contract effectively. The bidders shall update the information given at the time of purchase of Bidding Documents. The updated information shall make special reference to the nature and magnitude of current Works in hand, any change in legal or financial status or in organizational set up of the bidder or any other substantial change which is of relevance to the eligibility of the bidder for award of the Contract. The updated information shall also include the following:

- Details of the technically qualified personnel to be engaged by the Contractor in various shifts and sites.
- Details of the Constructional Plant alongwith their layout, rated capacity/output commensurate with the proposed progress to be achieved as per bar chart and the detailed methodology requested in Para 1.10. Further, a schedule of deployment of Constructional Plant shall be specifically indicated. The list of the Constructional Plant submitted by the bidder with his bid shall be a Contractual obligation with changes and substitutions subject to the approval of the PHPA-II.
- The bidder shall indicate whether he owns this Constructional Plant or proposes to purchase or hire the same and shall furnish proof that he shall be able to arrange this Constructional Plant whether from his own resources or on hire. The purchase orders in respect of the Constructional Plant proposed to be procured shall fructify within 60 days of the issue of the Letter of Award.

#### **1.4 Cost of Bidding**

The bidder shall bear all costs associated with preparation and submission of his bid and the PHPA-II shall in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

## **1.5 Site Visit**

- 1.5.1 The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into a Contract. The costs of visiting the Site shall be at bidder's own expense.
- 1.5.2 The bidder and any of his personnel or agents will be granted permission by the PHPA-II to enter upon its premises and lands for the purpose of such inspection but only upon the express condition that the bidder, his personnel or agents shall release and indemnify the PHPA-II and its personnel and agents from and against all liability in respect thereof and shall be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused, which, but for the exercise of such permission would not have arisen.

## **B – BIDDING DOCUMENTS**

### **1.6 Contents of Bidding Documents**

- 1.6.1 The Bidding documents together with any Corrigenda/Addenda thereto, issued in accordance with Para 1.8 and any Minutes of pre-bid Meeting issued in accordance with Para 1.16 will include the following:

<b>Sl. No.</b>	<b>Volume</b>	<b>Chapter</b>	<b>Contents</b>
1	I	I	Information and Instructions for Bidders
		II	Brief Description of the Project
		III	General Conditions of the Contract.
		IV	Additional Conditions of the Contract
		V	Model Rules for Health and Sanitary Arrangements for Contractor's Workmen.
		VI	Contractor's Labour Regulations.
		VII	Safety Precautions

## **Formats**

EQR-I	Format for Eligibility and Qualification Requirements (General)
EQR-II	Format for tunneling works completed successfully
EQR-III	Format for tunneling works presently under construction
EQR-IV	Format for Underground Caverns completed successfully
EQR-V	Format for Underground Caverns presently under execution.
EQR-VI	Format for Dam/Weir/Barrage works completed successfully
EQR-VII	Format for Dam/Weir/Barrage works presently under execution

## **Annex**

Annex-I	Proforma for Bank Guarantee for Bid Security
Annex-II	Proforma for Bid (To be enclosed with Price Bid)
Annex-III	Proforma of Agreement
Annex-IV	Proforma for Bank Guarantee for Performance Security
Annex-V	Proforma for Bank Guarantee for Advance for Mobilisation/Constructional Plant.
Annex-VI	Proforma for Hypothecation Deed for Advance for Constructional Plant.
Annex-VII	Proforma for Insurance of Constructional Plant
Annex-VIII	Schedule of Tariff for Electrical Energy
Annex-IX	Proforma for Requirement of Power Load
Annex-X	Construction Equipment to be provided by PHPA-II
Annex-XI	Proforma for Pre-Contract Integrity Pact

2	II A	Technical Specifications (For Civil Works)
3	II B	Technical Specifications (For Hydro-mechanical Works)
4	III	Bill of Quantities
5	IV	Drawings
6	V	Geo-technical Report

1.6.2 A complete set of Bidding Documents have been issued to the bidders who are prima-facie eligible for the purpose of bidding.

1.6.3 The bidder is expected to examine carefully all instructions, conditions, proforma, terms, specifications and drawings in the Bidding Documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk.

Pursuant to Para 1.25 hereof, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

## **1.7 Clarification of Bidding Documents**

A prospective bidder requiring any clarification of the Bidding Documents may notify the Chief Engineer, Punatsangchhu-II Hydroelectric Project Authority, Phuentsholing, Bhutan in writing or by fax (fax no. +975-5-251350) who will respond in writing or by fax to any request for clarification which he receives earlier than forty five days prior to the deadline for the submission of bids.

Written copies of the Chief Engineer's response (including a description of the inquiry but without identifying its source) will be sent to all prospective bidders who have purchased the Bidding Documents.

## **1.8 Amendment of Bidding Documents**

- 1.8.1 At any time prior to the deadline for submission of bids, the PHPA-II may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by the issuance of an Corrigendum/Addendum.
- 1.8.2 The corrigendum/addendum will be sent in writing or by fax to all prospective bidders who have purchased the Bidding Documents and will be binding upon them. Prospective bidders shall promptly acknowledge receipt thereof by fax to the PHPA-II.
- 1.8.3 In order to afford prospective bidders reasonable time in which to take an corrigendum/addendum into account in preparing their bids, the PHPA-II may, at its discretion, extend the deadline for the submission of bids in accordance with Para 1.19. A minimum period of three weeks will be provided to enable bidders to assess the implications of the Corrigenda/Addenda.

## **C – PREPARATION OF BIDS**

### **1.9 Language of Bid**

The bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the bidder and the PHPA-II shall be written in the English language.

### **1.10 Documents Comprising the Bid**

- (i) The bid to be prepared by the bidder shall be on two envelope basis and shall comprise Proforma of Bid, the Bid Security, the Bill of Quantities, the Schedules of Supplementary Information, if any, the information on eligibility and qualification requirements and any other materials required to be completed and submitted in accordance with the instructions to bidders embodied in these Bidding Documents. The Proformae, Bill of Quantities and Schedules provided in

these Bidding Documents shall be used without exception. (Subject to extension of Schedules in the same Proforma and to the provisions of para 1.14.2 regarding the alternative forms of bid security).

- (ii) The bidder shall, in addition submit;
- details of the technically qualified personnel and the Constructional Plant as in Para 1.3.2 hereof.
  - preliminary programme for completion of the Works indicating the order in which he intends to carry out the Works in the form of bar chart. This programme shall abide by the limit dates specified in the Contract and shall constitute the basis to prepare the detailed programme to be furnished according to Clause – 14 of Chapter – III of these documents. The programme shall provide a clear description for the Temporary Works, locations and type of permanent installations and other infra-structural/job facilities etc.
  - detailed method statement justifying the methodology of execution proposed by the bidder.
  - detailed description alongwith drawings of the construction camps for employees of the Contractor indicating his proposals for fulfilling the requirements laid under Clause – 34 of Chapter – III of these documents. The description shall also include, sanitary installations, raw water and sewage treatment, kitchens, recreation facilities, first aid provisions, type of construction materials to be used for the camps, intended layout and arrangement of streets, parking facilities and fencing etc. The Contractor shall also comply with the provisions under Chapter – V of this document.
  - break down of lump sum prices, if any, in the Bill of Quantities

- the total requirements of the estimated power load in KW and the requirements on each site as per Annex – IX.

## **1.11 Bid Prices**

1.11.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole Work as described in Para 1.1.1 based on the schedule of unit rates and prices submitted by the bidder.

1.11.2 The rates and amounts shall be quoted in decimal in such a manner that no interpolation is possible. The rates shall be written both in words and figures. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.

1.11.3 The bidder shall fill in rates and prices for all items of Works described in the Bill of Quantities. Where quantities of items of work are given in Lump Sum (LS), the bidder shall submit detailed break of LS costs entered in the Bill of Quantities for such items. The detailed break up shall be submitted with the Bid.

1.11.4 The Royal Govt. of Bhutan (RGoB) shall receive from the Contractor royalty for the timber, boulders, aggregates and other Construction materials required from Bhutan for the Project.

The Royal Government of Bhutan shall exempt taxes, levies/duties for Plant, Construction materials & equipment, machineries and services imported for direct use in the construction of the Project until the date of commercial operation/Project completion. Any procurement made under tax exemption basis shall be liable for tax payment as per the Tax Act of the RGoB if disposed off in Bhutan. However, Contractor or Sub-Contractor recruited in connection with the Project shall be liable for payment of Contractor's Tax in lieu of income tax as per Income Tax Act of Bhutan, 2001.

Royal Government of Bhutan shall exempt Bhutan Sales Tax (BST) on;

- a) Vehicle such as tippers, trucks, dumpers, plants and machinery.



- b) 95% of POL/HSD purchased.
- c) All kinds of spare parts, electrical items and M.S. pipes, workshop materials, hardware items and all other items which are categorized as direct input to the project.

The contractor shall however be liable to pay BST on inspection vehicles and related spare parts, stationeries, office equipment and furniture, household items, hardware items used for office and labour camps, sport equipment and furniture, other items of consumable in nature, imports for canteens and items brought by the Contractor for personal use of his personnel.

The Govt. of India shall exempt from central excise duty any material/equipment exported to Bhutan for the Project.

The Contractor shall avail exemption of central excise duty at source for materials / equipment brought to the Project. In case exemption at source is not available and the Contractor, if required to do so shall pay the central excise duty in respect of such material/equipment and the PHPA-II will reimburse the said duty to the Contractor on production of documentary evidence in proof of having paid the duty and the PHPA-II shall seek refund from the GoI. The above re-imbursements shall be made at actuals without considering any overheads and profits.

At the time of export of Constructional Plant (CP) to India, the PHPA-II shall recover from the Contractor, a part of the Central Excise Duty as reimbursed at the time of import of such CP as per the following formula;

$$\begin{array}{l}
 \text{Amount to be recovered} \quad \text{Excise Duty reimbursed} \quad \text{Depreciated value of the} \\
 \text{from the Contractor} \quad = \quad \text{at the time of Import} \quad \times \quad \text{CP} \\
 \text{-----} \\
 \text{Original Value of the CP at the time of import.}
 \end{array}$$

The Contractor shall himself be responsible for payment of a part of central excise duty to Indian Custom Authority at Land Custom station on the depreciated value of the

equipment for which exemption at source has been availed by the Contractor, at the time of export of such equipment to India. The Contractor shall also be responsible for payment of Custom Duty to Indian Custom Authority at the time of export of the equipment which is imported to the Project directly from third countries.

1.11.5 The rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause-70 of Chapter – III of this document.

## **1.12 Currencies of Bid and Payment**

1.12.1 The unit rates and prices shall be quoted by the bidder entirely in Ngultrum/Indian Rupees (One Ngultrum = One Indian Rupee)

All the payments due under the Contract shall be made in Ngultrum/Indian Rupees.

## **1.13 Bid Validity Period**

1.13.1 Bids shall remain valid for acceptance for a period of 180 days (one hundred and eighty days) from the date of opening of bids prescribed in Para 1.22 hereof.

1.13.2 In exceptional circumstances, prior to expiry of the original bid validity period, the PHPA-II may request the bidder for a specified extension in the period of validity. The request and the responses thereto shall be made in writing or by fax. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required nor permitted to modify his bid, but will be required to extend the validity of his bid security correspondingly. The provision of Para 1.14 regarding discharge and forfeiture of bid security shall continue to apply during the extended period of bid validity.

## **1.14 Bid Security**

1.14.1 The bidder shall furnish, as part of his bid, a bid security for an amount of Nu./Rs. 50 million

1.14.2 The bid security shall, at the bidder's option, be in any one of the following alternative forms:

- (a) Crossed bank draft on Bank of Bhutan, Thimphu/Phuentsholing or State Bank of India, Alipurduar, India or any Scheduled Bhutanese/Indian Bank in favour of the Punatsangchhu-II Hydroelectric Project Authority.
- (b) Irrevocable bank guarantee issued by the Bank of Bhutan or State Bank of India or any other Scheduled Bank in Bhutan/India, and pledged in favour of the Punatsangchhu-II Hydroelectric Project Authority. The Proforma for the bank guarantee shall be in accordance with the sample Proforma for bid security enclosed at Annex – I in these Bidding Documents. Other Proforma may be permitted subject to the prior approval of the PHPA-II.

1.14.3 The bid security shall be made payable to the PHPA-II without any condition(s) or reservations in respect of bank drafts and, bank guarantee submitted as bid security and shall remain valid for thirty days beyond the period of validity of the bid.

1.14.4 Any bid not accompanied by an acceptable bid security will be rejected by the PHPA-II as non-responsive.

1.14.5 The bid securities of unsuccessful bidders will be discharged/returned as promptly as possible, but not later than thirty days after expiration of the period of bid validity prescribed by the PHPA-II.

1.14.6 The bid security of the successful bidder will be discharged when the bidder has signed the agreement and furnished the required Performance Security.

1.14.7 No interest shall be paid by the PHPA-II on the bid security.

1.14.8 The bid security may be forfeited;

- (i) if a bidder withdraws his bid during the period of bid validity;
- (ii) in the case of successful bidder, if he fails within the specified time limit to:
  - sign the Agreement, or
  - furnish the required performance security.

### **1.15 Bidding Condition**

The bidder shall submit offers which comply fully with the requirements of the Bidding Documents.

### **1.16 Pre-Bid Meeting**

1.16.1 A pre-bid meeting, open to all prospective bidders who have purchased the Bidding Documents is contemplated to be convened in the PHPA-II office at Phuentsholing, Bhutan. The date and time for this meeting will be notified to the bidders two weeks in advance.

1.16.2 The purpose of this meeting will be to issue clarifications and to answer questions on any matter that may be raised upto and at that stage.

1.16.3 The bidder is requested to submit questions, if any, in writing or by Fax (+975-5-251350) to reach the office of the Chief Engineer, PHPA-II, Phuentsholing, Bhutan not later than one week before the meeting.

1.16.4 Minutes of the Meeting, including copies of the questions raised and responses given, will be furnished expeditiously, to all those attending the meeting (and subsequently to all

purchasers of the Bidding Documents). Any modification of the Bidding Documents mentioned in Para 1.6.1, which may in the opinion of the PHPA-II become necessary as a result of the pre-bid meeting, shall be made exclusively through the issuance of a corrigendum/addendum pursuant to para 1.8

### **1.17 Format and Signing of Bids**

1.17.1 The bidder shall prepare one original and three copies of the documents comprising the bid as described in Para 1.10 and clearly marked “ORIGINAL” and “COPY” as appropriate. In the event of any discrepancy between them, the original shall prevail.

1.17.2 The original of the bid shall be typed or written in indelible ink and the original and copies shall be signed by a person or persons duly authorized to bind the bidder to the Contract. Proof of authorization shall be furnished in the form of a written Power of Attorney which shall accompany the bid. All pages of the bid and entries where amendments have been made shall be initialled by the person or persons signing the bid.

1.17.3 The complete bid shall be without alternations, interlineations or erasures, except those to accord with instructions issued by the PHPA-II, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

## **D – SUBMISSION OF BIDS**

### **1.18 Sealing and Marking of Bids.**

1.18.1 The bidder shall seal the original and each copy of the bid in an inner and an outer envelope, duly marking the envelopes as “ORIGINAL” and “COPY” as appropriate. The original and three copies of the documents comprising the bid as described in para 1.10 shall be submitted by the bidder.

1.18.2 The bids shall be submitted in two parts in separate sealed envelopes and shall be put together in a larger outer envelope. The larger outer envelope, marked as “Confidential” shall:

- (i) be addressed to the Chief Engineer, PHPA-II, Phuentsholing, Bhutan.
- (ii) bear the following identification
  - (a) Bid for the Contract Package Number C-1 “Construction of Diversion Tunnel, Dam, Intake, Desilting Arrangement including Hydro-mechanical Works and Highway Tunnel”.
  - (b) “DO NOT OPEN BEFORE 1500hrs. (BST) on 25.04.2011.
- (iii) The inner envelopes shall clearly identify the envelope number and the contents of the envelopes detailed as under;
  - a) Envelope number – I

The first sealed envelope marked as envelope no. 1 shall contain the Techno-Commercial Bid, Bid Security, the schedule of supplementary information, if any, the information on eligibility and qualification requirements, General Conditions of Contract, Additional Conditions of Contract, proformae, Formats, Annex, Technical Specifications and any other materials required to be completed and submitted in accordance with the instructions to bidders. **This envelope shall contain no information giving any indication about the prices.** This envelope shall be superscribed as “Envelope number - 1 Techno-Commercial Bid for Construction of Diversion Tunnel, Dam, Intake, Desilting Arrangement including Hydro-mechanical Works and Highway Tunnel”.

b) Envelope number -2

The second sealed envelope shall contain only the Proforma of Bid (Annex – II) and the Bill of Quantities. This envelope shall be superscribed as “Envelope no. 2 – Price Bid for Construction of Diversion Tunnel, Dam, Intake, Desilting Arrangement including Hydro-mechanical Works and Highway Tunnel”.

The inner envelopes No. 1 & 2 shall also be addressed as mentioned above and indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared late or is otherwise unacceptable.

1.18.3 If the outer envelope is not sealed and marked as instructed above, the PHPA-II will assume no responsibility for the misplacement or premature opening of the bid submitted. A bid opened prematurely for this cause will be rejected by the PHPA-II and returned to the bidder.

**1.19 Deadline for Submission of Bids.**

1.19.1 The bids must be received by the Chief Engineer, PHPA-II, Phuentsholing, Bhutan not later than 1400 hrs. (BST) on 25.04.2011.

1.19.2 The PHPA-II may, at its discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Para 1.8, in which case all rights and obligations of the PHPA-II and the bidders previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

**1.20 Late Bids**

Any bid received by the PHPA-II after the deadline for submission of bids prescribed by the PHPA-II in accordance with para 1.19 will be returned unopened to the bidder.

## **1.21 Modification and Withdrawal of Bids**

- 1.21.1 The bidder may modify or withdraw his bid after bid submission, provided that the modification or notice of withdrawal is received in writing by the PHPA-II prior to the prescribed deadline for submission of bids.
- 1.21.2 The bidder's modifications or notice of withdrawal shall be prepared, sealed, marked and delivered in accordance with the provisions of Para 1.18 for the submission of bids, with the inner envelopes additionally marked "Modification" or "Withdrawal" as appropriate.
- 1.21.3 Subject to para 1.24, no bid shall be modified subsequent to the deadline for submission of bids.
- 1.21.4 Withdrawal of bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by bidder in his bid shall result in the forfeiture of the bid security pursuant to para 1.14.

## **E – BID OPENING AND EVALUATION**

### **1.22 Bid Opening**

- 1.22.1 The bid contained in envelope no-1 i.e. the Techno-Commercial bid including submissions made pursuant to Para 1.21, will be opened by the Chief Engineer, PHPA-II, Phuentsholing, Bhutan or an Officer duly authorized by him in his office at 1500 hrs.(BST) on 25.04.2011 in the presence of the bidders' authorized representatives who may wish to attend. The bidders' representatives, who are present, shall sign a register evidencing their attendance.
- 1.22.2 Bids for which an acceptable notice of withdrawal has been submitted pursuant to para 1.21 shall not be opened. The PHPA-II will examine bids to determine whether they are complete, whether the requisite bid securities have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.



1.22.3 At bid opening, the Chief Engineer, PHPA-II, Phuentsholing, Bhutan, or an Officer duly authorized by him will announce the bidders' names, modification and withdrawals, if any, the presence of the requisite bid security and such other details as the said officer may consider appropriate. He shall also read aloud the attested and un-attested corrections and shall record the number of such corrections on each page of the Bidding Documents over his dated initials and also initial all such corrections.

### **1.23 Process to be Confidential**

1.23.1 After the public opening of bids, information relating to the examination, clarification, evaluation and comparison of bids and recommendations concerning the Award of Contract shall not be disclosed to bidders or other persons not officially concerned with such process.

1.23.2 Any effort by a bidder to influence the PHPA-II in the process of examination, clarification, evaluation and comparison of bids, and in decisions concerning Award of Contract, may result in the rejection of his bid.

1.23.3 The Contractor shall not communicate or use in advertising, publicity or in any other medium, photograph or other reproduction of the Works under this Contract, or description of the site, dimensions, quantity, quality or other information, concerning the Works unless prior written permission has been obtained from the Engineer-in-Charge.

1.23.4 All documents, correspondence, decisions and other matters concerning the Contract shall be considered of confidential and restricted nature by the Contractor and he shall not divulge or allow access thereto by any unauthorised persons.

### **1.24 Clarification of Bids**

To assist in the examination, evaluation and comparison of Techno-Commercial bids, the PHPA-II may ask bidders who fulfill the Eligibility and Qualification Requirements in accordance with para 1.3 individually for clarification of the bids. The request for clarification and the response shall be in writing or by fax, but no change in the price or

substance of the bid shall be sought, offered or permitted except in case of change in construction methodology and as required to confirm the correction of arithmetic errors discovered by the PHPA-II during the evaluation of the bids in accordance with Para 1.26

## **1.25 Determination of Responsiveness**

1.25.1 Prior to the detailed evaluation of bids, the PHPA-II will determine whether each technical bid is techno-commercially substantially responsive to the requirements of the Bidding Documents.

1.25.2 For the purpose of this Para, a substantially responsive bid is one which fulfills the Eligibility and Qualification Requirements in accordance with Para 1.3 and conforms to all the terms, conditions and specifications of the Bidding Documents without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, or performance of the Works, or which limits in any substantial way, inconsistent with the Bidding Documents, the PHPA-II's rights or the bidder's obligations under the Contract, and the rectification of which deviation or reservation would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

1.25.3 The technical evaluation shall be made for the bidder's proposed method of Construction, Construction programme, order/sequence of the Work and proposed resources assigned to do the Work to determine his capability.

1.25.4 If the technical bid is not substantially responsive to the requirements of the Bidding Documents, or the proposed construction methods are clearly impracticable, it will be rejected by the PHPA-II and may not subsequently be made responsive by the bidder having corrected or withdrawn the non-conforming deviation or reservation.

1.25.5 The price bids of only those bidders will be opened whose Techno-Commercial bids have been found to be substantially responsive to the requirements of the Bidding Documents. The date and venue for the opening of the price bids shall be notified separately and communicated to the eligible and technically qualified bidders. The price bids along with

bid securities of the bidders whose Techno-Commercial bids have been declared non-responsive, shall be returned unopened to the bidders. The price bids of the technically qualified bidders shall be opened by the Chief Engineer, PHPA-II, Phuentsholing, Bhutan on a date to be notified separately, in the presence of the intending bidders or their authorized representatives who wish to be present.

## **1.26 Corrections of Errors**

1.26.1 The price bids shall be checked by the PHPA-II for any arithmetic errors in computation and summation. Errors will be corrected by the PHPA-II as follows:

- (i) where there is a discrepancy between the rate in figures and in words, the rate in words will govern; and
- (ii) where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit rate and the quantity, the unit rate as quoted will govern and the total amount shall be corrected, unless in the opinion of the PHPA-II there is an obvious misplacement of the decimal point in the unit rate in which case the total amount as quoted shall govern and the unit rate shall be corrected.
- (iii) if there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected.

1.26.2 The amount stated in the Proforma of Bid (Annex-II) will be adjusted by the PHPA-II in accordance with the above procedure for the correction of errors and, with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, his bid will be rejected and the bid security will be forfeited.

## **1.27 Evaluation and Comparison of Bids**

1.27.1 The PHPA-II will evaluate and compare only bids determined to be substantially responsive to the requirements of the Bidding Documents in accordance with Para 1.25.

1.27.2 In evaluating bids, the PHPA-II will determine, for each bid, the Evaluated Bid Price by adjusting the Bids Price as follows:

- i) making any correction for errors pursuant to para 1.26
- ii) making an appropriate adjustment for any discount and other acceptable quantifiable variations or deviations.

1.27.3 The PHPA-II will evaluate bids and award the Contract to the Techno-Commercially acceptable responsive bidder offering the lowest Evaluated Bid Price after taking into account 1.27.2.

1.27.4 The PHPA-II reserves the right to accept or reject any variation, deviation or alternative offers. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the Bidding Documents or otherwise result in the accrual of unsolicited benefits to PHPA-II shall not be taken into account in bid evaluation.

1.27.5 Price adjustment provisions applying to the period of execution of the Contract shall not be taken into account in bid evaluation.

## **F – AWARD OF CONTRACT**

### **1.28 Award Criteria**

Subject to Para 1.29, the PHPA-II will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest Evaluated Bid Price pursuant to para 1.27

## **1.29 PHPA-II's Right to Accept any Bid and to Reject any or all Bids**

Notwithstanding Para 1.28, the PHPA-II reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the PHPA-II's action.

## **1.30 Notification of Award**

1.30.1 Prior to the expiration of the period of bid validity prescribed by the PHPA-II or any extension thereof, the PHPA-II will notify the successful bidder by fax confirmed in writing by registered letter that his bid has been accepted.

This letter (hereinafter and in the Conditions of Contract called "Letter of Award") shall name the sum which the PHPA-II will pay to the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called "the Contract Price").

1.30.2 The notification of award will constitute the formation of the Contract.

1.30.3 Upon the furnishing by the successful bidder of a Performance Security in accordance with the provisions of para 1.32, the PHPA-II will promptly notify the unsuccessful bidders that their bids have been unsuccessful.

## **1.31 Signing of Agreement**

1.31.1 Within thirty days of receipt of the Letter of Award, on a date and time mutually agreed upon, the successful bidder or his authorized representative shall attend the office of the Chief Engineer, PHPA-II, Phuentsholing, Bhutan for signing of the Agreement. The Proforma for Agreement is as at Annex-III.

1.31.2 Failure on the part of the successful bidder to comply with the requirements of the Para 1.31.1 will constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.

### **1.32 Performance Security**

1.32.1 Within 30 (thirty) days of the receipt of the notification of award from the PHPA-II but not later than the date of the signing of the Agreement, the successful bidder shall furnish to the PHPA-II, a Performance Security in the form of a Bank Guarantee for an amount of 2.5% (two point five percent) of the Contract Price in accordance with the Conditions of the Contract.

1.32.2 The Performance Security provided by the successful bidder in the form of a Bank Guarantee, shall be in favour of Punatsangchhu-II Hydroelectric Project Authority issued by the Bank of Bhutan or State Bank of India or any Scheduled Bhutanese/Indian Bank. The Bank Guarantee shall be on the Proforma attached at Annex – IV.

1.32.3 Failure of the successful bidder to comply with the requirement of Para 1.31 and 1.32 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.