

ANNEXURE - I (PRICE BREAKUP FOR SUPPLY)								
NAME OF PROJECT:			NSPCL BHILAI EXPANSION POWER PROJECT(2X250MW)					
NAME OF PACKAGE:			GYPSUM DEWATERING SYSTEM (VACUUM BELT FILTER TYPE)					
TECHNICAL SPECIFICATION No:			PE-TS-468-571-A101 REV 01					
				ONLY FOR INDIAN BIDDERS		ONLY FOR FOREIGN BIDDERS		
SL NO.	DESCRIPTION	UNIT	Qty	UNIT Ex-WORKS PRICE (INR)	TOTAL Ex-WORKS PRICE (INR)	CURRENCY	UNIT C&F PRICE (AT NEAREST PORT OF BHILAI SITE)	TOTAL C&F PRICE (AT NEAREST PORT OF BHILAI SITE)
1	Total Lumpsum prices for SUPPLY part comprising of design (i.e. preparation and submission of drawing /documents including "As Built" drawings and O&M manuals), engineering, manufacture, fabrication, assembly, inspection / testing at vendor's & sub-vendor's works, Charges of BHEL/ Customer nominated inspection agency (if equipment sourced from outside India), painting, maintenance tools & tackles, first fill & top-up of lubricants & consumables, alongwith spares for erection, startup and commissioning as required, forwarding, proper packing(sea worthy packaging in case shipped through sea), shipment and delivery at site for project and package specified above complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	LOT	1					
	MAJOR BREAK-UP OF PRICES OF 1.0 ARE MENTIONED BELOW							
1.1	Primary hydro cyclone comprising of hydrocyclone clusters, anchor bolts, nuts and washers, flanges for inlet and overflow, a variety size of vortex finders for all the hydro cyclone, accessory piping within the skid to make the system complete.	SET	2		0			0
1.2	Secondary hydro cyclone comprising of hydrocyclone clusters, anchor bolts, nuts and washers, companion flanges for inlet and overflow, variety size of vortex finders for all the hydro cyclone & accessory piping within the skid to make the system complete.	SET	2		0			0
1.3	Vacuum belt filters complete with accessories, maintenance platform with staircase including discharge chute, and driving motors (IE3) with VFD & inverter panel, coupling along with guard	NOS.	2		0			0
1.4	Vacuum receivers with anchor bolts, nuts and washers.	NOS.	2		0			0
1.5	Vacuum pumps with drive (IE3 motor) along with all connecting bolts/ nuts/ washers/foundation bolts for installation, coupling along with guard, required instruments and safety device (as required).	NOS.	2		0			0
1.6	Vent fan including enclosure along with drive motor (IE3), coupling along with guard and associated piping from VBF till fan	NOS.	2		0			0
1.7	Complete arrangement for cloth and cake washing arrangement, cloth and cake wash pumps with motors (IE3), coupling along with guard, associated piping, valves, spray nozzles & accessories	LOT	1		0			0

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1.8	Complete arrangement of Filtrate extraction pumps with motors (IE3), coupling along with guard, suction and discharge valves, instrumentation etc. to make system complete.	LOT	1		0			0
1.9	Complete interconnected piping (slurry, air and water pipes) along with valves, rubber lining (wherever applicable), supports, gaskets, fasteners and accessories which is integral to Gypsum dewatering system as defined in technical specification, Section I, Sub-section-C1, Clause no. 2.1.1.9 (i).	LOT	1		0			0
1.10	Complete instruments associated with equipment and integral piping as defined at 1.9 above for Gypsum Dewatering System	LOT	1		0			0
	GRAND TOTAL				0			0
NOTE:								
1	Bidder to note that above BOQ for this tender has to be read in conjunction with tender specification. Any item, if not mentioned in above BOQ but indicated in tender specification and required for completion of the system shall deemed to be included in above price.							
2	Referring to Section I, Sub-section-C1, Clause no. 2.1.1.9 (ii) of the Technical Specification; Scope of Interconnected piping (slurry, air and water pipes) along with instruments, valves, rubber lining (wherever applicable), supports, gaskets, fasteners and accessories which is non integral to Gypsum dewatering system are limited to engineering only and supply shall be made by BHEL . Engineering includes layout & routing of pipes, preparation of isometric drawing and BOQ.							

ANNEXURE II (PRICE BREAKUP FOR SERVICES)					
NAME OF PROJECT:		NSPCL BHILAI EXPANSION POWER PROJECT(2X250MW)			
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TECHNICAL SPECIFICATION:		PE-TS-468-571-A101 REV 01			
				FOR INDIAN / FOREIGN BIDDERS	
S. No.	DESCRIPTION	UNIT	QTY	UNIT RATE (INR)	TOTAL RATE (INR)
1.0	Total lumpsum firm prices for Services comprising of Supervisory service part for assembly, erection & commissioning, trial run at site, carrying out Performance guarantee at site, Training to customer/ client personnel covering hands on experience of operation and maintenance at site, training at manufacturer's works and final handing over to end customer in flawless condition for project and package complete with all accessories for the total scope defined as per BHEL NIT & tender technical specification as specified above, amendment & agreements till placement of order.	LOT	1		
	MAJOR BREAK-UP OF PRICES OF 1.0 ARE MENTIONED BELOW				
i	COST OF SUPERVISION FOR SERVICES				
a	Total lump sum prices for visits [should include travel expenses to/ fro site, visa/ insurance (if applicable), intermediary stay] for Supervision of assembly, erection and commissioning, trial run at site & taining to O&M staffs	Nos.	4		0
b	Total lump sum prices for Supervision of assembly, erection and commissioning, trial run at site & taining to O&M staffs (in days) including visit charges, local transportation, boarding, lodging & other related exepenses for the total scope defined as per BHEL NIT & tender technical specification, amendment & agreements till placement of order.	days	60		0
ii	Total Lump sump price for successful conductance of Performance Guarantee test and handover in flawless condition of the package to the customer shall include to/ fro site travel expenses, visa/ insurance (as applicable), intermediary stay, local transportation, boarding & lodging & other related exepenses.	LOT	1		0
iii	Total Lump sump price for training of employees of customer at manufacturer's works 6 man-days (3 persons for 2 days) including lodging and boarding	LOT	1		0
	GRAND TOTAL				0
Note:					
1	No. of days at site defined at S.N. i(b) above shall be calculated on the basis of presence at site (travel time is excluded).				
2	Supervision of E&C charges should not exceed 2% of the total contract value, failing which the quoted amount shall be restricted (2% of the total contract value) by BHEL at the time of evaluation and ordering.				
3	No. of Visits and days as mentioned at Sl.No. i(a) & i(b) above may vary, depending upon site requirement. Any variation in no. of visits & no. of days shall be exercised based on unit rate arrived from Sl.No. i(a) & i(b) above respectively.				
4	Bidder to quote the Prices in 'figures' along with corresponding 'words'.				

ANNEXURE-III (LIST OF MANDATORY SPARES)					
NAME OF PROJECT:		NSPCL BHILAI EXPANSION POWER PROJECT(2X250MW)			
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			ONLY FOR INDIAN BIDDERS	ONLY FOR FOREIGN BIDDERS	
Sl. No.	DESCRIPTION	Qty	TOTAL Ex-WORKS PRICE (INR)	CURRENCY	TOTAL C&F PRICE (AT NEAREST PORT OF BHILAI SITE)
I.	MECHANICAL				
1	Hydro-cyclones (Gypsum Primary Dewatering, Secondary Waste Water and any other Hydrocyclone)				
a.	Hydro-cyclone Isolation Valve	10% of each type OR 1 no. whichever is higher			
b.	Hydro-Cyclone	10% of each type OR 1 no. whichever is higher			
c.	Hydro-Cyclone rubber lining - feed chamber & overflow chamber	10% of each type OR 1 no. whichever is higher			
d.	Vortex finder & Apex inserts	10% of each type OR 1 no. whichever is higher			
2	Vacuum Belt Filter				
a.	Filter Cloth	4 sets			
b.	Belt	1 sets			
c.	Vacuum Box Seals	2 sets			
d.	Drive Motor	1 no.			
3	Vacuum Pumps				
a.	Pump Impeller Assembly	1 no.			
b.	Pump Bearing	1 set			
c.	Seals	1 set			
d.	Motor	1 no.			
4	Vacuum Breaker Valves				
a.	Valve Assembly	1 no.			
b.	Actuator	1 no.			
5	Slurry Pumps				
a.	Impeller Assembly	4 no. of each type and size			
b.	Complete Casing	1 no. of each type and size			
c.	Casing Liners (where replaceable liners are provided)	1 set*			
d.	Seals	4 set of each type and size			
e.	Bearings	1 no. of each type and size			
f.	Motor	1 no. of each type and size			
g.	Gear Box	1 no. of each type and size of pump			
h.	Motor-Pump Coupling	1 no. of each type			
6	Slurry Valves	4 nos. of each type and size			
7	Slurry Line Bends	4 nos. of each type and size			
8	Horizontal Centrifugal Pumps				
a.	Complete Impeller Assembly	1 nos. of each type			
b.	Casing Liners	1 set* of each type			
c.	Bearing	1 set*			
d.	Motor	1 no. of each type			
e.	Pump discharge valve assembly	1 nos. of each type			
II.	MEASURING INSTRUMENTS				
1.01.00	MEASURING INSTRUMENTS				
1.01.01	(i) Transmitters of all types and model no. (for measurement of pressure, differential pressure, flow, level, temp, etc.). This shall include magnetic/ electromagnetic flow meter, mass flow meter also.	10% or 1 no. of each type and model, whichever is more.			
1.01.02	Temp Elements along with thermo well (except winding temp elements of motor)	10% or 2 no. of each type, model & length, whichever is more.			

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Sl. No.	DESCRIPTION	Qty	TOTAL Ex-WORKS PRICE (INR)	CURRENCY	TOTAL C&F PRICE (AT NEAREST PORT OF BHILAI SITE)
1.01.03	(i) Process Actuated Switches (Pressure, Differential pressure, flow, level, temp) (ii) Limit switches (for pneumatic and manual valves)	10% or 2 no. of each type and model, whichever is more.			
1.01.04	Local Gauges for Pressure, Differential pressure, flow, level,temp	5% or 1 no. of each type, model and range, whichever is more.			
1.02.00	PROCESS CONNECTION PIPING (For Impulse Piping / Tubing and Air Supply Piping as Applicable)				
1.02.01	Valves of all types and models	10% or 1 no. of each type, class, size and model whichever is more.			
1.02.02	2 way, 3way, 5way valve manifolds	10% or 1 no. of each type, class, size and model whichever is more.			
1.02.03	Fittings	10% or 1 packet of each type, class, size and model whichever is more.			
1.02.04	Purge meters	5% of each model or 1 no. whichever is more.			
1.02.05	Filter regulators	20% of each model or 2 nos. whichever is more.			
1.03.00	CONTROL VALVES, ACTUATORS & ACCESSORIES (Following items shall be provided under this clause for all modulating control valves being supplied under this package)				
1.03.01	Pneumatic and electro-hydraulic actuator assembly	10% or 1 no. of each type, model and rating, whichever is more.			
1.03.02	Valve trim (including cage, plug, stem, seat rings, guide bushings etc.)	1 set for each type of control valve.			
1.03.03	Diaphragms, O' rings, seals etc. of all types make etc.	100%			
1.03.04	Pressure Gauges of all types, make, rating etc.	10% or 2 nos. of each type whichever is more			
1.03.05	Solenoid valves (if applicable)	10% or 2 nos. of each type whichever is more			
1.03.06	Positioner units (complete unit)& accessories (link assembly)	10% or 1 no. of each type whichever is more			
1.03.07	Pneumatic air-filter/Regulator of each type, make rating etc.	10% or 2 Nos., whichever is more			
1.03.08	Air lock relays	10% or 2 nos. of each type whichever is more			
1.04.00	PNEUMATICS ISOLATION / BLOCK VALVES, ACTUATORS & ACCESSORIES (For all ON/OFF valves supplied under this package)				
1.04.01	Pneumatic actuator assembly	10% or 1 no. of each type, model and rating, whichever is more.			
1.04.02	Diaphragms, O' rings, seals etc. of all types make etc.	100%			
1.04.03	Limit switches (complete unit) & accessories (link assembly)	10% or 2 Nos., whichever is more			
1.04.04	Pneumatic air-filter/Regulator of each type, make rating etc.	10% or 2 Nos., whichever is more			
1.05.00	ELECTRICAL ACTUATORS				

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Sl. No.	DESCRIPTION	Qty	TOTAL Ex-WORKS PRICE (INR)	CURRENCY	TOTAL C&F PRICE (AT NEAREST PORT OF BHILAI SITE)
1.05.01	Actuators	1 no of each type and rating			
1.05.02	Electronic PCB of all types	10% of each type & model			
1.05.03	Absolute Encoder (replaceable part)	5% of each type & model			
1.05.04	Electronic Torque sensor	5% of each type & model			
1.06.00	Solenoid Valves				
1.06.01	Solenoid Valves	10% of each type, rating and model			
1.06.02	Solenoid Valve COILS	10% of each type, rating and model			
1.07.00	VFD SYSTEM :				
1.07.01	Electronic cards				
a.	Control modules	1 nos. of each type & rating			
b.	I/O module	1 nos. of each type & rating			
c.	Power supply modules	1 nos. of each type & rating			
d.	Gate module including gate transformer	100% of one channel			
1.07.02	Power device (Thyristor, IGBT etc.) bridge leg	1no.(Qty. for one ph.)			
1.07.03	Over voltage limiter and surge suppressor network	1 set			
1.07.04	Semi conductor fuses for Power device (thyristor, IGBT etc.)	1 set			
1.07.05	Power & Control fuse	25% of installed quantity			
1.07.06	Control Transformer	1 nos. of each type & rating			
1.07.07	Contactor/Breaker	1 no.			
1.07.08	CT/VT	1 nos. of each type & rating			
1.07.09	Indicating lamps	100% of each type & rating			
1.07.10	Auxiliary contactors & relays	1 no. of each type & rating			
1.07.11	Indicating lamp holder full set	15% of each type and colour			
1.07.12	Panel mounted meters	1 nos. of each type & rating			
GRAND TOTAL			0		0
NOTE:					
1	Wherever set is mentioned, one set of the spares of that item shall be for complete replacement of that particular item for one equipment.				
2	Any fraction of a item shall mean the next higher integer.				
3	Wherever quantity has been specified as percentage (%), the quantity of mandatory spares to be provided by contractor shall be the specified percentage (%) of the total population of the plant. In case, the quantity so calculated happens to be fraction, the same shall be rounded off to next higher whole number.				
4	Wherever the quantities have been indicated for each type, size, thickness, material, radius, range, etc., these shall cover all the items supplied and installed and the				
5	In case, spares indicated in the list are not applicable to the particular design offered by the bidder, the bidder should offer spares applicable to offered design with quantities generally in line with the approach followed in the above list.				
6	(*) Unless otherwise stated, a set shall mean complete replacement for one equipment.				
7	Mandatory spares listed above is bare minimum requirement. In case any additional mandatory spares requirement is covered elsewhere in the tender specification apart from specified above, same shall be deemed to have been covered in bidders scope of supply.Bidder is also required to refer to notes mentioned at Annexure-II, Sub Section-E, Section-I in technical specification.				

ANNEXURE-II DEVIATION SHEET (COST OF WITHDRAWAL)										
PROJECT:-							NSPCL BHILAI EXPANSION POWER PROJECT(2X250MW)			
PACKAGE :-							GYPSUM DEWATERING SYSTEM (VACUUM BELT FILTER TYPE)			
TENDER ENQUIRY :-										
NAME OF THE BIDDER										
Sl. No.	Volume/Section	Page No.	Clause No.	Technical Specification/Tender Document No	Complete Description of Deviation	CURRENCY	Cost of withdrawal of deviation to be entered by the bidder in	Reference of price Schedule of which Cost of Withdrawal of Deviation is applicable	Nature of cost of withdrawal of deviation (Positive/Negative)	Reasons for quoting deviation
1	TECHNICAL DEVIATION									
1.01										
1.02										
1.03										
1.04										
1.05										
1.06										
1.07										
1.08										
2	COMMERCIAL DEVIATION									
2.01										
2.02										
2.03										
2.04										
2.05										
2.06										
2.07										
2.08										

NOTES:

1. Cost of Withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.

2. All the bidders have to list out all their technical & commercial deviations (if any) in details in the above format.

3.Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.

4.Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawl of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable. In absence of same, such deviation(s) shall not be considered and offer shall be considered in total compliance to NIT.

5. Bidder shall furnish price copy of above format along with price bid.

6.The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.

7.Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.

8. For deviations w.r.t. Credit Period, Liquidated damages, Firm prices if a bidder chooses not to give any cost of withdrawl of deviation loading as per Annexure-VII of GCC, Rev-07 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawl of deviation shall be taken as NIL.

9. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.

10. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.

11. Cost of withdrawl is to be given seperately for each deviation. In no event bidder should club cost of withdrawl of more than one deviation else cost of withdrawl of such deviations which have been clubbed together shall be considered as NIL.

12. In case nature of cost of withdrawl (positive/negative) is not specified it shall be assumed as positive.

13. In case of descerepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

ANNEXURE-IV
GUARANTEED POWER CONSUMPTION FORMAT

NAME OF PROJECT:	NSPCL BHILAI EXPANSION POWER PROJECT (2X250MW)
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TECHNICAL SPECIFICATION:	PE-TS-468-571-A101 REV 01

Sl. No.	Description / Item	Working	Stand by	Power Consumption (KW) (at motor input terminal)	Duty Factor	Power Consumption (KW)
1	2	3	4	5	6	7 = 3 x 5 x 6
a.	Vacuum Belt Filter	1	1		1	
b.	Vacuum Pump	1	1		1	
c.	Cake Wash Pump	1	3		1	
d.	Belt Filter Wash Pump	1	3		1	
e.	Belt Filter Vent Fan	1	1		1	
				Total Guaranteed power (KW)		

Notes:

1	Guaranteed power consumption falls under Category - I guarantees.
2	Power consumption (KW) of motors shall be measured at motor input terminals when the system operating at the rated capacity. For this purpose, the drives of standby equipment shall not be considered.
3	Base aux power is 140 KW.
4	The minimum value of the total guaranteed power consumption quoted amongst techno commercially qualified bidders shall be taken as the guaranteed base power for the bid evaluation.
5	The total guaranteed power consumption quoted by the bidders at column no. (7) shall be loaded at the rate of INR 1,36,930 per KW for the differential power quoted over the base aux. power as mentioned at S.N. 2 above.
6	<p>Power quoted by bidder shall be termed as 'Guaranteed Power consumption' (GPC) and bidder shall be liable to demonstrate compliance to GPC value during PG test/ Demonstration test at site.</p> <p>If the actual power consumption exceeds the quoted guaranteed power consumption, then the contractor shall carry out all necessary modifications and/or replacements to make the equipment/system comply with the guaranteed power consumption at no extra cost to the NTPC/BHEL and reconduct the performance guarantee test with NTPC/BHEL consent.</p> <p>In case the actual power consumption during performance test still does not meet the guaranteed power consumption within 90 days or a reasonable time period allowed by CUSTOMER/BHEL, CUSTOMER/BHEL reserves the right to either of the following.</p> <p>a) Reject the equipment/system/plant and recover from the successful bidder the payments already made or b) Accept the equipment/system/plant after levying Liquidated damages at the rate of INR 1,36,930 per KW excess power consumption, over the guaranteed power consumption indicated by the bidder in his bid. Such liquidated damages may be recovered by BHEL by deduction from the contract price or by enforcing the contract performance guarantee or in any other manner deemed fit by BHEL.</p>
7	“Any equipment/ item required by bidder as per their proven design to make ‘vacuum belt filter’ complete/ operational and is operating on continuous basis, shall be considered under S.N. ‘a’ in the GPC format, i.e., “Vacuum Belt Filter” and the power consumption shall be quoted accordingly.”