

Corrigendum - 1 dated 18/11/2024 to CPC Tender No. BHEL/CPC/UKI/PRE-BID BOP/25/050

**Corrigendum - 1 dated 18/11/2024 to CPC Tender No. BHEL/CPC/UKI/PRE-BID BOP/25/050 for the work of “PRE-BID TIE-UP/ MOU FOR EXECUTION OF BOP PACKAGES ON EPC BASIS AT 1X800 MW ULTRA SUPER CRITICAL UNIT No. # 7 TO BE CONSTRUCTED ON ASH DYKE AREA AT UKAI TPS, GSECL, GUJARAT”.**

**A) TECHNICAL CONDITIONS OF CONTRACT (TCC):** Note 1) & Note 3) of Clause 2.2 and Clause 18 of TCC are revised as below:

Sl. No.	Clause No.	Existing clause in Tender	Revised clause
1	Note 1) mentioned under Clause No. 2.2 of Technical Conditions of Contract (TCC)	SCOPE MATRIX & BATTERY LIMIT attached with TCC.	<b>SCOPE MATRIX Rev-01 &amp; BATTERY LIMIT Rev-01</b> are attached herewith. Modifications are highlighted in Blue colour.
2	Note 3) mentioned under Clause No. 2.2 of Technical Conditions of Contract (TCC)	Bidder may note that BOP scope of work mentioned under "Broad Scope of Scope Matrix" may vary (addition/deletion) for BHEL in-house manufactured items. For any variation (addition/deletion), BHEL shall seek price implication from Bidders prior to price bid opening.	<p>Bidder may note that BOP scope of work for BHEL in-house manufactured items covered under “Broad scope of matrix” may be removed from their scope of work.</p> <p>Hence, Bidder to indicate their take-off prices for these BHEL in-house manufactured items separately in <b>Annexure-A</b> (attached herewith). BHEL reserve the right to either include or exclude these items in bidder’s BOP scope of work.</p> <p>In case BHEL decides to supply any/all items, as per Annexure-A, as free supply basis to BOP Bidder then their offered take-off price of those excluded items shall be reduced from their quoted price.</p>

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3	Clause No. 18.0 of Technical Conditions of Contract (TCC)	<p>ENGINEERING EXCELLENCE:</p> <p>As an EPC bidder, it shall be their responsibility to obtain approval from various design centres of BHEL as well as Owner (GSECL) including consultant (Steag), hence, they may suitably tie up with a design agency like TCE, Fischtnr, Stenia etc. for the same.</p>	<p>ENGINEERING EXCELLENCE:</p> <p>As an EPC bidder, it is necessary for them to tie-up with a design agency like TCE, Fischtnr, Stenia, who will be responsible for detail engineering and approval from various design centres of BHEL as well as Owner (GSECL) including consultant (Steag), during execution of Project.</p> <p>Bidder to specify their Project Specific tie-up with the design agency along with their offer.</p>
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**Note:**

- 1) All other terms and conditions against this NIT shall remain unchanged.**
- 2) This corrigendum is to be submitted duly signed and stamped along with the Techno-commercial bid (Part- I).**

**for BHARAT HEAVY ELECTRICALS LTD**  
**Sr. Manager/ SCT- CPC**

## 1x800MW GSECL UKAI PROJECT

### SCOPE MATRIX R01

**BROAD SCOPE:** All supplies/work (Civil, structural, architectural, mechanical, electrical, and C&I) outside BTG island will be in the scope of BOP vendor on EPC basis and inside BTG island shall be in BHEL scope. (Refer Table below for exception points)

**BTG ISLAND:** BTG island shall start from SwitchYard including Transformer Yard, Power House, Boiler, ESP, ID Fan, FGD and Duct inlet to Chimney.

**MAJOR INCLUSIONS (BOP PKG):** CHP-BHP, LHP-GHP, AHP, Raw Water System, WATER TREATMENT, COOLING TOWERS, CHIMNEY, FUEL OIL HANDLING SYSTEMS, MISC. TANKS, HVAC , FIRE FIGHTING SYSTEM, STATION LIGHTING, MISC. EOT CRANES, AUXILLIARY BUILDINGS,ELEVATORS etc.

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISIO NING			
A	MECHANICAL SYSTEM									
1	STEAM GENERATOR AND AUXILIARIES INCLUDING ESP	BHEL	Complete SG and Auxiliary package in BHEL scope.	BHEL	BHEL	BHEL	BHEL			
2	FLUE GAS DESULPHURISATION SYSTEM	BHEL/ BOP Vendor	Within BTG Island - BHEL/BOP Outside BTG island - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	Terminal Point (TP) shall be 5 meter in and out away from Absorber. <b>BHEL Scope:</b> Absorber system, Bleed Pump, RC pump, Oxidation blowers and associated piping (BAP Scope) FGD control room is clubbed with ESP control room - BHEL Scope. <b>BOP Scope:</b> Lime Handling Plant (LHP), Gypsum Handling Plant (GHP), Gypsum Dewatering System, Ball Mill, Limestone grinding System, Lime Silo, Primary Hydrocyclone,Secondary Hydrocyclone, Tanks, Agitators, Lime Dosing, Associated Piping, etc. & all other requirements as per tender specifications for FGD System shall be in BOP Vendor scope.		
3	STEAM TURBINE AND AUXILIARIES	BHEL	Complete Pkg by BHEL	BHEL	BHEL	BHEL	BHEL			
4	MILL & BUNKER BAY	BHEL	Complete Pkg by BHEL	BHEL	BHEL	BHEL	BHEL		Gallery (from last TP of CHP & BHP) upto Mill Bunker shall be in BOP Vendor System.	
5	POWER CYCLE PIPING	BHEL	Complete Pkg by BHEL	BHEL	BHEL	BHEL	BHEL		For Areas mentioned specifically under BOP Vendor scope (As clarified in Hotwell Make Up System, Boiler Fill System below)	
6	Plant water system including raw water system	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP	Plant water system including rawa water system, clarified water system is in BOP vendor scope.		
7	Sewage Treatment Plant	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP	Sewage upto Sump in BHEL Scope in BTG area. From Sump outlet including Pump & Piping in BOP vendor scope. BTG area Sump Locations are near ESP control Room, S/Y control room and Powerhouse.		Associated Civil, Str, & Arch Works inside BTG island in BHEL scope. <b>Uncabled</b> Electrical Feeder by BHEL, however, cable & termination for Pump in BOP vendor scope.
8	DM plant	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			
9	CW Teatment Plant	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			
10	Pre treatment Plant	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			
11	Effluent treatment plant	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP	Effluent upto Sump in BHEL Scope in BTG area. From Sump outlet including Pump & Piping in BOP vendor scope.		<b>Uncabled</b> Electrical Feeder by BHEL, however, cable & termination for Pump in BOP vendor scope.
12	Chlorine Di-Oxide Plant	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
13	Side Stream Filtration	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			
14	Condensate Polishing Unit (CPU) including regeneration facility	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP/BHEL	BOP	BOP	Rinse to condenser hotwell piping along with piping valves and instruments etc. upto condenser hotwell nozzel shall be in BOP vendor Scope.		Associated Civil, Str, & Arch Works inside BTG island in BHEL scope.
15	Laboratory Equipment	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING			
16	Chemical required for Water Systems till handeover to Owner (GSECL)	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
17	Fire tenders	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
18	Fork lift	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
19	Misc. Handling equipment like Hand Pallet Trucks, Battery operated Pallet Trucks, Platform Trolleys, Plateform Trucks & Drum Trolley etc. as per Owner (GSECL) Specs	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
20	LOW PRESSURE SYSTEM & PIPING	BHEL/ BOP Vendor	Within BTG Island - BHEL Outside BTG island - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	1. DM Water Makeup (Normal & Emergency) to DMCW OH in BOP Vendor scope. 2. APH/ESP Wash: Upto BTG Battery Limit (Nearest point to Boiler) in BOP Vendor scope. 3. IA & SA piping in BOP areas: In BOP scope		
21	<b>CW SYSTEM</b>									
21A	Equipment Cooling water system including ACW pumps.	BHEL/ BOP Vendor	Within BTG Island - BHEL Outside BTG island - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	<b>ECW/DMCW system (inside BTG Island)-</b> BHEL shall provide Cold water for cooling of equipments in BOP Island at C/D row. BOP vendor shall terminate ECW Hot water return header at C/D row. Flow and Pr Drop to be provided by BOP vendor.  <b>ACW system- (inside BTG Island- Horizontal Pump)-</b> BOP vendor will terminate TP near A row for inlet to ACW system. Outlet Hot water pipe of ACW piping shall be terminated at A row by BHEL. Flow and Pr Drop to be provided by BHEL.  <b>ACW system- (outside BTG Island- Vertical Pump</b>		ACW Booster Pumps (Horizontal) & DMCW Pumps shall be in the scope of BHEL (refer attached Battery limit R00 attached).  Maximum limit on DMCW Flow, Pressure drop & Temperature Rise (across Terminal Point) shall be provided by BHEL.  ACW Flow & Pressure drop (across BTG Terminal Point) shall be provided by BHEL.
21B	Circulating water system including CW pumps (Concrete Volute)	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP	Up to Condensar Nozzel by BOP vendor		Complete CW system including RE Joint along with BFV,COLTS, filter, ARV ,pump, Powerhouse and associated items etc in BOP vendor scope.  Complete CW pipeline from condenser outlet to NDCT and from CWPB to condenser inlet shall be in the scope of BOP EPC Vendor.  Condensar parameters will be intimated by BHEL to BOP Vendor: A.Flow B.Pressure drop  CW Pump system study by BOP Vendor.
21C	NDCT-Cooling towers for circulating water system	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP	1. CW Piping (Supply & Return): Complete CW pipeline from CW Pump discharge nozzle to condenser inlet nozzle shall be in the scope of BOP Vendor. 2. Complete Channel in BOP Vendor Scope.		Condensar parameters will be intimated by BHEL to BOP Vendor: A.Flow B.Pressure drop
22	Chimney	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP		Wet Stack Study shall be carried out by BOP Vendor, however, required BTG inputs shall be provided by BHEL.	<b>Uncabled</b> Feeders for Normal & Emergency power supply shall be provided by BHEL.
	<b>PLANT UTILITIES</b>									
23	Main Plant Compressed air system	BHEL/ BOP Vendor	Compressor house equipments and distribution within BTG area: By BHEL.  Distribution including air receivers outside BTG area: BOP Vendor	BHEL	BHEL	BHEL	BHEL	BHEL shall provide one tapping each for IA and SA (of 150 NB) at 5 mtrs. From Compressor House for distribution in BOP area.		1. Location of Compressor house is inside BTG Battery Limit. 2. Civil, Str & Arch. work of compressor house shall be in BHEL scope. 3. DM CW terminal point for CAS whether from C/D bay or at compressor house shall be as per layout and location of compressor house.

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING			
24	Air conditioning and ventilation system	BOP Vendor	Complete Pkg (BTG + BOP Area) on EPC Basis	BOP	BOP/BHEL	BOP	BOP	SCOPE: Entire plant including BTG area shall be in vendor scope.		Civil, Str & Arch. work inside BTG island battery limits shall be in BHEL Scope.  1. Necessary input drawings for BTG areas shall be provided to BOP Vendor. 2. Route/ space for running makeup water/ ducts for HVAC package inside BTG battery limit shall be provided by BHEL. Entire piping/ duct along with necessary supports/ fixtures shall be in vendor scope. 3. In BTG area, sealing of duct/ pipe/ fan opening in floor and wall, grouting of foundation/ foundation bolts including special type of grouting like GPX2, duct, pipe and fan support are in the scope of BOP vendor
25	Fire detection and protection system	BOP Vendor	Complete Pkg (BTG + BOP Area) on EPC Basis	BOP	BOP/BHEL	BOP	BOP			SCOPE: Entire plant including BTG area shall be in vendor scope.  Civil, Str & Arch. work inside BTG island battery limits shall be in BHEL Scope.Inputs shall be provided be provided by BOP Vendor.
26	COAL & BIOMASS HANDLING PLANT	BOP Vendor	Complete Pkg (BTG + BOP Area) on EPC Basis	BOP	BOP	BOP	BOP	1. Coal & Biomass feeding to the bunker shall be in scope of BOP vendor.  2. Support bracket for gallery (from last TP) in Bunker building shall be provided by BHEL. Required Stool Pieces is in BOP Vendor Scope.  3. Equipment Support base (RCC) for conveyors above bunker bay and Dust Extraction System is in BHEL Scope.		Bunker gratings and Bunker monorails shall be supplied by BHEL
27	FUEL OIL HANDLING PLANT	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP	FOHS shall be terminated at Battery limit of BTG area near D row (Supply and return line both)		Complete FO storage, handling, pressuresing and forwarding system in BOP vendor scope. CCOE approval shall be in Bop agency scope.
28	ASH HANDLING SYSTEM	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP	1. For bottom ash: after Boiler Seal plate.  2. For Economizer ash/APH ash/SCR/Duct/ESP ash handling system: from respective hopper bottom flange.  3. Terminal Point for Ash disposal & AWRS shall be as per Customer Specifications.	Civil work of Bottom Ash Hopper by BHEL, necessary Inputs to be provided by BOP vendor.	
29	MILL REJECT HANDLING SYSTEM	BOP Vendor	Complete Pkg on EPC Basis	BOP/BHEL	BHEL	BOP	BOP	A) Mill Side: i) Each Mill Reject Spout: Elevation of Mill Reject Spout (w.r.t. FFL in Mill area) 3000 mm.  B) Reject Silo Side: Chute at the outlet of Mill reject silo. Civil Work: Trenches, Sump and foundation of Silo shall be in BHEL scope.		Civil, Str & Arch. work inside BTG island battery limits shall be in BHEL Scope.  1. Location in BTG area. 2. Necessary input drawings for BTG areas shall be provided to BOP Vendor. 3. Route/Space for running reject conveyor as per approved layout shall be provided by BHEL during detail enginnering. 4. Minor civil work: chipping & grouting of foundation/ foundation bolt are in BOP vendor scope.
30	CHEMICAL LP DOSING SYSTEM AND OXYGENATED TREATMENT SYSTEM	BOP Vendor	Complete Pkg on EPC Basis	BOP/BHEL	BHEL	BOP	BOP	TP shall be at outlet of the Skid provided by BOP Vendor, further distribution by BHEL.		Engg & Execution for Civil, Str & Arch. work inside BTG island battery limits shall be in BHEL Scope. (Required inputs shall be provided by BOP Vendor)
31	ELEVATORS	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP/BHEL	BOP	BOP	Civil & Arch. work inside BTG island battery limits shall be in BHEL Scope.		Minor civil work required for elevators in BTG island battery limit shall be in scope of BOP vendor.

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING			
32	HOISTS	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP/BHEL	BOP	BOP			Hoists (CPB & EH) for complete plant are in BOP vendor scope. Monorail beam for Hoist & CPB for equipments placed in BTG area shall be by BHEL and Hoist & CPB for same by BOP Vendor.
33	EOT CRANES	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP/BHEL	BOP	BOP	1. Civil work inside BTG island battery limits shall be in BHEL Scope. 2. Gantry girder for EOT cranes inside BTG island battery limits shall be in BHEL Scope.		All EOT cranes including TG Hall EOT crane, BC Bay crane (for BFP) shall be in the scope of BOP vendor.
34	SEPARATION OF PLANT DRAINS FROM STORM WATER DRAINS	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP		Civil, Str & Arch. work inside BTG island battery limits (except BOP Pkgs inside BTG area) shall be in BHEL Scope.	
35	Coal Shed Dozer, Payloader for CHP-BHP & LHP-GHP Dozer Shed	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
Additional points										
36	Service & Potable Water System	- Within BTG Island (Except CHP-BHP, AHP, LHP-GHP) - BHEL - Outside BTG island (including CHP-BHP, AHP, LHP-GHP in BTG area) - BOP vendor		BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	Service & Potable water TP 1. Within battery Limit- BHEL 2. Outside Boundary Limit- BOP Vendor TP for service /Potable water shall be at TG A- Row.		Pump house will be in BoP area
37	Hotwell Make Up System , Boiler Fill System	BHEL	BHEL	BHEL	BHEL	BHEL	BHEL	1) DM makeup Discharge header terminal point near condenser for Normal make-up upstream of control station (A-Row) 2) Emergency makeup Discharge header terminal point near condenser for Emergency make-up u/s of control station (A-Row). 3) Boiler fill pump discharge header to deareator filling near (A-Row)		DM makeup pump, Boiler Fill Pump, Emergency make-up pump in BOP vendor scope.
38	Weigh Bridge	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			
39	FGD. Tanks & Agitator	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			Civil, Str & Arch. work shall be in BOP Vendor Scope (except Absorber & RC pump house).
40	Gypsum Dewatering system	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP	Piping and other equipment 5 mtr away from absorber outlet shall be in BoP vendor scope.		
41	Lime dosing system (For FGD) including waste water transfer pumps to ash pond	BOP Vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP			
42	PIPE and CABLE RACKS - INSIDE BTG ISLAND (Within Battery Limit)	BHEL	- Within BTG Island (Except CHP-BHP, AHP, LHP-GHP) - BHEL	BHEL	BHEL	BHEL	BHEL			Pipe cum cable rack within BTG area shall be provided by BHEL. Pipe BOQ (size and number) which are coming on BTG area to be informed by BOP vendor for piperack design. However, the same shall be supplied & laid by BHEL.
43	PIPE and CABLE RACKS - a. OUTSIDE BTG ISLAND (Outside Battery Limit) b. INSIDE BTG ISLAND FOR CHP-BHP, AHP, LHP-GHP	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			Pipe cum cable rack within BOP area shall be provided by BOP contractor. Pipe BOQ (size and number) which are coming on BOP area to be informed by BHEL for piperack design. However, the same shall be supplied & laid by BOP vendor.
44	Misc. Tanks (CST & DM)	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			BOP vendor scope.
45	Centralized Nitrogen System (For preservation of Heaters during Shutdown)	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP	TP shall be inlet of respective equipments.		Civil, Str & Arch. work inside BTG island battery limits shall be in BHEL Scope.Inputs shall be provided be provided by BOP Vendor.

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING			
B	<u>CIVIL/STR / ARCH Works</u>									
46	Buildings, Structures		- Within BTG Island (Except CHP-BHP, AHP, LHP-GHP) - BHEL  - Outside BTG island (including CHP-BHP, AHP, LHP-GHP in BTG area) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP			
47	Service Building	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
48	Levelling & Grading of complete Plant Area in Bhola Singh and Hussain Tekari (BTG + BOP Area)	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP	Complete leveling and grading in BOP vendor Scope	EARTH FILLING IN BTG AREA WHERE CIVIL WORKS IS BEING EXECUTED BY BHEL	
49	Roads and Drains (for respective Buildings, Structures)	BHEL/ BOP Vendor	- Within BTG Island (Except CHP-BHP, AHP, LHP-GHP) - BHEL  - Outside BTG island (including CHP-BHP, AHP, LHP-GHP in BTG area) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP			Within the battery limit of BTG by BHEL (Proposed battery limit - Refer Plot plan)
50	Paving	BHEL/ BOP Vendor	- Within BTG Island (Except CHP-BHP, AHP, LHP-GHP) - BHEL  - Outside BTG island (including CHP-BHP, AHP, LHP-GHP in BTG area) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP			Within the battery limit of BTG by BHEL (Proposed battery limit-Refer Plot plan)
51	Geo-Technical Investigation and Topographical survey	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
52	Site Enabling work	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			Site Enabling work for (BTG +BOP) Island shall be arranged by BOP Vendor
53	Dismantling Works	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			Dismantling Scope bifrucation to be provided BHEL as per customer Tender Documents. BOP Vendor is requested to visit site for detail analysis.
54	Construction Water	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			BOP Vendor shall arrange distribution of construction Water from the tapping to be provided by Owner (GSECL). Consumption Charges are applicable in line with Owner (GSECL) specifications.
55	Boundary Wall including Retaining Wall as mentioned in specification	BOP Vendor	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
56	Green Belt Development	BOP	Complete Pkg on EPC Basis	BOP	BOP	BOP	BOP			
57	3D Model	BHEL/ BOP Vendor	- Within BTG Island (Except CHP-BHP, AHP, LHP-GHP) - BHEL  - Outside BTG island (including CHP-BHP, AHP, LHP-GHP in BTG area) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	Single editable model of BOP shall be provided to BHEL for further integration with BTG model. 3D Modelling of BOP Packages as per specifications. Acceptable file formats for 3D review model shall be as below: 1. .dgn 2. .vue 3. .rvm 4. .sat		

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISIO NING			

Note 1 : Necessary input drawings for BTG areas shall be provided to BOP Vendor.

Note 2 :The above list is not exhaustive. In case of any ambiguity, bidder may note that all the work outside BTG island shall be in BOP vendor's scope; and all works inside BTG island of any EPC systems (like CHP, AHP, etc.), in BOP Vendors scope, shall also be executed by the BOP vendor.

Note 3: Bidder may note that BOP scope of work for BHEL in-house manufactured items covered under "Broad scope of matrix" may be removed from their scope of work. Hence, Bidder to indicate their take-off prices for these BHEL in-house manufactured items separately in Annexure-A (attached herewith). BHEL reserve the right to either include or exclude these items in bidder's BOP scope of work. In case BHEL decides to supply any/all items, as per Annexure-A, as free supply basis to BOP Bidder then their offered take-off price of those excluded items shall be reduced from their quoted price.

Note 4: Interconnection/termination/jointing of various equipment/systems/pipes at all above mentioned terminal points shall be in the scope of BOP Vendor unless specified elsewhere in the tender document.



# 1x800MW GSECL UKAI PROJECT

## SCOPE MATRIX [R01](#)

**BROAD SCOPE:** All supplies/work (Civil, structural, architectural, mechanical, electrical, and C&I) outside BTG island will be in the scope of BOP vendor on EPC basis and inside BTG island shall be in BHEL scope.(Refer Table below for exception points)

**BTG ISLAND:** BTG island shall start from Switch Yard including Transformer Yard, Power House, Boiler, ESP, ID Fan, FGD and shall Duct inlet to Chimney.

**MAJOR INCLUSIONS (BOP PKG):** CHP-BHP, LHP-GHP, AHP, Raw Water System, WATER TREATMENT, COOLING TOWERS, CHIMNEY, FUEL OIL HANDLING SYSTEMS, MISC. TANKS, HVAC , FIRE FIGHTING SYSTEM, STATION LIGHTING, MISC. EOT CRANES, AUXILLIARY BUILDINGS,ELEVATORS etc.

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Terminal Point No.	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING				
C	Electrical System/ Equipments										
1	Generator along with all auxiliaries, Neutral GroundingTransformer, NG Cubicle, SPVT, LAVT,GCB	BHEL	Complete system in BHEL Scope	BHEL	BHEL	BHEL	BHEL				
2	Electrical Control Desk & DDCMIS for Electrical Breakers. DDCMIS interface with PLC/microprocessor panel/Profibus COMM/local control panels	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				Interface Inputs that will required by BHEL to design the system shall be provided by BOP vendor.
3	Relay Panel (Generator, GT & UT protection panel and Station Transformer protection Panel)	BHEL	Complete system in BHEL Scope	BHEL	BHEL	BHEL	BHEL				
4	400KV GIS switchyard and extension Bays	BHEL	Complete system in BHEL Scope	BHEL	BHEL	BHEL	BHEL				It is inclusive of Establishing LILO of existing transmission line at Singrauli Stage-III Generation switchyard
5	Substation Automation System	BHEL	Complete system in BHEL Scope	BHEL	BHEL	BHEL	BHEL				
6	Power Transformer (GT, ST, UT, Reactor) including UAT, SAT	BHEL	Complete system in BHEL Scope	BHEL	BHEL	BHEL	BHEL				Load & feeder requirement to be informed by BOP vendor for sizing of BTG scope Transformers. Following input to be share by BHEL to BOP contractor: i. Load details of considered by BTG vendor for BOP island shall be provided to BOP vendor. Bidder to ensure that electrical load in BOP area should not exceed maximum load considered by BTG contractor ii. Electrical Single Line Diagram for auxiliary power distribution
7	Auxiliary Power Transformer (11/3.3 Kv-) EXCEPT SAT & UAT	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				Load & feeder requirement to be informed by BOP vendor for sizing of BTG scope Transformers. Following input to be share by BHEL to BOP contractor: i. Load details of considered by BTG vendor for BOP island shall be provided to BOP vendor. Bidder to ensure that electrical load in BOP area should not exceed maximum load considered by BTG contractor ii. Electrical Single Line Diagram for auxiliary power distribution.
8	Neutral Grounding Resistor (3.3kV & 11kV)	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				Inline with auxiliary Power Transformer
9	Isolated Phase Bus Duct, Air Presurizing System, HAB	BHEL	Complete system in BHEL Scope	BHEL	BHEL	BHEL	BHEL				

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Terminal Point No.	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISIO NING				
10	3.3 KV & 11 KV Segregated Phase Bus Ducts (inline with Power Transformer)	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA)-BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				<b>Civil:</b> 1) Complete civil in BTG Island (Except CHP-BHP, LHP-GHP, AHP) by BHEL. 2) Complete civil in BOP Island (including CHP-BHP, LHP-GHP, AHP in BTG Island) by BOP vendor. <b>Supply and E&amp;C:</b> Supply by BHEL for BTG Island (Except BOP packages which are placed in BTG AREA) Supply by BOP for BOP Island (including BOP packages which are placed in BTG AREA)
11	HT (11 kV & 3.3 kV) Switchgear	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA)-BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				<b>Civil:</b> 1) Complete civil in BTG Island (Except CHP-BHP, LHP-GHP, AHP, AHP) by BHEL. 2) Complete civil in BOP Island (including CHP-BHP, LHP-GHP, AHP, AHP in BTG Island) by BOP vendor. <b>Supply and E&amp;C:</b> Supply by BHEL for BTG Island (Except BOP packages which are placed in BTG AREA) Supply by BOP for BOP Island (including BOP packages which are placed in BTG AREA)  For BOP packages which are placed in BTG area like FPS/CPU/FGD, Uncabled feeder shall be provided by BHEL. Indicative list of feeders shall be provided by BHEL in tender stage ESLD.
12	Service Transformer (Oil filled type Transformers/DTT).	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) -BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				a) AN and ONAN shall be considered for BOP areas/ESP/FGD. b) FGD LT transformers – BOP vendor scope  <b>Following details to be ensured/provided for Transformer in BOP vendor scope:</b> i. Losses of transformer shall be governed by IS & Technical Specification. ii. Auxiliary losses to be informed by BOP vendor. iii. Load & feeder requirement to be informed by BOP vendor for sizing of BTG scope Transformers.
13	415 V LT Switchgear & DC Boards	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA)-BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				1) Supply and E&C for LT Switchgear of BOP packages which are placed in BTG area (FGD/HVAC/FPS/CPU/CHP-BHP,AHP,LHP-GHP) same shall be done by BOP Vendor.
14	Non Segregated Phase Bus Duct	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor  Inline with scope of LT switchgear and service transformer.	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				Inline with scope of LT switchgear and service transformer.
15	Sandwich Busduct for DG Connection.	BOP vendor	Complete system in BOP Vendor Scope	BOP	BOP	BOP	BOP				

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Terminal Point No.	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING				
16	Local Push Button Station & Miscellaneous Equipment	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) -BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				Respective equipment supplier
17	AC & DC Motors (HT/LT)	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) -BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				<b>Civil:</b> 1) Complete civil in BTG Island (Except CHP-BHP, LHP-GHP, AHP, AHP) by BHEL 2) Complete civil in BOP Island (including CHP-BHP, LHP-GHP, AHP in BTG Island) by BOP vendor.  <b>Supply:</b> HT/LT Motors inside BTG area (Except BOP packages which are placed in BTG AREA) supply by BHEL.  HT(including Temp transmitter alongwith JB)/LT Motors of BOP area (including BOP packages which are placed in BTG AREA) shall be supplied by BOP Vendor.  HT Differential CT shall be also be provided in HT Motor as per Specification.  <b>Erection &amp; Commissioning:</b> 1) E&C by BHEL for motors supplied by BHEL. 2) E&C by BOP bidder for motors supplied by BOP
18	Cables (HV, LV, Control & Instrumentation) and Special Cables	BHEL/ BOP	BTG Packages placed Inside BTG Island - BHEL  BOP packages placed Outside BTG Island & Inside BTG Island - BOP Vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				1. When equipment's at both ends are in BHEL's scope, supply & installation of HV & LV power, control and instrumentation cables including special cable and cable termination & accessories will be in BHEL's scope.  For balance equipment's, supply & installation of HV & LV power, control and instrumentation cables including special cable and cable termination & accessories will be in BOP Vendor's scope.  2. For BOP load in BTG area, cable shall be in BOP vendor scope.  3. In case of BHEL supplied equipment to be mounted in BoP area, supply & installation of HV & LV power, control and instrumentation cables including special cable and cable laying and termination with accessories will be in BOP scope.
19	Cable trays & supports	BHEL/ BOP	- Within BTG Island (Except CHP-BHP, LHP-GHP, AHP which are placed in BTG AREA) -BHEL  - Outside BTG island (including CHP-BHP, LHP-GHP, AHP which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				BOP contractor shall inform details of cable trays ( no & type) for cable in BOP vendor scope in BTG area.
20	Fire Sealing System	BOP vendor	Complete system in BOP Vendor Scope	BOP	BOP	BOP	BOP				For BTG area, tentative BoQ of various Fire Sealing Material shall be informed by BHEL.

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Terminal Point No.	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISIO NING				
21	220V DC Battery & Charger System	BHEL/ BOP	- Within BTG Island (Except CHP-BHP, LHP-GHP, AHP which are placed in BTG AREA) - BHEL  - Outside BTG island (including CHP-BHP, LHP-GHP, AHP which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				
22	Illumination System	BOP vendor	Complete Pkg on EPC Basis.	BOP	BOP	BOP	BOP				For BTG Area, Uncable feeder shall be provided by BHEL. Required Input to be provided by BOP vendor.
23	Earthing & Lightning Protection System	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				1A. Within BTG Island (For Equipment under BTG Scope)- Complete Earthing & Lightning Protection System (both underground & above ground) for BTG Area by BHEL.  1B. Within BTG Island (For Equipment under BOP Scope)- Above Ground Earthing by BOP vendor & underground earthing by BHEL. Suitable risers shall be provided by BTG vendor.  2. Outside BTG Island- Complete Earthing & Lightning Protection System (both underground & above ground) for BOP areas by BOP vendor. It includes interconnection of BOP Package earth mat to earth mat of BTG Package.  Further, Above Ground Earthing for equipment's supplied by BHEL in BOP area shall also be done by BOP Vendor.
24	Construction PowerArrangement	BOP vendor	Complete system in BOP Vendor Scope	BOP	BOP	BOP	BOP				Bop Vendor shall arrange distribution of construction Power from the tapping to be provided by Owner (GSECL). Consumption Charges for BOP area are applicable in line with Owner (GSECL) specifications.
25	DG Set	BOP vendor	Complete system in BOP Vendor Scope	BOP	BOP	BOP	BOP				
26	Electrical Lab Equipment	BOP vendor	Complete system in BOP Vendor Scope	BOP	BOP	BOP	BOP				Electrical lab package for the complete project shall be in BOP vendor scope. Space requirement & LT Power feeder requirement for Electrical Lab package in main Plant to be informed by BOP vendor.

<b>D</b>	<b>Instrumentation &amp; Control Works</b>
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Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Terminal Point No.	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISSIO NING				
1	Complete C&I System - for packages outside BTG area	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				1. Complete cable laying and termination upto marshalling panel for equipment supplied by BoP vendor shall be in the scope of BoP vendor. 2. BoP vendor has to provide cabling details to BHEL for designing and routing cable trays (within BTG island) by BHEL. 3. Wherever one end is in vendor scope, cable laying and termination upto DCS (main control room) will be in BoP vendor scope. 4. In case of BHEL supplied equipment to be mounted in BoP area, cable laying and termination will be in BOP Vendor scope. 5. Interface Inputs that will required by BHEL to design the system shall be provided by BOP vendor. 6. Main Plant DCS to BOP DCS Optical Fiber connectivity alongwith conduit shall be in BHEL scope
2	DDCMIS interface with PLC/microprocessor panel/Profibus COMM/local control panels	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				
3	Vibration Monitoring system	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				
4	a) Steam and Water Analysis System (SWAS), b) CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) c) AMBIENT AIR QUALITY MONITORING STATION (AAQMS)	BHEL	Complete work on EPC basis	BHEL	BHEL	BHEL	BHEL				
5	Misc Items : ONLINE ORP MONITOR / ANALYSER, ORP/PH PORTABLE METER;	BOP Vendor	Complete work on EPC basis	BOP vendor	BOP vendor	BOP vendor	BOP vendor				Analysers required for CPU are in BOP vendor scope (falling in BTG Island).
6	Remote Operation/Status Signals of Switchgear Breakers, Transformers.	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				Remote operation ( cable laying, termination and testing & commissioing) for BOP supplied vendor PLC will be done by BOP vendor. However, for BHEL supplied switchgear remote operations shall be done by BHEL. For BHEL supplied switchgear (used for operation of BoP vendor equipment), testing and commissioning for remote operation will be assisted by BOP vendor.
7	HART Management System	BHEL	Complete work on EPC basis	BHEL	BHEL	BHEL	BHEL				
8	CCTV	BOP vendor	Complete work on EPC basis	BOP	BOP	BOP	BOP				BOP vendor to take care of the same
9	PA System	BOP vendor	Complete work on EPC basis	BOP	BOP	BOP	BOP				UPS load requirement for BOP portion of systems (viz. PA system) in BTG area shall be informed by BOP vendor

Sl. No.	Description	SCOPE IN AGENCY (BHEL / BOP)	Broad Scope	DETAIL SCOPE				Terminal Points Description	Terminal Point No.	Exclusions	Remarks
				DESIGN / ENGG	CIVIL/ STR/ ARCH (SUPPLY & ERECTION / EXECUTION)	SUPPLY & ERECTION (MECH, ELEC, C&I)	TESTING / COMMISIO NING				
10	UPS	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				
11	24V DC Battery & Charger System	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				
12	C&I Lab Items	BOP vendor	Complete work on EPC basis	BOP	BOP	BOP	BOP				For details please Refer TECHNICAL SPECIFICATION CONTROL & INSTRUMENTATION, Clause No- 19.00.00 C&I MAINTENANCE AND CALIBRATION EQUIPMENTS, VOLUME - III, Part-C, Page 328.
13	Electrical Actuators with Integral Starters	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				
14	Junction Box including profibus based instruments.	BHEL/ BOP	- Within BTG Island (Except BOP packages which are placed in BTG AREA) - BHEL  - Outside BTG island (including BOP packages which are placed in BTG AREA) - BOP vendor	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP	BHEL/ BOP				BoP vendor to ensure termination till Marshelling panel part of DCS Panel considering all items in his/profibus vendors scope incl PA & DP Cables, splitter , TB etc )
15	For soft-link communication and Hardwired interfacing between BOP's PLC/Microprocessor based control system etc, and BTG's DDCMIS all the interfacing hardware such as converters / modem /power supply unit, software etc shall be supplied by BOP EPC supplier scope, wherever both ends or single end are in BOP EPC supplier's scope.	BOP vendor	Complete work on EPC basis	BOP	BOP	BOP	BOP				BTG's scope will be limited to providing Common Ethernet switch port placed in main Unit CCR alongwith accessories required.  In case of redundant communication cables, each cable shall be laid in two separate trays /conduit.  -For Time Synchronization Signals from BTG's master clock system to BOP's PLC/DCS/Microprocessor based control system etc., all the interfacing hardware such as signal conditioner cards /converters / modem / power supply unit, software etc. shall be supplied by BOP EPC supplier, wherever both ends or single end are in BOP EPC supplier's scope at PLC end.  -Terminal point with respect to interface with DDCMIS / PLC / Microprocessor System of BOP Scope is the terminal boxes of DDCMIS panel(s) supplied under BTG scope and placed in Central Control Room

Note 1: Control equipment room for common plant systems like Ash handling system, Coal handling system, Water treatment system, Makeup water system etc. shall be near respective MCC. Remote RIO rooms shall be provided as per requirement and their location shall be finalized during detailed engineering.

Note 2: Bidder may note that BOP scope of work for BHEL in-house manufactured items covered under "Broad scope of matrix" may be removed from their scope of work. Hence, Bidder to indicate their take-off prices for these BHEL in-house manufactured items separately in Annexure-A (attached herewith). BHEL reserve the right to either include or exclude these items in bidder's BOP scope of work. In case BHEL decides to supply any/all items, as per Annexure-A, as free supply basis to BOP Bidder then their offered take-off price of those excluded items shall be reduced from their quoted price.

Note 3: Interconnection/termination/jointing of various equipment/systems/pipes at all above mentioned terminal points shall be in the scope of BOP Vendor unless specified elsewhere in the tender document.

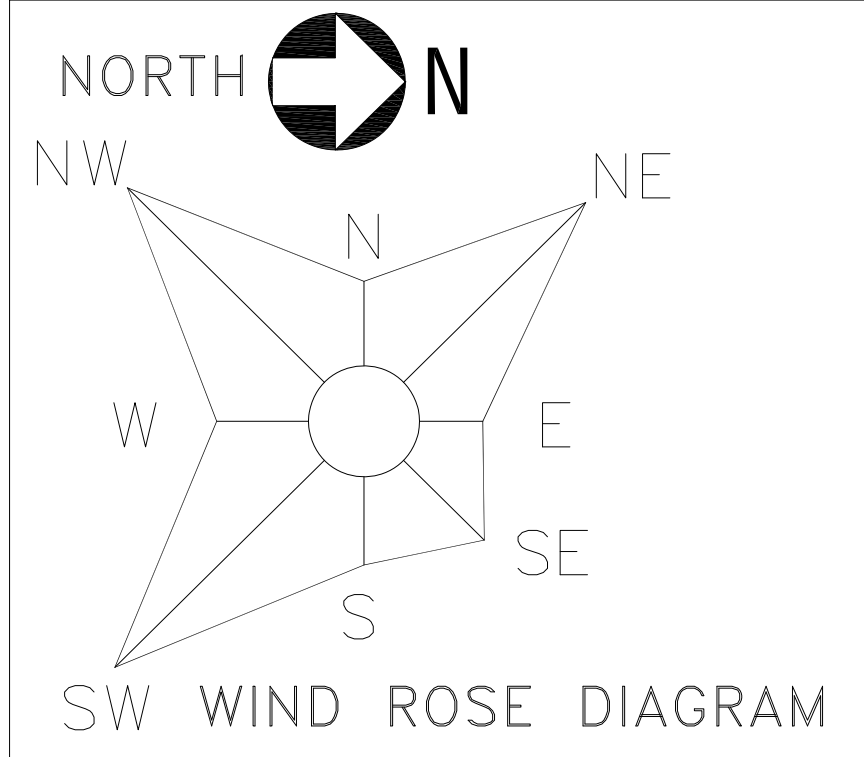


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1200.0W  
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900.0S  
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- NOTES:-
- 1) ALL DIMENSIONS ARE IN millimeters & ELEVATION IN METER.
  - 2) ALL CO-ORDINATES ARE IN METERS.
  - 3) BIDDER TO CONSIDERED 9 NOS. OF ASH DISCHARGE POINT
  - 4) ASH SLURRY PIPE LINE ROUTE ARE SHOWN FOR GARLANDING PURPOSE. DURING DETAILED ENGINEERING THIS SHALL BE FINALISED.

FOR BATTERY LIMIT



- LEGEND :-
- BAFA & HCSD SLURRY ROUTE 2a
  - BAFA & HCSD SLURRY ROUTE 2b
  - BOUNDARY WALL
  - BOUNDARY WALL WITH RETAINING WALL
  - EXISTING BOUNDARY WALL

LEGEND

ITEM No	DESCRIPTION
1.	STG BUILDING
2.	BOILER
3.	TRANSFORMER YARD
4.	ESP
5.	ESP & FGD CONTROL ROOM
6.	CHIMNEY
7.	400 kV GIS BUILDING
8.	GT
9.	MILL AREA
10.	SERVICE BUILDING
11.	AHP COMPRESSOR/SWITCHGEAR/CONTROL BUILDING
12.	CONDENSATE STORAGE TANK (CST)
13.	SLURRY RECIRCULATION PUMP HOUSE
14.	UT
15.	ABSORBER
16.	PROCESS WATER TANK FOR FGD
17.	EMERGENCY SLURRY TANK
18.	LIMESTONE SLURRY STORAGE TANK
19.	LIMESTONE MILL BUILDING
20.	LIMESTONE STORAGE SILOS
21.	GYPNUM DEWATERING BLDG.
22.	AIR COMPRESSORE HOUSE
23.	ASH WATER SUMP
24.	CENTRAL MONITORING BASIN & PH
25.	FLY ASH SILO
26.	COOLING TOWER(NDCT)
27.	C.W.P.H. FORE-BAY
28.	CW PUMP HOUSE AND ELEC./MCC ROOM
29.	CW CHLORINATION PLANT
30.	NOT USED
31.	CHEMICAL HOUSE FOR CW SYSTEM
32.	CLARIFIERS
33.	CHEMICAL HOUSE FOR ETP & PT
34.	CLARIFIED WATER RESERVOIR
35.	EFFLUENT TREATMENT PLANT (ETP)
36.	ST
37.	FIRE WATER RESERVOIR
38.	NOT USED
39.	NEUTRALIZATION PIT
40.	SEWAGE TREATMENT PLANT
41.	H2 STORAGE AREA
42.	DM WATER STORAGE TANKS
43.	SAT / UAT
44.	ASH SLURRY PUMP HOUSE
45.	CLARIFIED/FIRE WATER PUMP HOUSE
46.	TRANSFER TOWER
47.	E.D.G. SET
48.	HYDROBIN
49.	HCSD PUMP HOUSE(FOR FLY ASH)+ELECT.ROOM
50.	SETTLING TANK
51.	SURGE TANK
52.	CPU REGENERATION PLANT
53.	CANTEEN
54.	COAL CRUSHER HOUSE
55.	COAL STOCK PILE
56.	PENT HOUSE
57.	WAGON TIPLER
58.	AMMONIA STORAGE TANK AREA
59.	EMERGENCY RECLAIM HOPPER
60.	ACW BOOSTER PUMP
61.	LDO DAY TANK
62.	LDO PRESSURIZING PUMP HOUSE
63.	TIME/SECURITY OFFICE
64.	STORE
65.	DM TRANSFER PUMP HOUSE
66.	AUX. BOILER
67.	SCR
68.	LDO TANK
69.	LDO PUMP HOUSE
70.	COAL PILE RUNOFF SETTLING POND
71.	D.M PLANT
72.	CW SIDE STREAM FILTRATION PLANT

FOR TENDER PURPOSE ONLY

CUSTOMER GUJARAT STATE ELECTRICITY CORPORATION LIMITED

1 X 800 MW ULTRA SUPER CRITICAL  
UNIT NO. 7 ON ASH DYKE AREA AT UKAI TPS

BHARAT HEAVY ELECTRICALS LTD  
POWER SECTOR  
PROJECT ENGINEERING MANAGEMENT  
NOIDA

DEPT	CODE	NAME	SIGN	DATE
DESIGN	DESIGN	ARSHDEK		20.06.2024
CHD	SK			20.06.2024
APPD	SK			20.06.2024

TITLE PLOT PLAN

DEPT.	SCALE	DRAWING NO.
SIGN		PE-DG-P85-100-M001
SHEET	1 OF 1	REV. P02



Annexure-A

Bidder to indicate their take -off price (in INR) for following BHEL in-house manufactured items falling in BOP Island as per Battery Limit

S. N.	Scope Matrix Reference	Description of Item	Bidder's Price (In INR)	Bidder's Price (In words)
1	A-21B	Supply of CW pumps (CV Type)		
2	C-10	Segregated Phase Bus Ducts		
3	C-11	HT Switchgear		
4	C-12	DTT		
5	C-14	Non-Segregated Phase Bus Duct		
6	C-17	HT Motors		
7	C-2 & D-2	DDCMIS		
8	D-3	Vibration Monitoring system		