DEENDAYAL PORT AUTHORITY

An ISO 9001 : 2008 & ISO 14001 : 2004 Certified Port

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EXPRESSION OF INTEREST [EOI] for

"Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on a turnkey basis."

Executive Engineer (Electrical), DPA invites Expression of Interest for the work of "Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on a turnkey basis." From the reputed firms from those who have executed similar work in Government/public sectors and other leading private organizations. The Expression of Interest (EOI) documents containing details of Scope of Work and technical specifications are enclosed herewith.

The interested firms are requested to submit budgetary quotation for the said work in format enclosed at Annexure I. The completed EOI (Expression of Interest) shall be submitted to the office of the undersigned on or before 02/04/2025.

s/d
Executive Engineer (E)
Deendayal Port Authority

Annexure I

Bill of Quantities

Name of Work: Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on a turnkey basis.

SCHEDULE-A

Part- A - Dismantling of Existing Double Circuit EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM

DISMANTLING PORTION PART -A					
Dismantling of Existing Double Circuit EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM					
Sr. No.	**Description of Works**	**Unit**	**Quantity**	**Unit Rate**	**Total Cost (Excl. GST) in Rs.**
A	**Dismantling of Existing Structure**				
1	Dismantling of Existing Towers	Nos.	17		
2	Removal of Conductors & Earth wire	Km	4		
3	Dismantling of Insulators, Hardware & Accessories	LS	17		
SUB TOTAL of A					

<u>Part-B –</u> Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on turnkey basis.

SUPPLY PORTION PART - B					
Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on turnkey basis.					
Sr. No.	**Description of Supply with Specification**	**Unit**	**Quantity**	**Unit Rate**	**Total Cost (Excl. GST) in Rs.**
B	**Supply of Materials**				
B.1	Tower Materials				
B.1.1	220 kV Steel Part (MS)	MT	270.00		
B.1.2	Bolt Nuts	MT	18.00		
B.2	ACSR Panther Conductor	KM	24.00		
B.3	SR Insulators				
B.3.1	66kV, 120kN Tension SRI	Nos.	216		
B.4	Insulator hardware for ACSR Panther Conductor				
B.4.1	Single Tension	Nos.	216		
B.4.2	Vibration Damper	Nos.	216		
B.5	Earth wire - 7/3.15mm	KM	4.000		
B.6	Hardware for Earth wire - 7/3.15mm				
B.6.1	Tension Clamp	Nos.	18		
B.6.2	Cross by Clip	Nos.	72		
B.6.3	Copper Earth Bond	Nos.	36		
				SUB TOTAL OF B	

PART-C:

Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on turnkey basis.

ERECTION PORTION PART- C					
Design, Supply, Erection, Testing & Commissioning work for modification of EHV Kandla-FTZ D/C Line with ACSR Panther Conductor & GI Earthwire-7/3.15mm - 4.0 KM on turnkey basis.					
Sr. No.	**Description of Service Package**	**Unit**	**Quantity**	**Unit Rate**	**Total Cost (Excl. GST) in Rs.**
C-1	ERECTION OF LINE				
1	Check survey including detailed survey, preparation of profiles and revision in original route alignment, if any.	Km	4.000		
2	Stub-setting with prop or template including back- filling but excluding excavation and concreting etc. for all type of tower/extensions except special towers. (Weight of stub, cleat & template with Bolt & Nuts of Stub & template shall be counted) up to 12 metre extension.	MT	27.000		
3	Grounding of towers with pipe type earthing including excavation and back filling and supply of all materials like 32mm dia heavy duty 3 mtr .long G.I. Pipe & 50 x 6 mm G.I. flat, bolt-nuts, salt, coal/charcoal etc. as per drawing.	Set.	18.00		
4	Erection of super structure up to 6 meter extension including tree cutting, fixing of tower accessories, attachments except ACD / DP / NP / CIP / PP and excluding tack welding of bolts.	MT	270.000		

5	Fixing of Anti-climbing devices including supply of barbed wire (except special tower)	Nos.	18.00		
6	Fixing of DP / NP / PP / CIP including supply of plates and supply of G.I. bolt-nuts & tack welding as per drawings.	Loc.	18.00		
7	Tack welding of nuts up to approx. 10 meters. Height OR two bottom-most panel from ground level at three places on the nuts diametrically and applying zinc rich paint immediately after tack welding.	Per Bolt	36000.0		
8	Stringing of one ground wires including laying, jointing, tensioning, clamping with accessories, jump ring, & sister wire, vibration damper earth bond etc. & including tree cutting.	RKM	4.000		
9	Stringing of ACSR Panther Conductor - 3 (Three) conductors for double circuit on D/C and M/C tower including laying, jointing, tensioning, clamping with armour rods, hoisting of insulator string, fixing of jumpers, dampers etc. and with required tree cutting on entire length for adequate clearance / safe charging of line.	RKM	4.000		
10	Painting of name of line, location number, colour code and telephone number on tower (all four legs) for information of concerned substation including supply of paints, etc. a) all four legs	per location	18.00		
TOTAL COST PART - C, SCHEDULE - 01					

C-2	Schedule-2 (Pile Foundation)				
Sr. N0	Description Works	Unit	Quantity	Unit Rate	**FOR Total Cost (Excl. GST) in Rs.**
1	Empty boring through all sorts of strata for providing 900 mm dia R.C.C. bored piles up to required depth including providing necessary, bentonite, casting pipes with all plants and equipment's as required etc complete in all respects.	Rmt	5184.00		
2	Excavation for foundation up to 1.5 M depth including sorting out and stacking of useful materials and disposing of the excavated stuff up to any lead. Black Cotton Soil Dry/Wet	Cmt.	1800.00		
3	Providing and laying cement concrete (1:2:4 machine cut (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) and curing complete excluding cost of form work in Foundation and plinth.	Cmt	126.00		
4	Providing and laying controlled cement concrete M 30 as per mix design with minimum cement content of 450kg/M3 OPC Cement with C3A content 5 to 8 percent of approved make with tremie concrete for R.C.C. bored piles of any dia including ramming vibrating curing and finishing etc complete.	Cmt	2880.00		
5	Providing and casting in situ controlled cement concrete M30 as per mix design with OPC Cement with 5 to 8 percent C3A agent of 450kg/Cmt of approved make for R.C.C. Pile cap including necessary	Cmt	1440.00		

	formwork vibrating curring and finishing etc complete.				
6	Providing and laying controlled cement concrete M-30 as per mix design with OPC Cement with 5 to 8 percent C3A agent of 450kg/Cmt of approved make exposed work with curing etc. complete including the cost of form work but excluding the cost of reinforcement for R.C.C. work in Column Having cross sectional area more than 0.18 Sq. M.	Cmt	180.00		
7	Providing and laying controlled cement concrete M-30 as per mix design with OPC Cement with 5 to 8 percent C3A agent of 450kg/Cmt of approved make exposed work with curing etc. complete including the cost of form work but excluding the cost of reinforcement for R.C.C. work For Beam Having cross sectional area more than 0.18 Sq. M.	Cmt	180.00		
8	Stub setting including back-filling but excluding excavation and concreting etc. for all types of towers/extensions except special towers. (weight of stub, creat and template with Bolt and Nuts of stub and template shall be counted)	Kg	15000.00		
9	Providing Thermo Mechanically Treated CRS bars/ (coated with fusion bounded epoxy paint) of FE 500 Grade confirmed as per IS 1786 for RCC work including bending, binding and placing in position etc. completed for up to floor two level	Kg	252000.00		

10	Providing steel liner for curbs and staining for wells in clouding fabricating and setting out as per detailed drawing as directed by E.I.C.	MT	108.00		
11	Demolition of RCC work including stacking of serviceable materials and disposal of unserviceable materials with all lead and lift.	Cmt	288.00		
12	Performing Integrity test on each pile before casting of pile cap with accurate instruments, Software's etc. complete to determine length or depth,. Whole test shall be conducted as per ASTM D5882-16-Standard test Method for low Strain Integrity Testing of Piles.	Job work	288.00		
13	Performing Lateral load test on a completed cast-in-situ pile in order to evaluate its performance relative to the lateral load/displacement criteria for the design of working pile. The load test shall be carried out for a maximum load of 2.5times the design load for initial test and 1.0 times the designed load for routine tests. includes all required instruments, machinery operations like Excavations for placing hydraulic jack, brackets and datum bars etc. The load and displacement values recorded during the test are plotted on a graph with Load on X-axis and Displacement on Y-axis and analysed according to the procedure given in Clause 7.4 of IS: 2911 part 4. Whole test shall be conducted as per IS: 2911 (Part-4)-2013	Job work	18.00		

14	Providing and Applying tar extended two component coating system based on synthesized epoxy resin and amine adduct manufacture as per technical specification of central electro chemical research (CERCI/CSIRKARAIKUDI) to achieve 400-450 microns DFT in two coats as directed. The item includes cleaning the surface before treatment as per manufacturer specification. The coating system EPCO2020TX or equivalent shall comply the CERCI technology of " comprehensive repair and protection of concrete/steel surface in wet and underwater condition". The rate shall be inclusive of all materials labour equivalent scaffolding etc.	SMT	6300.00		

15	Diversing of water course, providing working platform/ floating platform/ cofferdam and bund or island etc for foundation and maintaining the same for the period. Also Necessary provisions for Approach road and working platform 300mm sand filling, with minimum 200mm th.metal and required filling as per site condition by good quality of murrm/Erath and providing NP-3 pipe line for cross drainage where ever required for passing of water, preparing working platform, material conveyance, mobilization to all location as required including all operations for making approach road to particular working place. Payment shall be made after completion of particular Location. Also after completion of the whole tower line work, the Agency must have to remove all platforms. approach road etc after instruction of the GETCO officers.	Per Location	18.00		
TOTAL COST PART - C, SCHEDULE - 01+02					
TOTAL AMOUNT (Part-I + Part-II + Part-III) Rs					

(Grand Total in Words _____)
(NOTE: The rates should be inclusive of All Taxes, Duties, Fees, Cess etc and all incidental charges but exclusive GST).

s/d

Signature & Seal of Contractor

Executive Engineer (E) Deendayal Port Authorit

Scope of Work**

The project involves the modification and upgradation of the existing EHV transmission line to ensure reliability and enhance operational efficiency. The selected contractor shall undertake the following major activities:

A. Design & Engineering

- Conducting a detailed survey, feasibility study, and site assessment for the modification work.
- Marking of new tower locations based on the approved survey.
- Preparation of design calculations and detailed engineering drawings.
- Structural design and analysis for foundation and tower modifications.
- Coordination with relevant authorities for necessary design approvals.
- Preparation of bill of materials (BOM) and detailed project execution plans.

B. Supply of Materials

- Procurement and supply of ACSR Panther conductor and GI Earthwire-7/3.15mm, along with all necessary components.
- Supply of insulators, hardware fittings, clamps, and fasteners.
- Supply of tower members, structures, and foundation reinforcement materials.
- Ensuring quality control measures during procurement to meet project standards.

C. Erection & Construction Work

- Mobilization of manpower, machinery, and equipment for execution.
- Site preparation, excavation, and construction of tower foundations.
- Dismantling of 17 existing towers**as per approved methodology and disposal of dismantled materials as instructed.
- Supply and erection of 18 new transmission line towers**, including assembly and bolting of structures.
- Conductor stringing, tensioning, and proper sagging of ACSR Panther conductor and GI Earth wire.
- Implementation of safety measures during erection and construction.

D. Testing & Commissioning

- Pre-commissioning inspections and functional testing of the modified transmission line.
- Conducting electrical and mechanical integrity checks as per industry standards.
- Ensuring compliance with safety, quality, and environmental guidelines.
- Final commissioning, system integration, and handover to the designated authority.

However, before disconnection & dismantling of the exiting DC overhead 66kV Transmission Tower. The Switching of power from existing to new one shall be with minimum power interruption to avoid Port's Operational Inconvenience.

Executive Engineer (E)
Deendayal Port Authority