

Corrigendum to NIT No. - 48444 / Enquiry No. – 92G2000133

TECHNICAL

1. Corrigendum to Technical Specification / BOQ shall be as per Annexure attached, separate for both BALLIA and SHAMLI projects.

PQR

1. Corrigendum to PQR shall be as per Annexure attached, common for both BALLIA and SHAMLI projects.

COMMERCIAL

1. Clause 17 of STC to be read as follows: - Comparative statement shall be prepared and evaluated on Total Cost to BHEL (after taking input credit for GST) for the complete package (i. e. 132 kV and 220 kV for both the projects). However, POs/WOs shall be placed separately for 132 kV and 220 kV for each projects (i. e 4 POs and 4 WOs). In addition to above, vendors are requested to note that prices should be quoted in such a manner that prices of services portion should be in line with following:

- a) **For 132 kV (for both Ballia and Shamli)** : Total Cost to BHEL for services portion (after taking input credit for GST) should not be less than 20% of Total Cost to BHEL (after taking input credit for GST) for both supply and services taken together.
- b) **For 220 kV (for both Ballia and Shamli)** : Total Cost to BHEL for services portion (after taking input credit for GST) should not be less than 10% of Total Cost to BHEL (after taking input credit for GST) for both supply and services taken together.

In case vendor becomes L-1 and it found that based on quoted prices, Total Cost to BHEL for services portion (after taking input credit for GST) works out to less than % mentioned above (i. e. 20 % or 10% as the case may be) for purpose of award/negotiation as the case may be, BHEL reserves the right to reduce the unit price for supply portion on pro rata basis and increase the unit price of services portion on pro rata basis to maintain the requirement in % as mentioned above.

Due date has been extended up to 25.10.2019. You are requested to please ensure submission of offer before due date.

अर्चना
5/10/19

**TECHNICAL REQUIREMENT OF EQUIPMENT for UPPTCL Ballia & UPPTCL
Shamli Projects**

(A). OPERATIONAL EXPERIENCE

(A.1). 220 kV Grade XLPE Power Cables

The cable shall be from the manufacturer who must have designed, manufactured, type tested as per relevant IEC/IS or equivalent standard and supplied in a single contract at least 1(one) km of single core, 220kV or higher grade XLPE insulated cable which must be in operation for at least 3 (three) years in tropical climate as on the date of bid opening i.e. 17.04.2018. However, in case of equipment manufactured in India under valid foreign collaboration, operating experience in tropical climate of offered collaborator's equipment, shall also be acceptable provided copy of valid collaboration agreement for the offered equipment is submitted with the proposal.

Performance certificate from end user shall be submitted.

(or)

Bidder, whose cables offered, should have designed, manufactured and supplied single core, 220kV or higher grade XLPE insulated cable to UPPTCL in earlier projects.

Documentary evidence of supply of cable shall be submitted.

(A.2). 132 kV Grade XLPE Power Cables

The cable shall be from the manufacturer who must have designed, manufactured, type tested as per relevant IEC/IS or equivalent standard and supplied in a single contract at least 1 (one) km of single core, 132kV or higher grade XLPE insulated cable which must be in operation for at least 3 (three) years in tropical climate as on the date of bid opening i.e. 17.04.2018. However, in case of equipment manufactured in India under valid foreign collaboration, operating experience in tropical climate of offered collaborator's equipment, shall also be acceptable provided copy of valid collaboration agreement for the offered equipment is submitted with the proposal.

Performance certificate from end user shall be submitted.

(or)

Bidder, whose cables offered should have designed, manufactured and supplied single core, 132kV or higher grade XLPE insulated cable to UPPTCL in earlier projects.

Documentary evidence of supply of cable shall be submitted

(B). TESTING FACILITIES

The manufacturer must have all necessary facilities at their works for carrying out such routine and acceptance tests as prescribed in the relevant IEC/IS and any other routine and acceptance test as specified in the specification.

Documentary evidence of existence of such facilities shall be submitted.

E. Anandh 23/1

Sanyal

3120011

Murthy

Murthy

**Amendment in Specification : TB-404-316-002 Rev.01 of UPPCTL Ballia GIS s/s
(for 220kV & 132 kV EHV Cables)**

Sl. No	TS Clause No:	Existing clause	Revised clause
1	Section 1		Clause 1.14 added 1.14 TYPE TESTING Bidder shall ensure that the cables and accessories procured have valid type test certificates as per relevant IS/IEC from CPRI or any other accredited testing lab. Type test certificates for EHV XLPE Cable & Cable Jointing/ Termination Accessories for working voltage of 220kV/132kV shall not be more than five years old as on 07.04.18. In those cases, where type test certificates are of dates earlier than 07.04.13, bidder/manufacturer shall carry out the type tests at CPRI or any other accredited testing lab prior to dispatch of equipment with no commercial implication to BHEL/UPPTCL. Type tests and special tests to be conducted/ valid certificates to be submitted shall be governed as follows, If type tests and special tests certificates (applicable for flammability test, acid gas generation test, smoke density test, accelerated water absorption test, ultra violet radiation test, oxygen index test, rodent & termite repulsion test, drum length/ surface finish check by re-winding, and any other tests) are not available for any size of cable, same shall be conducted by bidder at his own cost from CPRI or any other accredited testing lab. There shall not be any delivery and cost implication on account of this.

[Handwritten signature]

[Handwritten signature]

**Amendment in Specification : TB-404-316-002 Rev.01 of UPPCTL Ballia GIS s/s
(for 220kV & 132 kV EHV Cables)**

Sl. No	TS Clause No:	Existing clause	Revised clause
			In case any of Type tests have not been conducted on the offered design of 220 kV /132kV XLPE cables & its accessories, there has been a change in the design after the type tests, the requisite tests shall be conducted by bidder on the offered cable and accessories without any extra cost and delivery impact to BHEL/UPPTCL.
2	Section -IV (b) 245 kV XLPE Cable terminations and jointing kits Clause 5.3) Make of cable kits		Type tests reports to be submitted for 220kV /132kV XLPE Cable & Accessories should have been conducted on the offered cable and cable termination kits jointly. ADD AT END OF PARAGRAPH: Bidder shall offer cable termination kits of make specified as per clause 5.3 of TS. In case some other makes of cable termination kit is meeting technical specification requirement and has been successfully type tested along with offered cable, and valid type test reports are available with bidder, the same make cable termination kit is acceptable, subject to vendor approval from end customer (UPPTCL).
3	Section 1, clause 1.6- Technical requirement of equipment	As per Annexure-I	"As per Annexure-PQR"

Vinod Singh

Prakash

Amendment in Specification : TB-406-316-18 Rev.00 of UPPCTL SHAMLI GIS S/s			
Sl. No	TS Clause No:	Existing clause	Revised clause
1	BOQ in enquiry	COPPER (TINNED) CONDUCTOR 76/132KV SINGLE CORE CORRUGATED ALUMINUM SHEATH, 630 SQMM SIZE	REPLACE AS: COPPER CONDUCTOR 76/132KV SINGLE CORE CORRUGATED ALUMINUM SHEATH, 630 SQMM SIZE
2	Section 1; Clause 1.6) Type testing; Last paragraph	"Type test as per BOQ may be carried out if asked by UPPCTL. But will be payable only if bidder is already having valid reports for the same"	REPLACE AS: "Type tests reports to be submitted for 220kV XLPE Cable & Accessories should have been conducted on the offered cable and cable termination kits jointly"
3	Section 1; Clause 1.7) Prequalifying conditions for supply of equipment	A. Operational Experience The cable shall be from the manufacturer who must have designed, manufactured, type tested and supplied in a single contract at least 15 (fifteen) km of single core, 132kV or higher grade XLPE insulated cable which must be in operation for at least 3 (three) years as on the date of 07.09.18. B. Manufacturing Experience The indigenous manufacturers or their foreign collaborator must have manufactured at least 20% of the specified quantities of each item of identical or similar equipment C. Testing Facilities The manufacturer must have all necessary facilities at their works for carrying out such routine and acceptance tests as prescribed in the relevant ISS/IEC and any other routine and acceptance test as specified in the specification. Documentary evidence of existence of such facilities will be submitted along with the proposal	REPLACE AS: "Refer Annexure-PQR :Technical requirement of equipment for UPPCTL Ballia & UPPCTL Shamli Project"

21. August 2018
Saurabh

Amendment in Specification : TB-406-316-18 Rev.00 of UPPCTL SHAMLI GIS S/s																														
Sl. No		TS Clause No:	Existing clause			Revised clause																								
			D. Type Test for Indigenous or Fully Imported Equipments The offered equipments must have been fully type tested as per relevant ISS and/or any other specified international standards, during the last 5 years period to be reckoned from the date of 07.09.2018. Photo copy of such type test reports/ certificates must be submitted along with the proposal. the test certificates of proto type manufactured and tested by foreign collaborators of the tenderers at their works shall not be acceptable for indigenously manufactured equipment																											
4	Section 1; Clause 1.4, Annexure- BOQ/132kV, BOQ for 132kV Cable & Accessories		<table><thead><tr><th>Sl. No.</th><th>Item Description</th><th>Unit</th><th>Qty.</th></tr></thead><tbody><tr><td>1B2</td><td>1nox3 phase link box with SVL(sheath voltage limiter) at line end</td><td>Set</td><td>11</td></tr></tbody></table>	Sl. No.	Item Description	Unit	Qty.	1B2	1nox3 phase link box with SVL(sheath voltage limiter) at line end	Set	11				REPLACE AS: <table><thead><tr><th>Sl. No.</th><th>Item Description</th><th>Unit</th><th>Qty.</th></tr></thead><tbody><tr><td>1B2</td><td>3nox1 phase link box with SVL(sheath voltage limiter) at line end</td><td>Set</td><td>11</td></tr></tbody></table>				Sl. No.	Item Description	Unit	Qty.	1B2	3nox1 phase link box with SVL(sheath voltage limiter) at line end	Set	11				
Sl. No.	Item Description	Unit	Qty.																											
1B2	1nox3 phase link box with SVL(sheath voltage limiter) at line end	Set	11																											
Sl. No.	Item Description	Unit	Qty.																											
1B2	3nox1 phase link box with SVL(sheath voltage limiter) at line end	Set	11																											
5	Section 1; Clause 1.4, Annexure- BOQ/132kV, BOQ for 132kV Cable & Accessories		<table><thead><tr><th>Sl. No.</th><th>Item Description</th><th>Unit</th><th>Qty.</th></tr></thead><tbody><tr><td>1C2</td><td>Type tests for 1Cx630sqmm, 132kV XLPE, Cu conductor cable</td><td></td><td></td></tr><tr><td>1C2.1</td><td>Bending test on the cable followed by installation of accessories and a partial discharge test at ambient temperature.</td><td>Lot</td><td>1</td></tr><tr><td>1C2.2</td><td>Tan delta measurement.</td><td>Lot</td><td>1</td></tr><tr><td>1C2.3</td><td>Heating cycle voltage test</td><td>Lot</td><td>1</td></tr></tbody></table>	Sl. No.	Item Description	Unit	Qty.	1C2	Type tests for 1Cx630sqmm, 132kV XLPE, Cu conductor cable			1C2.1	Bending test on the cable followed by installation of accessories and a partial discharge test at ambient temperature.	Lot	1	1C2.2	Tan delta measurement.	Lot	1	1C2.3	Heating cycle voltage test	Lot	1				All type tests list is deleted from BOQ, PI & TS.			
Sl. No.	Item Description	Unit	Qty.																											
1C2	Type tests for 1Cx630sqmm, 132kV XLPE, Cu conductor cable																													
1C2.1	Bending test on the cable followed by installation of accessories and a partial discharge test at ambient temperature.	Lot	1																											
1C2.2	Tan delta measurement.	Lot	1																											
1C2.3	Heating cycle voltage test	Lot	1																											

21. अगस्त 2018
 20/1/2018

Rev. 1

Amendment in Specification : TB-406-316-18 Rev.00 of UPPCTL SHAMLI GIS S/s						
TS Clause No:		Existing clause			Revised clause	
		1C2.4	Partial discharge test at ambient temperature and high temperature	Lot	1	
		1C2.5	Lightning impulse voltage test followed by a power frequency voltage test.	Lot	1	
		1C2.6	Tests of outer protection for buried joints.	Lot	1	
		1C2.7	Examination of the cable system with cable and accessories shall be carried out after completion of the tests above	Lot	1	
		1C2.8	Non electrical type tests on cable as per cl. 12.5 of IEC 62067	Lot	1	
		1C3	Special tests for 1Cx630sqmm, 132kV XLPE, Cu conductor cable			
		1C3.1	Conductor examination as per clause 10.4 of IEC-62067.	Lot	1	
		1C3.2	Hot set test for XLPE insulation as per clause 10.9 of IEC 62067.	Lot	1	
		1C4	Type test on cable accessories as per IEC			
		1C4.1	Partial discharge test (Clause 9.2 of IEC 60840: 2004)	Lot	1	
		1C4.2	Voltage test (Clause 9.3 of IEC 60840: 2004)	Lot	1	
6	Section 1; Clause 1.4, Annexure- BOQ/132kV, BOQ for 132kV Cable & Accessories				REPLACE AS:	
		Sl. No.	Item Description	Unit	Qty.	
		1D2	Installation of 1nox3phase link box with SVL(sheath voltage limiter) at weatherproof cable box of transformer along with installation of metallic screen bonding/	Set	11	Installation of 3nox1phase link box with SVL(sheath voltage limiter) at weatherproof cable box of transformer along with installation of metallic screen bonding/

A. HANUJ 7/3/21

Amendment in Specification : TB-406-316-18 Rev.00 of UPPCTL SHAMLI GIS S/s				
Sl. No	TS Clause No:	Existing clause		Revised clause
			earthing cable along with accessories to complete earthing	
7	Section 2; Sub section - IV B 145 kV XLPE Cable terminations Clause 5.3) Make of cable kits			ADD AT END OF PARAGRAPH: Bidder shall offer cable termination kits of make specified as per clause 5.3 of TS, In case some other makes of cable termination kit is meeting technical specification requirement and has been successfully type tested along with offered cable, and valid type test reports are available with bidder, the same make cable termination kit is acceptable, subject to vendor approval from end customer (UPPTCL).

A. Arun Kumar
General

Amendment in Specification : TB-406-316-17 Rev.00 of UPPCTL SHAMLI GIS S/s			
Sl. No	TS Clause No:	Existing clause	Revised clause
1	BOQ in enquiry	COPPER (TINNED) CONDUCTOR 127/220KV SINGLE CORE CORRUGATED ALUMINIUM SHEATH, 1200 SQMM SIZE	REPLACE AS: COPPER CONDUCTOR 127/220KV SINGLE CORE CORRUGATED ALUMINIUM SHEATH, 1200 SQMM SIZE
2	Section 1; Clause 1.6) Type testing; Last paragraph	"Type test as per BOQ may be carried out if asked by UPPCTL. But will be payable only if bidder is already having valid reports for the same"	REPLACE AS: "Type tests reports to be submitted for 220kV XLPE Cable & Accessories should have been conducted on the offered cable and cable termination kits jointly"
3	Section 1; Clause 1.7) Prequalifying conditions for supply of equipment	A. Operational Experience The cable shall be from the manufacturer who must have designed, manufactured, type tested and supplied in a single contract at least 15 (fifteen) km of single core, 220kV or higher grade XLPE insulated cable which must be in operation for at least 3 (three) years as on the date of 07.09.18. B. Manufacturing Experience The indigenous manufacturers or their foreign collaborator must have manufactured at least 20% of the specified quantities of each item of identical or similar equipment C. Testing Facilities The manufacturer must have all necessary facilities at their works for carrying out such routine and acceptance tests as prescribed in the relevant ISS/IEC and any other routine and acceptance test as specified in the specification. Documentary evidence of existence of such facilities will be submitted along with the proposal D. Type Test for Indigenous or Fully Imported Equipments The offered equipments must have been fully type tested as per relevant ISS and/or any other specified international standards, during the last 5 years period to be reckoned from the date of 07.09.2018. Photo copy of	REPLACE AS: "Refer Annexure-PQR :Technical requirement of equipment for UPPCTL Ballia & UPPCTL Shamli Project"

Amendment in Specification : TB-406-316-17 Rev.00 of UPPCTL SHAMLI GIS S/s																																					
Sl. No	TS Clause No:	Existing clause		Revised clause																																	
		such type test reports/ certificates must be submitted along with the proposal. the test certificates of proto type manufactured and tested by foreign collaborators of the tenderers at their works shall not be acceptable for indigenously manufactured equipment																																			
4	Section 1; Clause 1.4, Annexure- BOQ/220kV, BOQ for 220kV Cable & Accessories	<table><tr><th>Sl. No.</th><th>Item Description</th><th>Unit</th><th>Qty.</th></tr><tr><td>2B2</td><td>1nox3 phase link box with SVL(sheath voltage limiter) at line end</td><td>Set</td><td>6</td></tr></table>	Sl. No.	Item Description	Unit	Qty.	2B2	1nox3 phase link box with SVL(sheath voltage limiter) at line end	Set	6	REPLACE AS: <table><tr><th>Sl. No.</th><th>Item Description</th><th>Unit</th><th>Qty.</th></tr><tr><td>2B2</td><td>3nox1 phase link box with SVL(sheath voltage limiter) at line end</td><td>Set</td><td>6</td></tr></table>			Sl. No.	Item Description	Unit	Qty.	2B2	3nox1 phase link box with SVL(sheath voltage limiter) at line end	Set	6																
Sl. No.	Item Description	Unit	Qty.																																		
2B2	1nox3 phase link box with SVL(sheath voltage limiter) at line end	Set	6																																		
Sl. No.	Item Description	Unit	Qty.																																		
2B2	3nox1 phase link box with SVL(sheath voltage limiter) at line end	Set	6																																		
5	Section 1; Clause 1.4, Annexure- BOQ/220kV, BOQ for 220kV Cable & Accessories	<table><tr><th>Sl. No.</th><th>Item Description</th><th>Unit</th><th>Qty.</th></tr><tr><td>2C2</td><td>Type tests for 1Cx1200sqmm, 220kV XLPE, Cu conductor cable</td><td></td><td></td></tr><tr><td>2C2.1</td><td>Bending test on the cable followed by installation of accessories and a partial discharge test at ambient temperature.</td><td>Lot</td><td>1</td></tr><tr><td>2C2.2</td><td>Tan delta measurement.</td><td>Lot</td><td>1</td></tr><tr><td>2C2.3</td><td>Heating cycle voltage test</td><td>Lot</td><td>1</td></tr><tr><td>2C2.4</td><td>Partial discharge test at ambient temperature and high temperature</td><td>Lot</td><td>1</td></tr><tr><td>2C2.5</td><td>Lightning impulse voltage test followed by a power frequency voltage test.</td><td>Lot</td><td>1</td></tr><tr><td>2C2.6</td><td>Tests of outer protection for buried joints.</td><td>Lot</td><td>1</td></tr></table>		Sl. No.	Item Description	Unit	Qty.	2C2	Type tests for 1Cx1200sqmm, 220kV XLPE, Cu conductor cable			2C2.1	Bending test on the cable followed by installation of accessories and a partial discharge test at ambient temperature.	Lot	1	2C2.2	Tan delta measurement.	Lot	1	2C2.3	Heating cycle voltage test	Lot	1	2C2.4	Partial discharge test at ambient temperature and high temperature	Lot	1	2C2.5	Lightning impulse voltage test followed by a power frequency voltage test.	Lot	1	2C2.6	Tests of outer protection for buried joints.	Lot	1	All type tests list is deleted from BOQ, PI & TS.	
Sl. No.	Item Description	Unit	Qty.																																		
2C2	Type tests for 1Cx1200sqmm, 220kV XLPE, Cu conductor cable																																				
2C2.1	Bending test on the cable followed by installation of accessories and a partial discharge test at ambient temperature.	Lot	1																																		
2C2.2	Tan delta measurement.	Lot	1																																		
2C2.3	Heating cycle voltage test	Lot	1																																		
2C2.4	Partial discharge test at ambient temperature and high temperature	Lot	1																																		
2C2.5	Lightning impulse voltage test followed by a power frequency voltage test.	Lot	1																																		
2C2.6	Tests of outer protection for buried joints.	Lot	1																																		

A. Pruthi 7/3/21

Saurabh

Amendment in Specification : TB-406-316-17 Rev.00 of UPPCTL SHAMLI GIS S/s

Existing clause		Revised clause			
Sl. No	TS Clause No:				
		2C2.7	Examination of the cable system with cable and accessories shall be carried out after completion of the tests above	Lot	1
		2C2.8	Non electrical type tests on cable as per cl. 12.5 of IEC 62067	Lot	1
		2C3	Special tests for 1Cx1200sqmm, 220kV XLPE, Cu conductor cable		
		2C3.1	Conductor examination as per clause 10.4 of IEC-62067.	Lot	1
		2C3.2	Hot set test for XLPE insulation as per clause 10.9 of IEC 62067.	Lot	1
		2C4	Type test on cable accessories as per IEC		
		2C4.1	Partial discharge test (Clause 9.2 of IEC 60840: 2004)	Lot	1
		2C4.2	Voltage test (Clause 9.3 of IEC 60840: 2004)	Lot	1
6	Section 1; Clause 1.4, Annexure- BOQ/220kV, BOQ for 220kV Cable & Accessories	REPLACE AS:			
		Sl. No.	Item Description	Unit	Qty.
		2D2	Installation of 1nox3phase link box with SVL(sheath voltage limiter) along with installation of metallic screen bonding/ earthing cable along with accessories to complete earthing	Set	6
		2D2	Installation of 3nox1phase link box with SVL(sheath voltage limiter) along with installation of metallic screen bonding/ earthing cable along with accessories to complete earthing	Set	6




Amendment in Specification : TB-406-316-17 Rev.00 of UPPCTL SHAMLI GIS S/s

Sl. No	TS Clause No:	Existing clause	Revised clause
7	Section 2; sub section - IV (b) 245 kV XLPE Cable terminations and jointing kits Clause 5.3) Make of cable kits		ADD AT END OF PARAGRAPH: Bidder shall offer cable termination kits of make specified as per clause 5.3 of TS, In case some other makes of cable termination kit is meeting technical specification requirement and has been successfully type tested along with offered cable, and valid type test reports are available with bidder, the same make cable termination kit is acceptable, subject to vendor approval from end customer (UPPTCL).

A. Anurag 3/3/21 Sawlewa