

NEPAL ELECTRICITY AUTHORITY

Project Management Directorate

Marsyangdi-Kathmandu 220 kV Transmission Line Project

ICB-PMD-MKTLP-072/073-03: Design, Supply, Installation and Commissioning of 220 kV Air insulated Substation (AIS) in Matatirtha, Kathmandu and 220kV Gas Insulated Substation (GIS) in Markichowk, Marsyangdi

AMENDMENT NO. 1 TO BIDDING DOCUMENT

S.No	Reference of Document	Existing provision	Amended as																
1.	I-A Part-A : EMPLOYER ASSESSED QUANTITIES, S.NO.- 6. Schedule No.1, Volume-III	<table border="1"> <tr> <td>6.0</td><td>245 kV Bust Post Insulator (Except auxiliary buses of transformer)</td><td>Nos</td><td>40</td></tr> </table>	6.0	245 kV Bust Post Insulator (Except auxiliary buses of transformer)	Nos	40	<table border="1"> <tr> <td>6.0</td><td>245 kV Bust Post Insulator (Except auxiliary buses of transformer)</td><td>Nos</td><td>90</td></tr> </table>	6.0	245 kV Bust Post Insulator (Except auxiliary buses of transformer)	Nos	90								
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2	I-A, Part-B: CONTRACTOR ASSESSED QUANTITIES, S.NO A (d). Schedule No.1, 2 & 4(a) Volume-III	New item added	<table border="1"> <tr> <td>d</td><td>Erection Hardware etc for 36 kV equipments & LT Transformer connection</td><td>set</td><td>1</td></tr> </table>	d	Erection Hardware etc for 36 kV equipments & LT Transformer connection	set	1												
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3	Clause No 7.3 (o), Chapter 12: SE, Rev.no.00 Technical Specification, Volume-II	<table border="1"> <tr> <th>Sl. No.</th><th>Description</th><th>245 kV</th><th>145 kV</th></tr> <tr> <td>O</td><td>Minimum total creepage distance for Heavy Pollution (mm)</td><td>6125</td><td>3165</td></tr> </table>	Sl. No.	Description	245 kV	145 kV	O	Minimum total creepage distance for Heavy Pollution (mm)	6125	3165	<table border="1"> <tr> <th>Sl. No.</th><th>Description</th><th>245 kV</th><th>145 kV</th></tr> <tr> <td>O</td><td>Minimum total creepage distance for Heavy Pollution (mm)</td><td>6125</td><td>3625</td></tr> </table>	Sl. No.	Description	245 kV	145 kV	O	Minimum total creepage distance for Heavy Pollution (mm)	6125	3625
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4	Chapter 3: Switchgear, Instrument Transformer, Rev.no.00 Technical Specification,	Table IIA (Requirements for 245 kV Current Transformers) for Matatirtha substation added	Table IIF (Matatirtha substation) Added for requirements for 245 kV Current Transformers. Above mentioned Table is enclosed at Annexure-																



	Volume-II		I alongwith subject amendment.
5	Chapter 3: Switchgear, Instrument Transformer, Rev.no.00 Technical Specification, Volume-II		Table IIG (Marsyangdi substation) Added for requirements for 145 kV Current Transformers. Above mentioned Table is enclosed at Annexure-II alongwith subject amendment.
6	Clause no 2.2.2.1.1	<p>c) 220 kV Auxiliary Bus to connect spare unit of Transformer.</p> <ul style="list-style-type: none"> i. One number 1-phase (isolated) SF6 ducts inside GIS hall (up to outer edge of wall) for connection of spare unit with two ICT bays. ii. End Piece module with the test link for Future extension of Auxiliary Bus module at end. The end piece module may be designed in such a way so that future GIS module may be tested without extending voltage to existing bus by removing the test link. iii. Gas monitoring devices, barriers, pressure switches, UHF based Partial Discharge measurement Sensors etc. as required iv. Local Bay control cubicle 	<p>c) 245 kV Auxiliary Bus to connect spare unit of Transformer.</p> <ul style="list-style-type: none"> i) One number 1-phase (isolated) SF6 ducts inside GIS hall (up to outer edge of wall) for connection of spare unit with two ICT bays. ii) One nos. 1-phases, 1600A, 40kA individual operated safety grounding switches complete with manual and motor driven operating mechanisms. iii) End Piece module with the test link for Future extension of Auxiliary Bus module at end. The end piece module may be designed in such a way so that future GIS module may be tested without extending voltage to existing bus by removing the test link. iv) Gas monitoring devices, barriers, pressure switches, UHF based Partial Discharge measurement Sensors etc. as required v) Local Bay control cubicle



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ANNEXURE-I OF AMENDMENT NUMBER 1 TO BIDDING DOCUMENT

TABLE – II F (Matathirtha Substation)

REQUIREMENTS FOR 245 KV CURRENT TRANSFORMERS (5 Core CT)

Core No	Application	Current ration	Output burden (VA)	Accuracy class As per IEC	Max. CT Knee Point Voltage V _k	Max CT Secondary winding resistance (Ohm)	Max Excitation current at V _k (in mA)
1	BUS DIFF CHECK	1600-1000/1	-		1600/1000	8/ 5	25 on 1600/1 Tap 40 on 1000/1 Tap
2	BUS DIFF MAIN	1600-1000/1	-		1600/1000	8/ 5	25 on 1600/1 Tap 40 on 1000/1 Tap
3	METERING	1600-1000/1	20	0.2S	-		
4	TRANS BACKUP/LINE PROTN.	1600-1000/1	-		1600/1000	8/ 5	25 on 1600/1 Tap 40 on 1000/1 Tap
5	TRANS DIFF/LINE PROTN.	1600-1000/1	-		1600/1000	8/ 5	25 on 1600/1 Tap 40 on 1000/1 Tap

All relaying CTs shall be of accuracy class TPS as per IEC 60044-1



ANNEXURE-I OF AMENDMENT NUMBER 1 TO BIDDING DOCUMENT

TABLE – II G(Marsyangdi Substation)

REQUIREMENTS FOR 145 KV CURRENT TRANSFORMERS (5 Core CT)

Core No	Application	Current ration	Output burden (VA)	Accuracy class As per IEC	Max. CT Knee Point Voltage V _k	Max CT Secondary winding resistance (Ohm)	Max Excitation current at V _k (in mA)
1	BUS DIFF CHECK	800-600-300/1	-		800 /600 /300	8/ 6/ 3	25on 800/1 Tap 33.33 on 600/1 Tap 66.66 on 600/1 Tap
2	BUS DIFF MAIN	800-600-300/1	-		800/ 600/ 300	8/ 6/ 3	25on 800/1 Tap 33.33 on 600/1 Tap 66.66 on 600/1 Tap
3	METERING	800-600-300/1	20	0.2S	-		
4	TRANS BACKUP/LINE PROTN.	800-600-300/1	-		800/ 600/ 300	8/ 6/ 3	25on 800/1 Tap 33.33 on 600/1 Tap 66.66 on 600/1 Tap
5	TRANS DIFF/LINE PROTN.	800-600-300/1	-		800/ 600/ 300	8/ 6/ 3	25on 800/1 Tap 33.33 on 600/1 Tap 66.66 on 600/1 Tap

All relaying CTs shall be of accuracy class TPS as per IEC 60044-1

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