

2 X 500 MW NTPL TUTICORIN FGD - OIL FILLED SERVICE TRANSFORMER BOQ-CUM-PRICE SCHEDULE					
Sr. No.	Item code	Item Description	Unit	Quantity	Quoted/Not quoted
1.0	302-11069-A	2.5MVA, 11kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=6%, Dyn11, OFF Circuit taps $\pm 5\%$ in steps of 2.5% (with cable box type HV, with bus-duct type LV)	NO.	4	
2.0	302-11000-B	OIL FILLED SERVICE TRANSFORMER - Mandatory Spares Details as per Annexure-I	SET	1	
3.0	302-11045-A	EXTRA OIL (10%) IN SEALED NON RETURNABLE STANDARD DRUMS (Type & no. of Transformers, as per Annexure-II)	LOT	1	
4.0	302-11051-A	TYPE TEST (Details as per Annexure-III)	LOT	1	
		Total (1 to 4)			
NOTES					
1	BIDDER TO NOTE THAT THE COST OF TRANSFORMER SHALL INCLUDE THE COST OF ALL ROUTINE TESTS WHICH SHALL BE CARRIED OUT ON ALL TRANSFORMERS WITHOUT ANY ADDITIONAL COST. BIDDER SHALL QUOTE ACCORDINGLY.				
2	BIDDER TO NOTE THAT THE COST OF TRANSFORMER SHALL INCLUDE THE COST OF ALL SPECIAL TESTS (EXCEPT SHORT CIRCUIT TEST DETAILS OF WHICH ARE MENTIONED IN SL.NO. 4 BELOW) WHICH SHALL BE CARRIED OUT ON ONE TRANSFORMER OF EACH TYPE AND RATING WITHOUT ANY ADDITIONAL COST. BIDDER SHALL QUOTE ACCORDINGLY.				
3	BIDDER SHALL SUPPLY 10% EXTRA OIL AS PER THE QUOTED PRICE. QUANTITY OF EXTRA OIL SHALL BE SUBJECT TO APPROVAL DURING DETAIL ENGINEERING.				
4	**CHARGES FOR CARRYING OUT SHORT CIRCUIT TEST SHALL BE PAYABLE BASED ON ACTUAL INVOICE FROM DESIGNATED LABORATORIES (CPRI, BHOPAL/ CPRI, BANGLORE / ERDA, VADODARA) WITH AN ADDITIONAL LUMP SUM AMOUNT OF 5% OF EX-WORKS PRICE OF TRANSFORMER BEING TESTED TO COVER HANDLING COSTS (TRANSPORTATION, INSURANCE ETC.).				
5	IN CASE TYPE TESTS ARE WAIVED, THE TYPE TEST CHARGES SHALL NOT BE PAYABLE TO THE BIDDER				
6	CHARGES FOR ALL TYPE TESTS EXCEPT SHORT CIRCUIT TEST SHALL BE CONSIDERED FOR PRICE COMPARISONS PURPOSE.				
7	IN CASE ANY OF THE TYPE AND SPECIAL TESTS ARE REQUIRED TO BE REPEATED THE SAME SHALL BE CARRIED OUT BY THE VENDOR WITHOUT ANY COMMERCIAL / DELIVERY IMPLICATION TO BHEL.				

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BOQ-CUM-PRICE SCHEDULE (MANDATORY SPARE)

ANNEXURE-I

Sr. No.	Item code	Item Description	Unit	Quantity	Quoted/Not quoted
1.0		HV Bushing with metal parts, connectors and gaskets			
a		2.5MVA, 11kV/3.45kV	NO.	2	
2.0		LV bushing with metal parts, connectors and gaskets			
a		2.5MVA, 11kV/3.45kV	NO.	2	
3.0		LV neutral bushing with metal parts, connectors and gaskets			
a		2.5MVA, 11kV/3.45kV	NO.	1	
4.0		Bushing CT (HV for winding temperature indicator)			
a		2.5MVA, 11kV/3.45kV	SET	1	
5.0		Bushing CT (LV for winding temperature indicator)			
a		2.5MVA, 11kV/3.45kV	SET	1	
6.0		Neutral Bushing CT (LV) - PS CLASS			
a		2.5MVA, 11kV/3.45kV	NO.	1	
7.0		Complete set of gaskets			
a		2.5MVA, 11kV/3.45kV	SET	1	
8.0		Winding Temperature Indicator with all accessories			
a		2.5MVA, 11kV/3.45kV	NO.	1	
9.0		Dial type Oil Temperature Indicator with all accessories			
a		2.5MVA, 11kV/3.45kV	NO.	1	

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BOQ-CUM-PRICE SCHEDULE (MANDATORY SPARE)

ANNEXURE-I

Sr. No.	Item code	Item Description	Unit	Quantity	Quoted/Not quoted
10.0		Pressure Relief Device			
a		2.5MVA, 11kV/3.45kV	NO.	1	
11.0		Magnetic Oil Level Gauge			
a		2.5MVA, 11kV/3.45kV	NO.	1	
12.0		Buchholz Relay			
a		2.5MVA, 11kV/3.45kV	NO.	1	
13.0		Silica Gel Breather			
a		2.5MVA, 11kV/3.45kV	NO.	1	
14.0		Prismatic Oil level gauge			
a		2.5MVA, 11kV/3.45kV	NO.	1	
15.0		Power Contactor			
a		2.5MVA, 11kV/3.45kV	NO.	1	
16.0		Control Contactor			
a		2.5MVA, 11kV/3.45kV	NO.	1	
17.0		Set of valves			
a		2.5MVA, 11kV/3.45kV	SET	1	
Total					

NOTE:

- One set corresponds to actual quantity of components and devices as installed for the equipment at Site required for 1 complete transformer

2 X 500 MW NTPL TUTICORIN FGD - OIL FILLED SERVICE TRANSFORMER**BOQ-CUM-PRICE SCHEDULE (EXTRA OIL)**

ANNEXURE-II

Sr. No.	Item Description	Unit	Quantity	Quoted/Not quoted	
	EXTRA OIL (10%) IN SEALED NON RETURNABLE STANDARD DRUMS (Type & no. of Transformers, as below)				
1.0	2.5MVA, 11kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=6%, Dyn11, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV)	NO.	4		
Total					

NOTES

1	BIDDER SHALL SUPPLY 10% EXTRA OIL AS PER THE QUOTED PRICE. QUANTITY OF EXTRA OIL SHALL BE SUBJECT TO APPROVAL DURING DETAIL ENGINEERING.
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**2 X 500 MW NTPL TUTICORIN FGD - OIL FILLED SERVICE TRANSFORMER
BOQ-CUM-PRICE SCHEDULE (TYPE TEST)**

ANNEXURE-III

Sr. No.	Description of Type Test	Unit	Quantity	Quoted/Not quoted
1.0	2.5MVA, 11kV/3.45kV, 3 phase, 2 winding, outdoor, ONAN, Z=6%, Dyn11, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV)	NO.		
1.a	TEMPERATURE RISE TEST WITH DISSOLVED GAS ANALYSIS TEST BEFORE & AFTER	NO.	1	
1.b	LIGHTNING IMPULSE ON HV & LV & NEUTRAL (WHERE NEUTRAL IS RESISTANCE GROUNDED)- FULL WAVE & CHOPPED WAVE	NO.	1	
1.c	DEGREE OF PROTECTION FOR M.BOX & CABLE BOX	NO.	1	
1.d	SHORT CIRCUIT TEST (SPECIAL TEST) AS PER IEC 60076-5**	NO.	1	AS PER NOTE 1
Total				

NOTES

- 1 **CHARGES FOR CARRYING OUT SHORT CIRCUIT TEST SHALL BE PAYABLE BASED ON ACTUAL INVOICE FROM DESIGNATED LABORATORIES (CPRI, BHOPAL/ CPRI, BANGLORE / ERDA, VADODARA) WITH AN ADDITIONAL LUMP SUM AMOUNT OF 5% OF EX-WORKS PRICE OF TRANSFORMER BEING TESTED TO COVER HANDLING COSTS (TRANSPORTATION, INSURANCE ETC.).
- 2 IN CASE ANY OF THE TYPE AND SPECIAL TESTS ARE REQUIRED TO BE REPEATED THE SAME SHALL BE CARRIED OUT BY THE VENDOR WITHOUT ANY COMMERCIAL / DELIVERY IMPLICATION TO BHEL.
- 3 VENDOR TO QUOTE FOR EACH TEST.