

TPNODL TP Nothern Odisha Distribution Limited



TP Western Odisha Distribution Limited

Dt: 02.02.2024

CENTRALIZED CONTRACTS GROUP

Response to Pre-Bid Queries [NIT Number: TPCODL/CCG/23-24/1000000534 (Rate Contract for Supply of Pin & Disc Insulators (Polymer) for TPCODL, TPNODL & TPSODL.)

The pre-bid queries as received against the referred tender enquiry and CCG/CEQG (TP-Odisha) responses on the same are placed below:

S. No.	Tender Reference	Description as per Tender Doc.	Pre-Bid Query raised by Bidder	CCG/CEQG (TP-Odisha) response		
A) 33	33 kV Polymeric Composite Pin Insulator					
1	ENG-EHV-1035, CLAUSE NO. 4 (TECHNICAL PARTICULARS)	SL. No. 19- Dia of FRP Rod- 32 mm	The diameter of 32mm for 10KN is not enough to give a mechanical strength of 10KN. The diameter of FRP Rod must be minimum 34mm to meet the required mechanical strength of 10 KN. You are therefore requested to please change the same to 34mm in place of 32mm.	Shall be as per Technical Specifications however better can be accepted		
2	ENG-EHV-1035, CLAUSE NO. 4 (TECHNICAL PARTICULARS)	SL. No. 33- Weight of the insulator- 1.2±0.1 kg	For 33kV Pin Insulator the weight should be minimum 2.3kgs in place of 1.2±0.1 kg.	Weight of insulator to be provided by bidder		
3	ENG-EHV-1035, CLAUSE NO. 5.4	"Bottom end fitting should be single		NA		
4	4.GENERAL TECHNICAL REQUIREMENTS, TECHNICAL PARTICULARS, 33kV Polymeric Pin SL No 19, Dia of FRP Rod page no 32	Dia of FRP Rod 32 mm	Dia of FRP Rod should be 34mm	Shall be as per Technical Specifications however better can be accepted		
B) 33	kV Polymeric Disc I	nsulator 90KN				
1	ENG-EHV-1035, CLAUSE NO. 4	SL. No. 3 (b) - Material of housing weather sheds (silicon content)- Silicon content of minimum 40% by weight	As per PGCIL, GETCO specification and as desired by maximum Indian Utilities the Silicon content is mentioned as	Silicon content of minimum 30% by weight		







Dt: 02.02.2024

TP Nothern Odisha Distribution Limited TP Southern Odisha Distribution Limit CENTRALIZED CONTRACTS GROUP

Response to Pre-Bid Queries NIT Number: TPCODL/CCG/23-24/1000000534

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	(TECHNICAL		minimum 30% by weight, whereas in	
	PARTICULARS)		Technical specification of tender, at	
			some places it is mentioned as 30% and	
			at some places it is mentioned as 40%.	
			You are therefore requested to please	
			mentioned the same as 30% by weight.	
			The length of FRP Rod may vary from	
	ENG-EHV-1035,		one manufacturer to other depending	
2	CLAUSE NO. 4	SL. No. 7(iii) - Length of FRP rod- 440 mm	upon their design and is not a	Length of FRP rod- 440 mm (min.)
	(TECHNICAL PARTICIII ARS)		fixed You are therefore requested to	
	TARTICOLARS		remove this parameter	
			IEC :61109 has not specified any	
	ENC FUE 1025		value for Dry Arcing distance. The	
	ENG-EHV-1035,		creepage distance of insulators is	
3	CLAUSE NO. 4	SL. No. 7(vi) - Dry arc distance- 380 mm	main parameter and must be met as	
	PARTICULARS		per requirements of system voltage.	
			You are therefore requested to	
			remove this parameter also.	Shall be as per Technical Specifications
	4.GENERAL	"Silicon content of	4.GENERAL TECHNICAL	
	TECHNICAL		REQUIREMENTS, TECHNICAL	
	REQUIREMENTS,		PARTICULARS, 33kV Polymeric	
	TECHNICAL		Disc Insulator (90KN & 120KN),	
4	PARTICULARS,		SL No 3 (b) , Material of housing	
	33kV Polymeric		weather sheds (silicon content)	
	Disc Insulator		page 45	
	(90KN & 120KN),			Silicon content of
	SL No 3 (b) ,			minimum 30% by weight



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Dt: 02.02.2024

ern Odisha Distribution Limited TP Southern Odisha Distribution Limited CENTRALIZED CONTRACTS GROUP

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S. No.	Tender Reference	Description as per Tender Doc.	Pre-Bid Query raised by Bidder	CCG/CEQG (TP-Odisha) response
	Material of			
	nousing weather			
	sheds (silicon			
	content) page			
	45			
C) 33	kV Polymeric Disc I	nsulator 120KN		
1	ENG-EHV-1035, CLAUSE NO. 4 (TECHNICAL PARTICULARS)	SL. No. 3 (b) - Material of housing weather sheds (silicon content)- Silicon content of minimum 40% by weight	As per PGCIL, GETCO specification and as desired by maximum Indian Utilities the Silicon content is mentioned as minimum 30% by weight, whereas in technical specifications of tender, at some places it is mentioned as 30% and at some places it is mentioned as 40%. You are therefore requested to please mentioned the same as 30% by weight.	Silicon content of minimum 30% by weight
2	ENG-EHV-1035, CLAUSE NO. 4 (TECHNICAL PARTICULARS)	SL. No. 7(iii) - Length of FRP rod- 440 mm	The length of FRP Rod may vary from one manufacturer to other. The type tests and design tests should be considered enough to prove the electro mechanical suitability of insulators as per requirements of IEC: 61109.	Length of FRP rod- 440 mm (min.)
3	ENG-EHV-1035, CLAUSE NO. 4 (TECHNICAL PARTICULARS)	SL. No. 7(vi) - Dry arc distance- 380 mm	IEC :61109 has not specified any value for Dry Arcing distance. The creepage distance of insulators is main parameter and must be met as per requirements of system voltage. Our insulators are designed & tested as per requirements of IEC:60815 & IEC: 61109.	Shall be as per Technical Specifications
4	Misc	Designation of ball & socket fittings is not mentioned in the technical	It is highy recommended and required that for 120KN load	Designation shall be 16 mm & 20 mm for
		specification	requirement the designation must be 20.	90 KN & 120 KN respectively



TPNØDL TP Nothern Odisha Distribution Limited



Dt: 02.02.2024

CENTRALIZED CONTRACTS GROUP

TPSODL

Response to Pre-Bid Queries NIT Number: TPCODL/CCG/23-24/1000000534

S.	Tender	Description as per Tender Doc.	Pre-Bid Query raised by	CCG/CEQG (TP-Odisha)
No.	Reference		Bidder	response
5	4.GENERAL			
	TECHNICAL			
	REQUIREMENTS,			
	TECHNICAL			
	PARTICULARS,			
	33kV Polymeric			
	DiscInsulator			
	(90KN & 120KN),			
	SL No 3 (b) ,			
	Material of			
	housing weather			
	sheds (silicon			
	content) page	Silicon content of	In 33kV Pin Insulators specification it as mention 30%	Silicon content of
	45	minimum 40% by weight	how come same 33 kv disc insulaotrs 40%	minimum 30% by weight
D) 11	.kV Polymeric Pin Ir	nsulator (5KN)		
			The length of ERP Rod may yany from	
1	ENG-EHV-2027,		one manufacturer to other depending	
	CLAUSE NO. 4	CL No. 20. Longth of EDD and min. 200 mm	upon their design and is not a	Length of EDD red min 200 mm (min)
	(TECHNICAL	SL. No. 20 - Length of FRP rod min 200 mm	parameter which is required to be	Length of FRP rod min 200 mm (min.)
	PARTICULARS)		fixed. You are therefore requested to	
			remove this parameter.	
_		Bottom end fitting should be single	Bottom end fitting is mentioned as	
2	ENG-EHV-2027,	unit without any joints.	single unit without any joints, whereas	Query is not clear.
	CLAUSE NO. 5.4.		in rechnical particulars (SI. No. 5)	SGCI is already mentioned in Technical
			material of End Fittings is mentioned as	Particulars.
			Soci, we wish to mention here that	







Dt: 02.02.2024

TP Nothern Odisha Distribution Limited TP Southern Odisha Distribution Limited CENTRALIZED CONTRACTS GROUP

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S.	Tender	Description as per Tender Doc.	Pre-Bid Query raised by	CCG/CEQG (TP-Odisha)
NO.	Reference		Bidder	response
			SGCI is cost effective with equal	
			performance like single piece without	
			joints. You are therefore requested to	
			mention the same as SGCI in technical	
		7 1 ACCEPTANCE TESTS		
2			As per IEC:61109-2008-05, following	
5		i) Verification of dimensions	tests are required to be conducted on	
		ii) End Sealing test (FRP rod and Silicone rubber housing)	Composite Polymeric Insulators as	
		iii) Visual examination (Free from voids, cavity, foreign particle and	acceptance test:-	
		scratch/nick spot)	a) verification of dimensions	
			b) verification of the locking system	
		iv) Verification of the locking system or the tightness of the interface	c) verification of the tightness of the	
	ENG_EHV/_2027	between end fitting and	interface between end fittings and	All tests to be performed as per IEC-61109
	CLAUSE NO 7	insulator housing	insulator housing	An lesis to be performed as per rec offos
		v) Galvanizing Test	d) verification of the specified	
		vi) Verification of the specified mechanical load	mechanical load, SML- which will be	
		vii) Bending Load Test	bend test for Pin Insulators	
		viii) Dry Power Frequency Withstand Voltage Test	e) galvanizing test	
		ix) Wet Power Frequency Withstand Voltage Test	You are therefore requested to please	
		x) Analysis of material properties of housing material	mention these test in the list of	
		xi) Analysis of material properties of Core material		
				l
E)11	دV Polymeric Disc Ir	nsulator 70KN		
	ENG-EHV-2028,	SL No. 3 (b) - Material of housing weather sheds (silicon content). Silicon	As per PGCIL, GETCO specification and	
1	CLAUSE NO. 4	content of	most of Indian utility desired Silicon	Silicon content of
-	(TECHNICAL	minimum 40% by weight	content of minimum 30% by weight. As	minimum 30% by weight
	PARTICULARS)		well as in specification ENG-EHV-2027	



TPNODL





Dt: 02.02.2024

CENTRALIZED CONTRACTS GROUP

Response to Pre-Bid Queries NIT Number: TPCODL/CCG/23-24/100000534

S.	Tender	Description as per Tender Doc	Pre-Bid Query raised by	CCG/CEQG (TP-Odisha)
No.	Reference	Description as per render Doc.	Bidder	response
			for 11 kV pin required Silicon content	
			of minimum 30% by weight.	
	ENG-EHV-2028,		Weight of insulator must be minimum	
2	CLAUSE NO. 4	SL No. 7(i) - Weight (Approx)- 1.2 kg	0.9 kg	Weight of insulator to be provided by
-	(TECHNICAL			bidder
	PARTICULARS)			
			The diameter of weathershed may vary	
	ENG-EHV-2028,		from one manufacturer to other. The	
	CLAUSE NO. 4		creepage distance of insulators must	
3	(TECHNICAL	SL. No. 7(iv) - Dia of weather sheds-≥90mm	be met as per requirements of system	Shall be as per Technical Specifications
	PARTICULARS)		voltage. Our insulators are designed &	
			tested as per requirements of	
			IEC:60815 & IEC: 61109.	
			IEC :61109 has not specified any value	
			for Dry Arcing distance. The creepage	
	ENG-EHV-2028,		distance of insulators is main	
4	CLAUSE NO. 4	SL. No. 7(vi) - Dry arc distance- 175 mm	requirements of system voltage. Our	Shall be as per Technical Specifications
			insulators are designed & tested as per	
	ANTEOLANS		requirements of IEC 60815 & IEC	
			61109.	
	4.GENERAL			
	TECHNICAL			
	REQUIREMENTS,			
	TECHNICAL			
5	PARTICULARS, 11kV			Length of FRP rod min 200 mm (min.)
	Polymeric Pin			
	Insulator, SL No 3 (b)		Length of FRP Rod min 200 mm is not	
	, Length of FRP Rod		mandatory it very from vendor to	
	(min) page no 58	Length of FRP Rod (min) 200mm	vendor based on there design	







Dt: 02.02.2024

TP Nothern Odisha Distribution Limited TP Southern Odisha Distribution Limited CENTRALIZED CONTRACTS GROUP

Response to Pre-Bid Queries NIT Number: TPCODL/CCG/23-24/100000534

S.	Tender	Description as per Tender Doc.	Pre-Bid Query raised by	CCG/CEQG (TP-Odisha)
S. No. In add	Tender Reference dition to above we w	Description as per Tender Doc. ish to inform about acceptance & type tests mentioned in specification 7.1 ACCEPTANCE TESTS i) Verification of dimensions ii) End Sealing test (FRP rod and Silicone rubber housing) iii) Visual examination (Free from voids, cavity, foreign particle and scratch/nick spot) "iv) Verification of the locking system or the tightness of the interface between end fitting and insulator housing" v) Galvanizing Test vi) Verification of the specified mechanical load	Pre-Bid Query raised by Bidder for Pin & Disc Insulators: - "As per IEC:61109-2008-05, following tests are required to be conducted on Composite Polymeric Insulators as acceptance test: - a) verification of dimensions b) verification of the locking system c) verification of the tightness of the interface between end fittings and insulator housing d) verification of the specified mechanical load, SML- which will be bend test for Pin Insulators e) galvanizing test	CCG/CEQG (TP-Odisha) response
1	Tests for Pin Insulators ENG-EHV-1035 & ENG- EHV-2027 CLAUSE NO. 7	vii) Verification of the specified medification viii) Bending Load Test viii) Dry Power Frequency Withstand Voltage Test ix) Wet Power Frequency Withstand Voltage Test x) Analysis of material properties of housing material xi) Analysis of material properties of Core material 7.3 TYPE TESTS A) For Insulators	You are therefore requested to please mention these tests in the list of acceptance tests" As per IEC:61109-2008-05 , Flashover	
		 i) Dry Power Frequency Withstand Voltage Test ii) Dry Power Frequency Voltage Flashover Test iii) Dry lightning impulse withstand voltage test. iv) Wet Power Frequency Withstand Voltage Test v) Wet Power Frequency Voltage Flashover Test vi) Mechanical failing load test. 	Tests are not required to be conducted and only withstand tests are required, you are therefore required. You are therefore requested to please remove Flashover tests from Type Tests.	For insulators Type test shall be as per Technical Specifications.



TP Nothern Odisha Distribution Limited





CENTRALIZED CONTRACTS GROUP

TPSO

Response to Pre-Bid Queries

Dt: 02.02.2024

NIT Number: TPCODL/CCG/23-24/1000000534 (Rate Contract for Supply of Pin & Disc Insulators (Polymer) for TPCODL, TPNODL & TPSODL.)

S. No.	Tender Reference	Description as per Tender Doc.	Pre-Bid Query raised by Bidder	CCG/CEQG (TP-Odisha) response
		 vii) Salt fog test: On insulators for 1000 hr as per IEC viii) Galvanization test ix) Radio interference test. B) For Silicon rubber i) Tensile Strength ii) Elongation iii) Tear Strength iv) Inclined plane Tracking & Erosion resistance test v) Volume Resistivity vi) Dielectric constant vii) Dielectric Strength viii) Density ix) Hardness x) Arc Resistance xii) Silicone Content xii) Flammability xiii) Limiting oxygen index test xiv) Resistance to weathering & UV. xv) Specific gravity 	All of these tests are conduced by us in day to day basis on all lots of silicon rubber being received by us from our suppliers. The same may be removed from Type Tests and we will submit test report for the same during inspection of material at our work	All tests to be submitted as per IEC-61109
		C) For FRP rods i) Verification of dimensions ii) Specific Gravity iii) Glass Content iv) Water Diffusion Test v) Hardness vi) Dye Penetration Test vii) Flexural Strength viii) Brittle fracture resistance test.	All of these tests are conducted by us in day- to-day basis on all Flots of silicon rubber being received by us from our suppliers. The same may be removed from Type Tests and we will submit test report for the same during inspection of material at our work	All tests to be submitted as per IEC-61109





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TP Nothern Odisha Distribution Limited CENTRALIZED CONTRACTS GROUP

TPSO

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Response to Pre-Bid Queries NIT Number: TPCODL/CCG/23-24/1000000534

S.	Tender	Description as per Tender Dec	Pre-Bid Query raised by	CCG/CEQG (TP-Odisha)
No.	Reference	Description as per render Doc.	Bidder	response
		 7.1 ACCEPTANCE TESTS i) Verification of dimensions ii) End Sealing test (FRP rod and Silicone rubber housing) iii) Visual examination (Free from voids, cavity, foreign particle and scratch/nick spot) iv) Mechanical performance Test v) Galvanizing Test vi) Mechanical Failing Load Test vii) Dry Power Frequency Withstand Voltage Test viii) Wet Power Frequency Withstand Voltage Test viii) Verification of the locking system or the tightness of the interface between end fitting and insulator housing" 	As per IEC:61109-2008-05, following tests are required to be conducted on Composite Polymeric Insulators as acceptance test: - a) verification of dimensions b) verification of the locking system c) verification of the tightness of the interface between end fittings and insulator housing d) verification of the specified mechanical load, SML e) galvanizing test You are therefore requested to please mention these tests in the list of acceptance tests	All tests to be submitted as per IEC-61109
2		 7.3 TYPE TESTS A) For Insulators i) Dry Power Frequency Withstand Voltage Test ii) Dry Power Frequency Voltage Flashover Test iii) Dry lightning impulse withstand voltage test. iv) Wet Power Frequency Withstand Voltage Test v) Wet Power Frequency Voltage Flashover Test vi) Mechanical failing load test. vii) Salt fog test: On insulators for 1000 hr as per IEC viii) Galvanization test ix) Damaged Limit Proof Test x) Radio interference test. 	As per IEC:61109-2008-05, Flashover Tests are not required to be conducted and only withstand tests are required, you are therefore required. You are therefore requested to please remove Flashover tests from Type Tests.	For insulators Type test shall be as per Technical Specifications.
		B) For Silicon rubber i) Tensile Strength ii) Elongation iii) Tear Strength iv) Inclined plane Tracking & Erosion resistance test	All of these tests are conduced by us in day to day basis on all lots of silicon rubber being received by us from our suppliers. The same may be removed from Type Tests and we will	All tests to be submitted as per IEC-61109







Dt: 02.02.2024

TP Nothern Odisha Distribution Limited TP Southern Odisha Distribution Limited CENTRALIZED CONTRACTS GROUP

Response to Pre-Bid Queries

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S.	Tender	Description as per Tender Doc	Pre-Bid Query raised by	CCG/CEQG (TP-Odisha)
No.	Reference	Description as per render boc.	Bidder	response
		v) Volume Resistivity vi) Dielectric constant vii) Dielectric Strength viii) Density ix) Hardness x) Arc Resistance xi) Silicone Content xii) Flammability xiii) Limiting oxygen index test xiv) Resistance to weathering & UV.	submit test report for the same during inspection of material at our work	
		xv) Specific gravity C) For FRP rods i) Verification of dimensions ii) Specific Gravity iii) Glass Content iv) Water Diffusion Test v) Hardness vi) Dye Penetration Test vii) Flexural Strength viii) Brittle fracture resistance test. ix) Water Diffusion Test	As per IEC:61109-2008-05, Flashover Tests are not required to be conducted and only withstand tests are required, you are therefore required. You are therefore requested to please remove Flashover tests from Type Tests.	All tests to be submitted as per IEC-61109
3	We would also like to inform you that in your technical specification Design Tests are not mentioned. As per IEC:61109 following design tests are required to be conducted:	 Tests on interfaces & connections of End Fittings Assembled core load time test Tracking & Erosion Test for 1000 hours on silicion rubber Accelerated weathering test for 1000 hours on silcion rubber Hardness test on silicon rubber Flammability Test on silicon rubber Dye Penetration test on FRP Rod Water Diffusion Test of FRP Rod 	All of these design tests are desired by all Indian Utilities, you are therefore also requested to incorporate these design tests in the technical specification of your tender and in PQR conditions. Only those supplier should be considered as qualified who have submitted these design tests. You are also requested to add that all Tests reports should	All tests to be submitted as per IEC-61109



TPNODL TP Nothern Odisha Distribution Limited



TP Southern Odisha Distribution Limited



Dt: 02.02.2024

CENTRALIZED CONTRACTS GROUP

Response to Pre-Bid Queries NIT Number: TPCODL/CCG/23-24/100000534

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S. No.	Tender Reference	Description as per Tender Doc.	Pre-Bid Query raised by Bidder	CCG/CEQG (TP-Odisha) response
			have conducted from ERDA and CPRI Only with NABL Logo on the test reports.	
4	8. TYPE TEST CERTIFICATES Page No 36	All the tests shall be conducted at CPRI/ERDA as per the relevant IS/IEC.	Some Place mentioned All the tests shall be conducted at CPRI/ERDA/Other Govt. Labas per the relevant IS/IEC. Please considered test test should be CPRI/ERDA/Other Govt. Labas	Please considere type test tests should be from CPRI/ERDA/Other Govt. Labs.

Note:

This document shall be an integral part of the tender and bidder shall submit signed/stamped copy of this document along with technical bid, as a token of acceptance. The tender document stands modified to the extent stipulated herein above in this document. All other terms & conditions shall be strictly followed as per Bid documents.

All other terms of Original Tender, remains unaltered.