

## FORMAT B.1

## Format for Technical Pre-Bid Queries

Tender No **TPSODL/OT/2022-23/0129**

Package No: Rate Contract for Supply of CTPT Mus at TPSODL

Bidder :

**Note :** The said format to be used only for Technical Pre-Bid Query. Any Commercial Query has to be strictly in Format B2 Format for Commercial Pre-Bid Query and sent separately

Format to be used for query regarding Technical Pre-Qualification Requirement, Safety Pre-Qualification Requirement, Technical Set of Document

Pre-Bid Query has to be sent in editable Excel file format only

Pre-Bid Query has to be sent through e-mail in TPSODL E-Tender System

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify	Description as per Bid Document	Remarks - Query / Clarification (As on 06-April-2023)	TPSODL Response
1	2	3	4	5
A	<b>Technical specifications for 33kV CTPT MU ENG-EHV-1042</b>			
1	Clause 4 GTP (iv) STC rating	25kA/1s	Note that 25kA/1s STC is very high considering technical design feasibility of lower CT ratios. Further, since low CT ratios are used in consumer metering application, the actual fault levels at consumer end are also low. In view of <b>CT design feasibility</b> , actual fault levels at consumer metering and also referring to STC ratings used by other utilities (including TPCODL/TPNODL), we recommend following STC rating 5A to 15A rated primary current => 3kA/1s 20A to 40A rated primary current => 6.4kA/1s 50A to 200A rated primary current => 18.4kA/1s 250A to 800A rated primary current => 25kA/1s	Kindly note that Short time thermal current and its duration shall be as follows: 5-15/5A(6.4KA/1sec) 20-40/5A(13.1 KA/1sec) 50-200/5A(18.4 KA/1sec) 250-400/5A(25 KA/1sec) 400-800/5A(26.2KA/1Sec)
2	Clause 4.2 GTP HT Star point of Primary of 3 Phase PT	Design feature	HT star point of primary of the 3 Phase PT shall be designed to withstand full level of voltage stress for 33kV system & shall be left floated inside the CTPT MU tank. This is the standard design feature supplied by us to many other utilities like MP Discoms, JBVNL, Bihar etc.  <u>Kindly review and confirm your acceptance.</u>	PT HV:star point shall be left floated inside MU tank PT LV:star point brought out at secondary terminal box for solid earthing purpose 3phase 4wire 50 cycle netowk
3	Clause 4.1 (viii) GTP	Rated burdon of PT 50VA	Note that 50VA rated burden is excessively high and is technically not recommended/not appropriate for the following reasons:- a. Class 0.2 is a high precision accuracy class and the associated digital meters at utility end are also of equivalent precision accuracy class. Such digital meters impose a very low burden of less than 1VA, Therefore 50VA rated burden called in your Technical specifications is 50 times the actual burden imposed by digital meters.  b. Accuracy of a metering class is guaranteed from 25% to 100% of rated burden. Hence, at 10VA rated burden, ratio & phase errors within 0.2 class shall be guaranteed within a range of 2.5VA to 10VA, which suits the actual service condition requirements.  On the other hand, with PT designed at 50VA rated burdens, the errors under actual service condition burden within 5VA will be inferior and will fall under 0.5 or 1.0 class, instead of desired 0.2 class (since actual burden is not more than 5VA)  Hence, burden imposed by digital meters relays must be thoroughly reviewed and appropriate rated burden must be finalized.  <b>We request to kindly consider rated PT burden between 10 to 20VA as per service requirements, so that desired accuracy is functionally achieved under actual service</b>	Specification to be complied

Sr. No.	Detailed Reference to TPSODL Technical Document. Please specify	Description as per Bid Document	Remarks - Query / Clarification (As on 06-April-2023)	TPSODL Response
B				
	Technical specifications for 11kV CTPT MU ENG-EHV-2033			
1	Clause 4 GTP (iv) STC rating	18,4kA/1s	<p>Note that 25kA/1s STC is very high considering technical design feasibility of lower CT ratios. Further, since low CT ratios are used in consumer metering application, the actual fault levels at consumer end are also low.</p> <p>In view of <b>CT design feasibility</b>, actual fault levels at consumer metering and also referring to STC ratings used by other utilities (including TPCODL/TPNODL), we recommend following STC rating</p> <p>5A to 15A rated primary current =&gt; 3kA/1s  20A to 40A rated primary current =&gt; 6.4kA/1s  50A to 200A rated primary current =&gt; 13.1kA/1s  250A to 800A rated primary current =&gt; 18.4kA/1s</p>	<p>Kindly note that Short time thermal current and its duration shall be as follows:</p> <p>5-15/5A(6.4KA/1sec)  20-40/5A(13.1 KA/1sec)  50-200/5A(18.4 KA/1sec)  250-400/5A(25 KA/1sec)</p>
2	Clause 4.2 GTP HT Star point of Primary of 3 Phase PT	Design feature	<p>HT star point of primary of the 3 Phase PT shall be designed to withstand full level of voltage stress for 11kV system &amp; shall be left floated inside the CTPT MU tank. This is the standard design feature supplied by us to many other utilities like MP Discoms, JBVNL, Bihar etc.</p> <p><u>Kindly review and confirm your acceptance.</u></p>	<p>PT HV: star point shall be left floated inside MU tank  PT LV: star point brought out at secondary terminal box for solid earthing purpose  3phase 4wire 50 cycle network</p>
3	Clause 4.1 (viii)GTP	Rated burdon of PT 50VA	<p>Note that 50VA rated burden is excessively high and is technically not recommended/not appropriate for the following reasons:-</p> <p>a. Class 0.5 is a high precision accuracy class and the associated digital meters at utility end are also of equivalent precision accuracy class. Such digital meters impose a very low burden of less than 1VA, Therefore 50VA rated burden called in your Technical specifications is 50 times the actual burden imposed by digital meters.</p> <p>b. Accuracy of a metering class is guaranteed from 25% to 100% of rated burden. Hence, at 10VA rated burden, ratio &amp; phase errors within 0.5 class shall be guaranteed within a range of 2.5VA to 10VA, which suits the actual service condition requirements.</p> <p>On the other hand, with PT designed at 50VA rated burden, the errors under actual service condition burden within 5VA will be inferior and will fall under class 1.0, instead of desired 0.5 class (since actual burden is not more than 5VA)</p> <p>Hence, burden imposed by digital meters relays must be thoroughly reviewed and appropriate rated burden must be finalized.</p> <p><u>We request to kindly consider rated PT burden between 10 to 20VA as per service requirements, so that desired accuracy is functionally achieved under actual service.</u></p>	<p>Specification to be complied</p>

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