West Bengal State Electricity Distribution Company Ltd.

(A Government of West Bengal Enterprise)

Office of the Project Manager

Rammam Hydel Project, St-II

NOTICE INVITING TENDER

TENDER NOTICE NO: PM/RMM/ELECT/TENDER/2022-23/09 **DATE: 21/07/2022**

Sealed tenders are invited from bona fide, resourceful and reliable Manufacturer or Authorized Agent of Manufacturer by The Addl. Chief Engineer & Project Manager, Rammam Hydel Project, St.-II, WBSEDCL, P.O.: Lodhomahat, Dist.: Darjeeling for **"Resin Cast Indoor Type Single Phase 11 kV 1000/5-5 A Two Core Current Transformer used for Metering & Protection purpose of Generators"** as detailed below in schedule of supply for Rammam H.P., St-II, Dovan, P.O.Lodhomahat, Dist. Darjeeling.

Notice Inviting Tender (NIT) will be made available in the website of WBSEDCL (www.wbsedcl.in) for downloading and displayed at Notice Board of above office from **20-07-2022 at 10:00 hrs**. The NIT will be received up to **25-08-2022 till 17:00 hrs**. and will be opened on next working day i.e., on **26-08-2022 at 14:00 hrs**. in the presence of authorized representative of Tenderers. Tender description, Tender notice no. and due date of opening of the tender should be prominently written on the envelope. **Rates should be quoted in the prescribed format as furnished in Annexure-II.** Guaranteed technical particulars **(GTP)** in the prescribed format as furnished in **Annexure- III** must also be submitted along with the offer. The Authorized Dealer Certificate should be enclosed in case of bid submission by Authorized Dealer.

The tenders will be guided by the following general terms and conditions:

GENERAL TERMS AND CONDITIONS:

1. **SCHEDULE OF SUPPLY:**

A) Resin Cast, Indoor Type 11 kV CT having following technical specification: -

Core	1	2	
Ratio	1000/5	1000/5	**Other Specifications**
VA	15	-	Type (DES) : 11B
Class	0.5	PS	Type : Wound
T. Ratio/ISF/ALF	≤ 5	≤ 1/200	IL: 12/35/75 kVp
RCT (75 C)	-	≤ 0.25 Ω	HSV: 12 kV
Vk	-	≥ 39.3 v	STC: 40 kA for 1 Sec.
Ie at Vk/4	-	≤ 155 mA	Freq: 50 Hz
P. Term.	P1-P2		Insulation Class: B
S. Term.	1S1- 1S2	2S1- 2S2	

The detailed technical specification of Scope of Supply along with technical terms & conditions have been mentioned in Annexure- I. Intending bidders are requested to go thoroughly through the details.

2. **TAXES & DUTIES**: Taxes & Duties, if any, are to be mentioned clearly and shall be reimbursed as per prevailing norms. (GST shall be extra as per norms and IT @ 2% may be deducted if required). TDS will be deducted as per prevailing norms. The agency must mention GST and PAN no. in quotation/bid.

3. **ELIGIBILITY CRITERIA:** The intending bidders must have:

   i) Experience of having completed similar nature of supply work with in last 5 years. Completion certificate of such work must be attached with the Bid/Quotation.

   iii) The bidder must have Income Tax PAN and GST Registration. Self-attested copies of these documents must be submitted along with Bid/Quotation.

4. **DELIVERY:** Within 120 (One hundred & twenty) days from the date of issue of the formal order. The materials shall have to be delivered at Rammam HP ST-II, Project Store located at RHP ST-II, Lodhamahat, Darjeeling, West Bengal.

5. **SUBMISSION OF TENDER:** The tenderers shall submit the tender documents in two separate sealed envelopes named Technical Bid and Financial Bid with clear marking of "Tender documents against Notice Inviting Tender No, name of work in brief, Name of Tenderer and date of opening".

   Technical Bid: The intending bidder shall submit 1st envelop named technical bid super-scribing name of work, tender notice no and date of opening shall contain:

   i) Sealed & Signed copy of NIT.
   ii) Credential/documents as supporting eligibility criteria as per Annexure- I & Annexure-III(GTP).

   Financial Bid: 2nd envelop named financial bid, super-scribing name of work, tender notice no. and date of opening containing duly sealed and signed price bid as per prescribed proforma (Annexure -II).

   The 3rd envelop should be addressed to the Additional Chief Engineer & Project Manager, Rammam Hydel Project, St-II, PO: Lodhomahat, Dist: Darjeeling, WB: 734201 with NIT no. having the address of Tenderer, Name of Work, Date of Opening and containing 1st & 2nd envelop only.

   Financial Bid will only be opened if and only if the Technical Bid qualifies the eligibility criteria as per the NIT.

6. **PAYMENT**: 100% payment along with GST shall be paid on the receipt of materials at site and on submission of invoice in triplicate. The Payment shall be made through fund transfer. The Agency shall have to submit their bank account details in the offer.

7. **VALIDITY**: The Tender / Quoted Rates shall remain valid for 120 (One hundred & twenty) days from the date of opening.

8. **Guarantee:** Materials shall have to be guaranteed for 12(twelve) months from the date of delivery. The Agency shall submit a Guarantee certificate along with the Invoice during the time of Delivery. The Agency shall have to clearly mention the Guarantee clause in the offer.

9. **Risk Purchase:** The time of delivery stipulated shall be deemed to be the essence of the contract and if the Agency fails to deliver any consignment within the period prescribed for such delivery as mentioned above, WBSEDCL shall be entitled to purchase such consignment or if not available, the best and nearest available substitute elsewhere on the Agency's account and at their risk or to cancel the formal order and they shall be liable to compensate for any loss or damage which WBSEDCL may sustain by reason of such failure on their part.

10. **Liquidated Damages:** Liquidated Damages @ ½% (half percent) per week up to 10(ten) weeks and @ 1% per week after that subject to a maximum of 10% shall be imposed for delay in delivery of materials after the lapse of stipulated period.

11. **CANCELLATION/TERMINATION**: In case the agency discontinues the work within the contract period, WBSEDCL reserves the right to get the work done by any other agency and realize any damage and losses to WBSEDCL from your bills and pending dues. The order may be cancelled/terminated at any point of time during the contractual period by WBSEDCL by serving 7 (seven) days of notice for unsatisfactory performance of the agency as may be observed by the controlling officer.

12. **STATUTORY TAX & SETTLEMENT OF DISPUTES:** Income tax and STDS together with GST will be deducted or paid as per laws from the Invoice. All disputes shall be settled amicably and where settlement cannot be reached then disputes shall be subjected to settlement under the jurisdiction of Darjeeling Court/ Calcutta High Court.

13. **CONTROLLING OFFICER:** The Divisional Engineer (E), In-Charge Power House Rammam HP, Stage-II.

14. **CONSIGNEE:** The Divisional Engineer (M) & Store I/C, Rammam HP, Stage-II.

15. **PAYING OFFICER:** The Assistant Manager (F&A), Rammam H. P, Stage II.

Tender will be guided by the aforesaid general terms & conditions and any deviation must be clearly recorded in the tender.

WBSEDCL reserves the right to accept or reject any or all tenders without assigning any reasons whatsoever and place order on more than one tenderer.

Yours faithfully,

21.07.2022

(ARUN KUMAR)

Addl. CE & Project Manager

Rammam Hydel Project, St-II

WBSEDCL

TECHNICAL SPECIFICATION OF INDOOR RESIN CAST TYPE 11 KV 1000/5-5 A CURRENT TRANSFORMER FOR METERING & PROTECTION OF 12.75 MW GENERATORS

1. SCOPE :

This specification covers the design, manufacture, assembly, testing, supply & delivery at Rammam Hydel Project, PO: Lodhomahat, Dist: Darjeeling, WB- 734201 of indoor current transformers of 11KV voltage class as specified in Schedule-A for metering & protection of 12.75 MW Generators.

2. STANDARD :

The indoor current transformers unit and accessories covered by this specification shall comply with the requirement of the latest edition of the following standards unless otherwise stated in this specification.

IS:2705& IS 3156 : Specification for Instrument Transformers.

3. DEVIATION :

Normally the offer should be as per Technical Specification without any deviation. But any deviation felt necessary to improve performance, efficiency and utility of equipment must be mentioned in the Deviation Schedule with reasons duly supported by documentary evidence. Such deviations suggested may or may not be accepted by the Company. Deviations not mentioned in Deviation schedule will not be considered.

4. DESIGN & CONSTRUCTION OF INDOOR 11 KV CURRENT TRANSFORMERS:

The design features and construction details of indoor current transformer shall be in accordance with therequirement stipulated in Schedule - A :

a. The current transformers shall be complete in all respects and shall conform to the modernpractice of design and manufacture.

b. The single phase current transformers shall be of low Reactance indoor resin cast type, 50 Hz, self cooled type.

c. The maximum permissible temperature rise of the current transformer winding when carrying a primary current equal to the rated continuous current at rated frequency and with rated burden over an ambient temperature (40°C) shall not exceed 55°C.

d. The CT Unit shall be resin cast type provided with class - B insulation or better. The design and construction of CT Unit shall be sufficient to withstand the thermal and mechanical stresses resulting from the specified short circuit currents and specified duration as mentioned in General Technical Specification.

e. The CT's shall be of wound primary type and the primary terminals shall be brought out for proper connection to 65x6 mm bus bar. Contact tips on primary side shall be silver plated. Primary shall be rigid, high conductivity grade copper conductor. Unavoidable joints on the primary conductor shall be welded type, preferably lap type. Current density at any point shall not exceed 1.60 Amp./sq.mm.

f. Secondary terminals shall be located at the bottom of the CT properly spaced for cable connection and the terminals shall be properly covered with acrylic cover having sealing arrangement. The secondary terminals shall have screw type terminals. The screw should have sufficient length for connection of at least two nos. wires with plain and spring washers and minimum 10 mm clearance between the adjacent screws. Suitable insulated copper wire of electrolytic grade shall be used for CT secondary winding.

g. The core of the CT Unit shall be high grade non-ageing, electrical, silicon laminated steel of low hysteresis loss and high permeability to ensure high accuracy at both normal and over current.

h. The exciting current shall be as low as possible and the CT Unit shall be capable of maintaining its rated accuracy at different burdens and within saturation limits.

i. Rating plate marking of both CT shall be provided as per relevant clause of IS:2705& IS 3156.

j. The CT Characteristics shall be such as to provide satisfactory performance for burdens ranging from at least 25% to 100% of rated burden in case of metering CT crores.

k. These CTs for 12.75 MW Generating Units shall be installed inside the **SIEMENS make 11 kV Indoor Switchgears of type 8 BK 20/71 against 11 kV SIEMENS make Circuit Breaker of Type- 3AH3 116 with Ir- 1250 Amp.**

l. The CT's shall have 320/195 mm base plate. The CT shall be designed for erecting base plate on top (i.e. Hanging CT) and the base plate shall have sufficient capacity to take the weight of the CT and the mechanical shocks generated during the passing of the fault current through the CT. Secondary connection terminals of the CT should be clearly visible and accessible from the back side of the breaker assembly just after opening the rear cover plate.There shall be 2 nos of earthing terminals provided on the base plate duly marked with earthing symbol for proper earth connection of CT. **A drawing of the CT is being attached herewith where necessary dimensions may be found.**

m. The CT's shall be painted with anti-tracking paint.

n. The CT secondary to be used for metering and instruments shall be of accuracy class and ISF as specified. The saturation factor of this core shall be low enough so as not cause any damage to measuring instruments in the event of maximum short circuit current.

o. PS class CTs shall have low secondary resistance and high knee point voltage so as to avoid any possibility of CT saturation under through fault conditions. The Agency shall furnish calculations in support of selection of above parameters for the offered CTs.

5. TERMINAL MARKING FOR CURRENT TRANSFORMER:

i) Primary terminals shall be marked P1 and P2 near the primary terminals.
ii) Secondary terminals have to be marked as 1S1 - 1S2 & 2S1 – 2S2 using anodized aluminum stickers, which can be seen through acrylic cover.

6. GUARANTEE :

Electrical characteristics shall be guaranteed by the bidder. In case of failure of materials to meet the guarantee, WBSEDCL shall have right to reject the material. Guaranteed Technical Particulars are to be specifically mentioned by the bidders in the offer.

7. TESTS AT FACTORY AND TEST CERTIFICATES :

a. Each C.T shall comply with the requirements of routine test as specified in the relevant Clause ofIS:2705.
b. Routine test at manufacturer's works shall be carried out as per relevant IS & Test Reports are to be submitted to WBSEDCL.
c. All Acceptance tests may be carried out at the manufacturer's works as per relevant IS. In addition to above, all routine tests are also to be carried out on Current Transformer as per relevant IS. Selection, rejection and retesting shall be guided by relevant IS. The entire cost of acceptance and routine tests that are to be carried out as per relevant IS shall be treated as included in quoted price of Current Transformer. Two (2) copies of test reports shall be submitted to the Project Manager, Rammam Hydel Project, St-II, WBSEDCL, Darjeeling before delivery of the material.

8. TEST REPORTS AND TYPE TESTS :

Only type tested C.T. are to be offered conforming to our technical specification, and relevant IS and IEC. C.T. offered should be similar with ones on which type testing has been carried out as per relevant IS and IEC. **One set of complete type test reports carried out within last 5 years from due date of submission of bid in Govt. recognized Test House or Laboratory /NABL accredited laboratory shall have to be submitted by the bidder positively along with the offer.** Successful bidder may require to produce original copies type test reports if asked by WBSEDCL. The Type Test certificates of the NABL accredited/govt. recognized test house or laboratory should however, bear the logo of NABL accreditation.

Each type test report shall comply the following information with test result

i) Compete identification, date and serial no.
ii) Relevant drawings as documented with test report.
iii) Method of application, Where applied, duration and interpretation of each test.

iv) The submitted type test report shall proof that the type test have been carried out within five years from the date of submission of bid.

9. TENDER DRAWING, CATALOGUE AND TEST REPORTS :

One copy of the following drawings and catalogue shall be submitted with each copy of tender for evaluation :

a. General arrangement drawings along with all accessories, electrical diagram of primary and secondary connection with polarity marking, terminal arrangement of secondary terminal box, size of primary terminals, grounding terminals and lifting lugs, net and shipping weight, dimension etc.

b. Name and rating plate diagram.

c. Clear drawing of CT arrangement, mentioning details dimension as per technical specification, to be submitted along with the bid. All type tests to be done on the items which will be designed exactly on these drawing and the certified copy of reports of same to be submitted.

10. PRINTING OF THE NAME OF THE DEPARTMENT ON THE NAME PLATE:

The following additional words shall be printed on the nameplate of the CT's **"Property of WBSEDCL".**

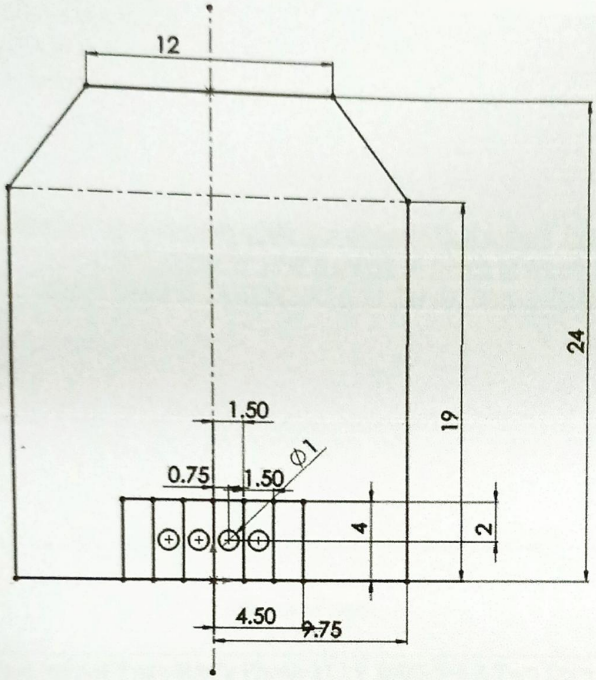
SCHEDULE A

SPECIFIC TECHNICAL PARTICULARS OF CURRENT TRANSFORMER

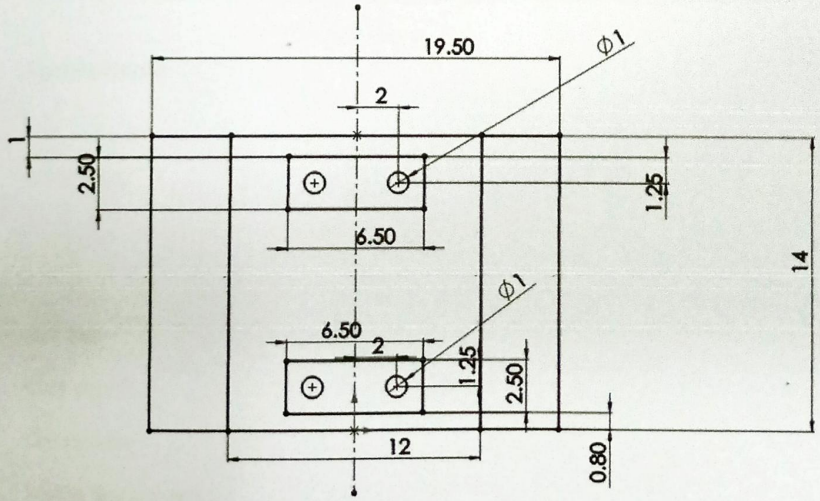
Core	1	2
Ratio	1000/5	1000/5
VA	15	-
Class	0.5	PS
T. Ratio/ISF/ALF	≤ 5	≤ 1/200
RCT (75 C)	-	≤ 0.25 Ω
Vk	-	≥ 39.3 v
Ie at Vk/4	-	≤ 155 mA
P. Term.	P1-P2	
S. Term.	1S1- 1S2	2S1- 2S2

Other Specifications:

Sl No:	**Description**	**Rating**
1	Type	Wound
2	Rated system voltage KV (rms)	11
3	Highest system voltage KV (rms)	12
4	System frequency (Hz)	50
5	Installation	Indoor
6	Extended current rating	120 %
7	Rated short time thermal current for 1second (KArms)	40
8	Rated Dynamic current KA (peak)(should be at least 2.5 times of above rating)	46
9	Rated Insulation level :	
	a) 1.2/50 microsecond impulse withstand voltage (KVpeak)	75
	b) One minute power frequency withstand voltage (KVrms) on primary winding	28
	c) Power frequency withstand voltage for secondary winding for one minute (KVrms)	3
10	Over voltage interturn test	As per IS:2705 & IS 3156
11	Minimum Creepage Distance (Heavily polluted atmosphere)(in mm)	300
12	Limit of temp. rise(°C) of windings at rated current	55°C
13	Maximum Partial Discharge:	
	a) when energized at 12KV rms	50 PC
	b) when energized at 1.2x12/√3 KV rms	20 PC



All dimensions in cm



All dimensions in cm

Annexure-II

To
The Project Manager
RHP, ST-II, WBSEDCL,
P.O: Lodhomahat
Dist: Darjeeling

Sub: Offer for Procurement of 06 Nos of Resin Cast Indoor Type Single Phase 11 kV 1000/5 A Current Transformer having specified rating as mentioned in NIT Tender No- PM/RMM/ELECT/TENDER/2022-23/ 09, Dated: 21.07.2022 at RHP St-II, WBSEDCL

Sir,

Sl. No.	Name of Item	QTY	Rate	Amount
01	**Resin Cast Indoor Type Single Phase 11 kV 1000/5-5 A Two Core Current Transformer used for Metering & Protection purpose of Generators**	**06**		
			TOTAL	

Agency Name:-

Address:-

GST No:-

PAN No:-

Contact No:-

Seal & Signature:-

N.B:- * Above rates will be firm for next 120 days.

** GST certificate needs to be enclosed.

Annexure-III

GUARANTEED TECHNICAL PARTICULARS FOR CURRENT TRANSFORMER
(To be submitted by Bidder)

Sl No.	Description	Particulars
1.	Make	
2.	Type	
3.	Reference Standard	
4.	Voltage Grade	
5.	Ratio	
6.	Frequency	
7.	No of core	
8.	Rated VA Burden	
9.	Accuracy Class	
10.	Class of Insulation	
11.	Temperature rise above ambient	
12.	Insulation level-KV (peak/rms)	
13.	a) Short time current rating(KA) for 1.0 sec	
	b) Dynamic current rating(KA peak)	
14.	Instrument security factor	
15.	Magnetizing curve furnished	
16.	Mounting Dimension of CT	
17.	Weight of CT	
18.	Material and Diameter of the Primary Stud of the CT	
19.	Material and Diameter of the Secondary Stud of the CT	
20.	Maximum Partial Discharge: a) when energized at 12KV rms b) when energized at 1.2x12/√3 KV rms	