



भारतीय प्रौद्योगिकी संस्थान रोपड़  
INDIAN INSTITUTE OF TECHNOLOGY ROPAR  
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Dated: 21/05/2026

आईआईटी रोपड़ में 66/11 केवी ग्रिड सबस्टेशन, 11/0.433 केवी सबस्टेशनों के लिए चौबीसों घंटे नियमित सेवाओं, निवारक रखरखाव और ब्रेक डाउन सेवाओं के लिए वार्षिक संचालन और रखरखाव अनुबंध, जिसमें सभी ट्रांसफार्मर, पीएसएस, डीजी सेट, एचटी और एलटी पैनल और केबल्स, आरएमयू, फीडर पैनल, स्ट्रीट लाइट और संबद्ध उपकरण के लिए प्रक्रिया में है।

Indian Institute of Technology Ropar is in the process for an Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar.

कार्य का नाम Name of Work	<b>Annual Operation &amp; Maintenance Contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid Substation, 11/0.433KV Substations including all transformers, PSS, DG Set, HT &amp; LT Panel and Cables, RMU, Feeder Panel, and allied equipments at IIT Ropar</b>
अनुमानित लागत Estimated Cost	Rs. 1,82,73,238 /- (Including GST )
बयाना जमा करने के लिए जमा राशि Earnest Money Deposit to be submitted	Rs. 3,65,465 /-

निविदा दस्तावेज केंद्रीय सार्वजनिक खरीद पोर्टल <http://eprocure.gov.in/eprocure/app> से डाउनलोड हो सकते हैं। ई-प्रोक्योरमेंट में पंजीकृत नहीं होने वाले इच्छु बोलीदाताओं को वेबसाइट <http://eprocure.gov.in/eprocure/app> के माध्यम से भाग लेने से पहले पंजीकरण करना चाहिए। पोर्टल नामांकन मुफ्त है बोलीदाताओं को सलाह दी जाती है 'आनलाइन बोली के निर्देश' पर दिए गए निर्देशों के माध्यम से जाने की सलाह दी जाए।

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

निविदाकर्ता वेबसाइट पर निविदा दस्तावेज का उपयोग कर सकते हैं (एनआईसी साइट में खोज के लिए, कृपया निविदा खोज विकल्प और 'आईआईटी' टाइप करें। उसके बाद, सभी आईआईटी रोपड़ निविदाओं को देखने के लिए "गो" बटन पर क्लिक करें) उपयुक्त निविदा का चयन करें और उन्हें सभी प्रासंगिक सूचनाओं से भरें और वेबसाइट पर <http://eprocure.gov.in/eprocure/app> पूरा निविदा दस्तावेज अगले पृष्ठ में दिए गए कार्यक्रम के अनुसार आनलाइन जमा करें।

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Ropar tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

कोई मैनुअल बोली स्वीकार नहीं की जाएगी। सभी कोटेशन (दरसूची) (तकनीकी और वित्तीय दोनों को ई-प्रोक्योरमेंट पोर्टल में जमा करनी चाहिए)।

No manual bids will be accepted. All quotations (both Technical and Financial should be submitted in the E-procurement portal).

(कुलसचिव / Registrar)

<b>SCHEDULE</b>	
Name of Organization	Indian Institute of Technology Ropar
Quotation Type (Open/Limited/EOI/Auction/Single/Global)	Open
Quotation Category (Services/Goods/works)	Services
Type/Form of Contract (Work/Supply//Service/Buy/Empanelment)	Services
Product Category (Civil Works/Electrical Works/HVAC Works /Fleet Management/ Computer Systems/Lab Equipment)	Electrical Works
Date of Issue/Publishing	21/05/2026 (17:00 Hrs)
Document Download/Sale Start Date	21/05/2026 (17:00 Hrs)
Document Download/Sale End Date	04/06/2026 (18:00 Hrs)
Last Date and Time for Uploading of Bids	04/06/2026 (18:00 Hrs)
Date and Time of Opening of Technical Bids	05/06/2026 (11:05 Hrs)
EMD	<b>Rs. 3,65,465</b> /- (For EMD)
	(To be paid through RTGS/NEFT. IIT Ropar Revenue Account Bank details are as under:
	Name of the Bank A/C   IIT Ropar Revenue Account
	SBI A/C No.   37360100716
	Name of the Bank   State Bank of India
	IFSC Code   SBIN0013181
	MICR Code   140002008
	(This is mandatory that UTR Number is provided in the on- line quotation/bid. (Kindly refer to the UTR Column of the Declaration Sheet at Annexure-II)
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	180 days (From last date of opening of tender)
Address for Communication	Estate and Maintenance Section, 2nd Floor, East Wing, M. Visvesvaraya Building, Indian Institute of Technology Ropar, Rupnagar – 140001
Contact No.	01881-235104,5108
Email Address	enm.office@iitrpr.ac.in, ae.electrical@iitrpr.ac.in

**Registrar**

## आनलाइन बोली (बिड) के लिए निर्देश / Instructions for Online Bid Submission:

व्यय विभाग के निर्देशों के अनुसार, यह निविदा दस्तावेज केंद्रीय सार्वजनिक प्रापण पोर्टल (यूआरएल:<http://eprocure.gov.in/eprocure/app>) पर प्रकाशित किया गया है। बोलीदाताओं को मान्य डिजिटल हस्ताक्षर प्रमाणपत्र का उपयोग करते हुए सीपीपी पोर्टल पर इलेक्ट्रॉनिक रूप से अपनी बोलियों की सॉफ्ट प्रतियां जमा करना आवश्यक है। सीपीपी पोर्टल पर पंजीकरण करने के लिए निविदाकर्ताओं की सहायता करने के लिए नीचे दिए गए निर्देशों तात्पर्य है, सीपीपी पोर्टल पर आवश्यकताओं के अनुसार अपनी बोलियां तैयार करें और अपनी बोलियां आनलाइन जमा करें।

As per the directives of the Department of Expenditure, this tender document has been published on the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

अधिक जानकारी सीपीपी पोर्टल पर आनलाइन बोलियां जमा करने के लिए उपयोगी हो सकती है।

More information useful for submitting online bids on the CPP Portal may be obtained at:

<http://eprocure.gov.in/eprocure/app>

### पंजीकरण / REGISTRATION

- 1) बोलीदाताओं को “नामांकन के लिए यहां क्लिक करें” लिंक पर क्लिक करके सेंट्रल पब्लिक प्रोक्योरमेंट पोर्टल (यूआरएल: <http://eprocure.gov.in/eprocure/app>) के ई-प्रोक्योरमेंट मोड्यूल पर भर्ती करना आवश्यक है। सीपीपी पोर्टल पर नामांकन नि:शुल्क है।  
Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)) by clicking on the link “Click here to Enroll”. Enrolment on the CPP Portal is free of charge.
- 2) नामांकन प्रक्रिया के भाग के रूप में, बोलीदाताओं को अपने खाते के लिए एक अद्वितीय उपयोगकर्ता नाम चुनना होगा और एक पासवर्ड प्रदान करना होगा।  
As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) बोलीदाताओं को सलाह दी जाती है कि पंजीकरण प्रक्रिया के भाग के रूप में अपना वैध ईमेल पता और मोबाइल नंबर पंजीकृत करें। इनका उपयोग सीपीपी पोर्टल से किसी भी संचार के लिए किया जाएगा।  
Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) नामांकन पर, बोलीदाताओं को सीसीए इंडिया द्वारा मान्यता प्राप्त किसी प्रमाणन प्राधिकरण द्वारा जारी किए गए अपने मान्य डिजिटल हस्ताक्षर प्रमाण पत्र (कक्षा द्वितीय या कक्षा III प्रमाण पत्र के साथ महत्वपूर्ण उपयोग पर हस्ताक्षर करने) की आवश्यकता होगी। (जैसे सीफी/टीसीएस/एनकोड/ई-मुद्रा आदि), इनके प्रोफाइल के साथ  
Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / n Code / eMudhra etc.), with their profile.
- 5) केवल एक मान्य डीएससी एक बोलीदाता द्वारा पंजीकृत होना चाहिए। कृपया ध्यान दें कि निविदाकर्ता यह सुनिश्चित करने के लिए जिम्मेदार है कि वे अपने डीएससी को दूसरों को उधार नहीं देते हैं जिससे दुरुपयोग हो सकता है।  
Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
- 6) बोलीदाता फिर अपने यूजर आईडी / पासवर्ड और डीएससी/ ईटीकेन के पासवर्ड को दर्ज करके सुरक्षित लॉग-इन के माध्यम से साइट पर लॉग आन करता है।  
Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / eToken.

## निविदा दस्तावेजों के लिए खोजना / SEARCHING FOR TENDER DOCUMENTS

- 1) सीपीपी पोर्टल में निर्मित विभिन्न खोज विकल्प हैं, ताकि बोलीदाओं को कई मापदंडों से सक्रिय निविदाएं खोज सकें। इन मापदंडों में निविदा आईडी, संगठन का नाम, स्थान, तिथि, मूल्य आदि शामिल हो सकते हैं। निविदाओं के लिए उन्नत खोज का एक विकल्प भी है, जिसमें बोलीदाता कई नामों को जोड़ सकते हैं जैसे संगठन का नाम, अनुबंध का स्थान, स्थान, सीपीपी पोर्टल पर प्रकाशित निविदा की खोज के लिए तारीख, अन्य कीवर्ड आदि।

There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.

- 2) बोलीदाताओं ने एक बार निविदाएं चुनी हैं जिसमें वे रुचि रखते हैं, उसका वे आवश्यक दस्तावेज / निविदा कार्यक्रम डाउनलोड कर सकते हैं। ये निविदाएं “मेरी निविदाएं” फोल्डर में ले जाई जा सकती हैं। इससे सीपीपी पोर्टल को बोलीदाताओं को एसएमएस / ई-मेल के माध्यम से सूचित किया जा सकता है, यदि निविदा दस्तावेज में कोई शुद्धि जारी की गई है।

Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

- 3) बोलीदाता को प्रत्येक निविदा को निर्दिष्ट अद्वितीय निविदा आईडी का नोट बनाना चाहिए, अगर वे हेल्पडेस्क से कोई स्पष्टीकरण / सहायता प्राप्त करना चाहते हैं।

The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

## बोली की तैयारी / PREPARATION OF BIDS

- 4) बोलीदाता को अपनी बोलियां जमा करने से पहले निविदा दस्तावेज पर प्रकाशित किसी भी शुद्धि को ध्यान में रखना चाहिए।

Bidders should take into account any corrigendum published on the tender document before submitting their bids.

- 2) कृपया बोली के भाग के रूप में जमा किए जाने वाले दस्तावेजों को समझन के लिए निविदा विज्ञापन और निविदा दस्तावेज ध्यान से देखें। कृपया उन अंकों की संख्या पर ध्यान दें जिन में बोली दस्तावेज जमा करना है, दस्तावेजों की संख्या- जिसमें प्रत्येक दस्तावेज के नाम और सामग्री शामिल हैं, जिन्हें प्रस्तुत करने की आवश्यकता है। इनमें से कोई भी विचलन बोली को अस्वीकार कर सकता है।

Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the documents that need to be submitted. Any deviations from these may lead to rejection of the bid.

- 3) बोलीदाता, अग्रिम में, निविदा दस्तावेज/ अनुसूची में बताए अनुसार प्रस्तुत करने के लिए बोली दस्तावेज तैयार करना चाहिए और आम तौर पर, वे पीडीएफ/एक्सएलएस/आरएआर/डीडब्ल्यूएफ स्वरूपों में हो सकते हैं। बोली दस्तावेजों को 100 डीपीआई के साथ काले और सफेद विकल्प स्कैन किया जा सकता है।

Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.

- 4) मानक दस्तावेजों के एक ही सेट को अपलोड करने के लिए आवश्यक समय और प्रयास से बचने के लिए जो प्रत्येक बोली के भाग के रूप में जमा करने के लिए आवश्यक हैं, ऐसे मानक दस्तावेज अपलोड करने का

प्रावधान (जैसे पैन कार्ड कॉपी, वार्षिक रिपोर्ट, लेखा परीक्षक प्रमाणपत्र आदि) बोलीदाताओं को प्रदान किया गया है। ऐसे दस्तावेजों को अपलोड करने के लिए बोलीकर्ता उनके लिए उपलब्ध “मेरा स्पेस” क्षेत्र उपयोग कर सकते हैं। बोली जमा करते समय ये दस्तावेज सीधे “मेरा स्पेस” क्षेत्र में जमा किए जा सकते हैं, और उन्हें बार-बार अपलोड करने की आवश्यकता नहीं है इससे बोली जमा प्रक्रिया के लिए आवश्यक समय में कमी आएगी।

To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use the “My Space” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for the bid submission process.

### बोली जमा करना / SUBMISSION OF BIDS

- 1) बोलीदाता को बोली प्रस्तुति के लिए अच्छी तरह से साइट पर लॉग इन रना चाहिए ताकि वह समय पर बोली अपलोड कर सके अथवा फिर बोली प्रस्तुत करने के समय से पहले। अन्य मुद्दों के कारण किसी भी देरी के लिए बोलीदाता जिम्मेदार होगा।  
Bidders should log into the site well in advance for bid submission so that he/she uploads the bid in time i.e. on or before the bid submission time. Bidders will be responsible for any delay due to other issues.
- 2) बोलीदाता को निविदा दस्तावेज में दर्शाए अनुसार एक-एक करके आवश्यक बोली दस्तावेजों को डिजिटल हस्ताक्षर और अपलोड करना होगा।  
The bidder has to digitally sign the bid document and upload the required bid documents one by one as indicated in the tender document.
- 2) बोलीदाता को निविदा शुल्क/ ईएमडी को भुगतान के लिए “आन लाइन” के रूप में भुगतान विकल्प चुनना होगा और उपकरण का विवरण दर्ज करना होगा। जब भी, ईएमडी / निविदा शुल्क की मांग की जाती है, बोलीदाताओं को टेंडर शुल्क और ईएमडी अलग-अलग आरटीजीएस के माध्यम से आन लाइन पर भुगतान करने की आवश्यकता होती है।  
Bidder has to select the payment option as “on-line” to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever an EMD / Tender fee is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS.
- 4) एक मानक BoQ प्रारूप को सभी बोलीदाताओं द्वारा भरने के लिए निविदा दस्तावेज प्रदान किया गया है। बोलीदाताओं को इस बात का ध्यान रखना चाहिए कि उन्हें आवश्यक प्रारूप में अपनी वित्तीय बोली जमा करनी चाहिए और कोई अन्य प्रारूप स्वीकार्य नहीं है। बोलीकर्ताओं को BoQ फाइल को डाउनलोड करने, इसे खोलने और अपने संबंधित वित्तीय उद्धरण और अन्य विवरण (जैसे बोलीदाता का नाम) के साथ सफेद रंगीन (असुरक्षित) कोशिकाओं को पूरा करना आवश्यक है। कोई भी अन्य कक्ष नहीं बदला जाना चाहिए। एक बार विवरण पूरा हो जाने पर, बोलीदाता को इसे सहेजना होगा और इसे आनलाइन जमा करना होगा, बिना फाइल नाम बदले। यदि BoQ फाइल को बोलीदाता द्वारा संशोधित किया गया है, तो बोली को खारिज कर दिया जाएगा।  
A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 5) सर्वर का समय (जो बोलीदाताओं के डैशबोर्ड पर प्रदर्शित होता है) बोलीदाताओं द्वारा बोलियों को खोलने के लिए समय सीमा को संदर्भित करने के लिए मानक समय के रूप में माना जाएगा। बोलीदाताओं को खोलना आदि। बोलीदाताओं को बोली प्रस्तुत करने के दौरान इस समय का पालन करना चाहिए।

The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

- 6) बोलीदाताओं द्वारा प्रस्तुत सभी दस्तावेज पीकेआई एन्क्रिप्शन तकनीकों का उपयोग करके एन्क्रिप्ट किया जाएगा जिससे डेटा की गोपनीयता सुनिश्चित हो सके। दर्ज किए गए डेटा को अनाधिकृत व्यक्तियों द्वारा बोली खोलने के समय तक नहीं देखा जा सकता है। बोलियों की गोपनीयता को सुरक्षित सॉकेट लेयर 128 बिट एन्क्रिप्शन तकनीक का उपयोग कर रखा जाता है। संवेदनशील क्षेत्रों का डेटा संग्रहण एन्क्रिप्शन किया जाता है।

All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.

- 7) अपलोड किए गए निविदा दस्तावेज केवल अधिकृत बोलीदाता द्वारा निविदा खोलने के बाद ही पठनीय हो सकते हैं।

The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- 8) बोलियों के सफल और समय पर जमा होने पर, पोर्टल सभी प्रासंगिक विवरणों के साथ बोली संख्या, बोली जमा करने की तारीख और समय के साथ बोली सफलतापूर्वक जमा करने का संदेश एवं बोली सारांश प्रदर्शित करेगा।

Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

- 9) कृपया अनुपालन पत्रक की एक पीडीएफ फाइल में सभी प्रासंगिक दस्तावेजों के स्कैन किए गए पीडीएफ को जोड़ दें।

Kindly add a scanned PDF of all relevant documents in a single PDF file of compliance sheet.

### **बोलीदाताओं को सहायता / ASSISTANCE TO BIDDERS**

- 1) निविदा दस्तावेज से संबंधित कोई भी प्रश्न और इसमें निहित नियमों और शर्तों को निविदा आमंत्रण प्राधिकरण को निविदा के लिए अथवा निविदा में वर्णित प्रासंगिक संपर्क व्यक्ति से संबोधित किया जाना चाहिए।

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

- 2) आनलाइन बोली प्रस्तुत करने अथवा सामान्य में सीपीपी पोर्टल से संबंधित प्रश्नों की प्रक्रिया से संबंधित कोई भी प्रश्न 24x7 सीपीपी पोर्टल हेल्पडेस्क पर निर्देशित किया जा सकता है। हेल्पडेस्क के लिए संपर्क संख्या 1800 233 7315 है।

Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

### **बोलीदाताओं के लिए सामान्य निर्देश / General Instructions to the Bidders**

- 1) निविदाएं पोर्टल <http://eprocure.gov.in/eprocure/app> के माध्यम से आनलाइन प्राप्त होगी। तकनीकी बोलियों में, बोलीदाताओं को सभी दस्तावेजों को पीडीएफ प्रारूप में अपलोड करना होगा।

The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app> .In the Technical Bids, the bidders are required to upload all the documents in .pdf format.

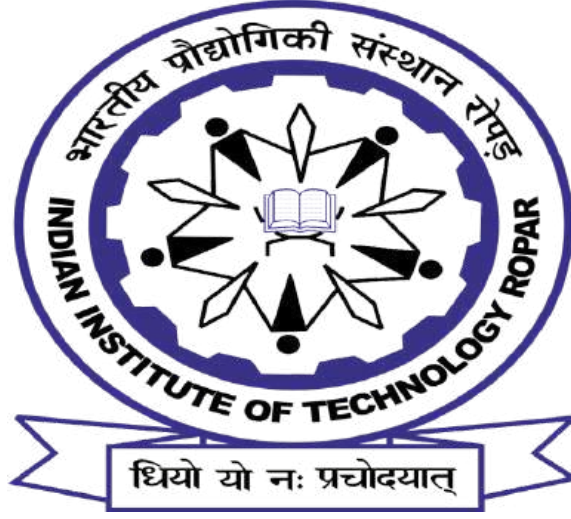
- 2) कंपनी के नाम में स्मार्ट कार्ड/ई-टोकन के रूप में मान्य क्लास II/III डिजिटल हस्ताक्षर प्रमाणपत्र (डीएससी) के पंजीकरण के लिए एक शर्त है और <https://eprocure.gov.in/eprocure/app> के माध्यम से बोली प्रस्तुत करने की गतिविधियों में भाग ले सकते हैं। डिजिटल हस्ताक्षर प्रमाणपत्र पर अधिकृत प्रमाणित एजेंसियों से प्राप्त की जा सकती है, जिनमें से जानकारी “डीएससी के बारे में सूचना” लिंक के तहत वेब साइट <https://eprocure.gov.in/eprocure/app> पर उपलब्ध है।

Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link “Information about DSC”.

- 3) निविदाकर्ता को सलाह दी जाती है कि <https://eprocure.gov.in/eprocure/app> पर ई-प्रोक्योरमेंट के लिए सेंट्रल पब्लिक प्रोक्योरमेंट पोर्टल माध्यम से आनलाइन बोली के जमा करते समय निविदाकार हेतु निर्देशों में उपलब्ध निर्देशों का अनुगमन करें।

Tenderer are advised to follow the instructions provided in the ‘Instructions to the Tenderer the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.

# **INDIAN INSTITUTE OF TECHNOLOGY ROPAR**



**ANNUAL OPERATION & MAINTENANCE CONTRACT FOR ROUND THE CLOCK ROUTINE SERVICES, PREVENTIVE MAINTENANCES AND BREAK DOWN SERVICES FOR 66/11KV GRID SUBSTATION, 11/0.433KV SUBSTATIONS INCLUDING ALL TRANSFORMERS, PSS, DG SET, HT & LT PANEL AND CABLES, RMU, FEEDER PANEL AND ALLIED EQUIPMENTS AT IIT ROPAR.**

NIT NUMBER : IITRPR/ENM/T/26/105  
Issued to : .....

**TO BE SUBMITTED TO:**

**The Registrar  
IIT Ropar  
Rupnagar, Punjab**

## INDEX

**Name of Work:** Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar.

<b>S. No.</b>	<b>Description</b>	<b>Page</b>
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NIT Amounting to **Rs 1,82,73,238/- (Rupees One Crore Eighty Two Lac Seventy Three Thousand Two Hundred and Thirty Eight Only)** [Certified that this NIT contains pages (94 only) pages + (Part C & BOQ Sample contains (07 only) Pages, Total (101 only) pages only]

# PART – A

**INDIAN INSTITUTE OF TECHNOLOGY ROPAR**

**ESTATE AND MAINTENANCE SECTION**

**TENDER DOCUMENT**

**Name of Work: Annual Operation & Maintenance contract for round the clock routine Services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar.**

<b>S. NO.</b>	<b>DESCRIPTION</b>	<b>PAGE</b>
<b>1</b>	<b>PART-A</b> <b>(NIT, Form 6 &amp; 7, Performa of schedules etc.)</b>	10-45
<b>2</b>	<b>PART-B</b> <b>(Special conditions, Acceptable List of Makes &amp; Drawings etc.)</b>	46-94
<b>3</b>	<b>PART-C</b> <b>(BOQ Sample format)</b>	96-101

**Notes: The following will be the part of Contract Agreement:**

1. CPWD General Conditions of Contract of 2023 Maintenance Works modified up to date.
2. CPWD General Specifications for Electrical works, Part-I: Internal, 2023, Part-II: external : 2023 and Part IV (Sub-Station) 2013, Part VII (DG Sets) as amended to date
3. For details refer to: [www.iitrpr.ac.in/tenders](http://www.iitrpr.ac.in/tenders) and <https://eprocure.gov.in/eprocure/app>.

**Estimated Cost: Rs 1,82,73,238/- (Rupees One Crore Eighty Two Lac Seventy Three Thousand Two Hundred and Thirty Eight Only)**

**Assistant Engineer**  
**(Electrical)**

**Joint Registrar**  
**(Estate & Maintenance)**

**INDIAN INSTITUTE OF TECHNOLOGY ROPAR**  
**ESTATE & MAINTENANCE SECTION**

**NOTICE INVITING TENDER**

The Registrar, IIT Ropar invites on behalf of Board of Governors of IIT Ropar percentage rate tender from for the following work:

**NIT No. IITRPR/ENM/T/26/105**

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**Name of Work:** Annual Operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar.

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1. **Estimated Cost: Rs. 1, 82,73,238/-**
2. **EMD : Rs. 3,65,465/-**

The bid form and other details can be downloaded from the website [www.iitrpr.ac.in/tenders](http://www.iitrpr.ac.in/tenders) and <https://eprocure.gov.in/eprocure/app>.

**Registrar**

**INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR TENDRING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE**

The Registrar, on behalf of Board of Governors of IIT ROPAR, invites percentage rate tenders from registered contractors in appropriate class in CPWD/ MES/ BSNL /Railways/ State PWDs and Central PSUs or OEM / authorized OEM agency/ State Electricity Board for the following work.OEM's/ authorized OEM agency means L & T,Schneider,Legrand only.

S. No.	Name of work	Estimated cost put to tender	Tender Fee	Earnest Money Deposit	Period of Completion	Last date for submitting of Bid	Time & date of opening of Tender
1	Annual Operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipment at IIT Ropar.	Rs.1,82,73,238/-	Nil	Rs 3,65,465/-	As mention BOQ	Refer Page no. 2 (Schedule)	Refer Page no. 2 (Schedule)

**A. ELIGIBILITY CRITERIA:**

- a) Should have completed the similar works during last seven years ending on previous day of last day of submission of tender out of which at least one should have been executed in Government Departments as mentioned below:
- . 3 (three) “**Similar works**” each of value not less than 40% of the estimated cost put to tender.
  - OR
  - . 2 (two) “**Similar works**” each of value not less than 60% of the estimated cost put to tender.
  - OR
  - . 1 (one) similar work of value not less than 80% of the estimated cost put to tender.
- \*Similar works means “Operation & Maintenance of 11/0.433 KV Sub Station”**
- b) Enlistment contractors of appropriate class in CPWD/MES/ BSNL/ Railways/ PSU/ State PWDs.
- c) Joint ventures are not accepted

## **B. Documents to be submitted with tender:**

- a) Enlistment contractors of appropriate class in CPWD/MES/ BSNL/ Railways/ PSU/ State PWDs/Central PSUs or OEM / authorized OEM agency/ State Electricity Boards. OEM shall manufacture ACB or VCB or Transformer.
- b) Class A Contractors registered with state Electricity Boards.
- c) Required experience/completion certificate of similar works.
- d) Certificate of registration for EPF and ESIC.
- e) Copy of GST Registration.
- f) Earnest Money Deposit (NEFT/RTGS in favour of IIT Ropar Revenue Account payable at Ropar / Rupnagar, Punjab) (Refer Page no.2 (Schedule))
- g) PAN registration with the Income Tax Department.
- h) Price quoted for the respective items in words and figures in prescribed format.

Price bids submitted by intending bidders shall be opened only to those tenderers, whose Earnest Money Deposit and other documents placed are found in order.

## **OTHER CONDITIONS:**

- 1) The intending bidder must read the terms and conditions of Form-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
- 2) Information and Instructions for bidders posted on the website shall form part of the bid document.
- 3) The agreement shall be drawn with the successful tenderer on prescribed Form No. Form-8 as modified and corrected upto date which is available as a Govt. of India Publication. Tenderer shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
- 4) Initially the work will be awarded for 1 year which can be further extended for two years on a year-to-year basis subject to satisfactory performance of the party. Rates must be quoted for Three Years otherwise tender shall be rejected. Rates shall be frozen for Three Years. For financial evaluation of the bid quoted by the bidders for overall three years shall be considered for finding the lowest bidder. All the 06 Sheets of BOQ need to be filled falling which tender stand rejected.
- 5) The time allowed for carryout the work will be **12 months** from the date of start as defined in schedule "F" or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender document.
- 6) The bid document consisting of plans, specifications the schedule of quantities of various types of items to be executed and set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website [www.iitrpr.ac.in/tenders](http://www.iitrpr.ac.in/tenders) and [eprocure.gov.in](http://eprocure.gov.in)
- 7) The contractor whose tender is accepted will be required to furnish a **Performance Guarantee of 5% (Five Percent)** of the tendered amount within the period specified in Schedule F. This guarantee shall be Deposit at Call receipt of any scheduled bank / Banker's cheque of any scheduled bank / Demand Draft of any scheduled bank / Pay order of any Scheduled Bank of any scheduled bank or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.

**In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, The EMD will be forfeit.**

- 8) The Institute reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed to be suitable by it, if too many bids are received satisfying the laid down criterion.
- 9) Copies of other drawings and documents pertaining to the works will be open for inspection by the tenderers at the office of the above-mentioned officer. Tenderers, are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
- 10) The competent authority on behalf of the Director, IIT Ropar does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all of the tenders received without the assignment of any reason.
- 11) All tenders, in which any of the prescribed conditions is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer, shall be summarily rejected.
- 12) Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 13) The competent authority on behalf of the Director, IIT ROPAR reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rates quoted.
- 14) The contractor shall not be permitted to tender for works in the IIT ROPAR responsible for award and execution of contracts in which his near relative is posted as Group A Officer in Accounts Section or as an officer in any capacity between the grade of Registrar and Engineer-in-charge (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any officer in the IIT ROPAR. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of the concerned Department / termination of the contract from this institute.
- 15) No Engineer of gazetted rank or other gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of two years after his retirement from government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as

aforesaid before submission of the tender or engagement in the contractor's service.

- 16) The tender for the works shall remain open for acceptance for a period of **180 days** from the date of opening of tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at a liberty to forfeit 100% of the said earnest money as aforesaid. Further, the tenderer shall not be allowed to participate in the re-tendering process of the work.
- 17) This Notice Inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall within **15 days** from the stipulated date of start of the work sign the contract consisting of:-
  - a) The notice inviting tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
  - b) Standard CPWD **Form-7** as modified and corrected.
- 18) Tenders with any condition including conditional rebates shall be rejected forthwith. However, tenders with unconditional rebates will be acceptable. Tenderers must associate himself, with agencies of the appropriate class eligible to tender for each of the minor components of work. Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.
- 19) The enlistment of the contractors should be valid on the last date of submission of tenders. In case only the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tenders. Those contractors not registered on the website mentioned above, are required to get registered beforehand.
- 20) Contractor must ensure to quote his tender percentage for the Estimated Cost. In addition to this, while selecting the designated cell if the cell is left blank the tender shall be treated as invalid. The contractor should quote the percentage above or below accurate to two places of decimal (or zero percentage only). The column should not be kept blank; otherwise the tender shall be treated as invalid.
- 21) In case of any query, please drop email to [enm.office@iitrpr.ac.in](mailto:enm.office@iitrpr.ac.in), [ae.electrical@iitrpr.ac.in](mailto:ae.electrical@iitrpr.ac.in)
- 22) Information and instructions for bidders posted on the website shall form part of the bid document.
- 23) The bid submitted shall become invalid if:
  - (i) The bidder is found ineligible.
  - (ii) The bidder does not deposit the original EMD. EMD are exempted for bidders having a certificate from NSIC/MSME.
  - (iii) The bidder does not upload all the documents (including service tax registration / VAT registration/Sale Tax registration) as stipulated in the bid document including the copy of receipt for deposition of original EMD.
  - (iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest tenderer in the office of tender opening authority.
  - (v) All the 06 Sheets of BOQ need to be filled falling which tender stand rejected.

- 24) Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of work.
- 25) The bidders can ask their query in the pre bidding as mention in schedule bid.
- 26) Rate of Good and Service Tax (GST) will be applicable as notified time to time by the authority for a period as applicable (during the validity period of the agreement i.e. up to completion of work). The TDS (tax deduction at source) shall be deducted from bill payments to the contractor as per Government law and rules.
- 28) The acceptance of the tender shall be conveyed by the **Joint Registrar, IIT Ropar** on behalf of the Director, IIT ROPAR.

**Registrar**  
**For & on behalf of the Board of Governors, IIT Ropar**

**ITEM RATE TENDER AND FOR WORKS CONTRACT**

Tender for “Annual Operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipment at IIT Ropar”

- (i) To be submitted by refer page no.2
- (ii) To be opened refer page no.2

Issued to : \_\_\_\_\_

Joint Registrar (E&M), IIT Ropar

**TENDER**

I/We have read and examined the Notice Inviting tender, schedule, A,B,C,D,E & F. Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the Director, IIT Ropar within the time specified in Schedule ‘F’, viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender **open for (90) Ninety days from the date of opening of tender** and not to make any modifications in its terms and conditions.

I/We undertake and confirm that eligible similar work(s) has/ have not been executed through another contractor on a back to back basis. Further that, if such a violation comes to the notice of the Department, then I/we shall be debarred for tendering in IIT Ropar in future forever. Also, if such a violation comes to the notice of the Department before the date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

Dated

Witness:  
Address:  
Occupation:

Signature of contractor  
Postal Address: \_\_\_\_\_  
Email : \_\_\_\_\_

## ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Board of Governors, IIT Ropar for a sum of Rs.....(Rupees \_\_\_\_\_only), The letter referred to below shall form part of this contract Agreement:-

- i)
- ii)
- iii)

Dated:

For on the behalf of Board of Governors, IIT ROPAR  
Signature

## PERFORMA OF SCHEDULES

### SCHEDULE 'A'

Schedule of Quantities.

### SCHEDULE 'B'

Schedule of materials to be issued to the contractor:

S.N.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	2	3	4	5
-NIL-				

### SCHEDULE 'C'

Schedule of Tools and Plants to be hired to the contractor

S.N.	Description of item	Hire charges per day	Place of issue
1	2	3	4
-NIL-			

### SCHEDULE 'D'

Extra schedule for specific requirements / document the work if any

As attached in for tender form

- NIL -

### SCHEDULE 'E'

Reference to General Conditions of contract maintenance work 2023 incorporating amendment up to date of submission of Tender.

<b>Name of Work</b>	Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar
<b>Estimated cost of the work</b>	Rs. 1, 82, 73, 238/-
<b>Earnest Money Deposit</b>	Rs 3,65,465/-
<b>Performance Guarantee</b>	5 % ( Five Percent ) of accepted tendered value
<b>Security Deposit</b>	2.5% shall be deducted from the running bills and final bills.

**SCHEDULE 'F'**

<b>SCHEDULE 'F' (FOR ELECTRICAL COMPONENT OF WORK)</b>	
<b>General Rules &amp; Directions</b>	
<b>Officer inviting tender</b>	Joint Registrar ( E & M ),IIT Ropar
<b>Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 &amp; 12.3</b>	Not Applicable
<b>Definitions</b>	Joint Registrar ( E & M ),IIT Ropar
<b>Engineer-in-charge</b>	
<b>Accepting Authority</b>	Registrar,IIT Ropar
<b>Percentage on cost of materials and labor to cover all overhead &amp; profits</b>	Not Applicable
<b>Standard schedule of Rates</b>	DSR 2025 (E&M) & 2025 (E &M) Vol-II with correction slips up to the last date of submission of bid.
<b>Department</b>	Estate & Maintenance, IIT Ropar.
<b>Standard contract Form</b>	GCC 2023 Maintenance works, Form-7 for CPWD works as amended up to the last date of submission of bid.

<b>CLAUSE 1</b>	
<b>Time allowed for submission of Performance guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. or proof of applying thereof from date of issue of letter of acceptance</b>	10 Days.
<b>Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period provided in (i) above</b>	03 Days
<b>Clause – 2</b>	

	<b>Authority for fixing compensation for not attending the complaint or non-deployment of labour as per time limit mentioned in Special Condition of NIT</b>	Registrar,IIT Ropar or Its Representative
	<b>Clause 2A</b>	

	<b>Whether clause 2A is applicable</b>	Not Applicable
	<b>Clause 3</b>	
	<b>Clause 3A</b>	Applicable
	<b>Clause 5</b>	
	<b>Number of days from the date of issue of letter of acceptance for reckoning date of start of work</b>	07 Days
	<b>Time allowed for execution of work</b>	As per mention in BOQ
	<b>Authority to decide</b>	
	<b>Extension of time</b>	Joint Registrar ( E & M ),IIT Ropar
	<b>Rescheduling of mile stones</b>	Not Applicable
	<b>Shifting of date of start in case of delay in handing over of site.</b>	Joint Registrar ( E & M ),IIT Ropar

**Clause 5.1**

**(a) Schedule of Handing over site.**

Part	Portion of site	Description	Time period for handing over reckoned from date of issue of letter of intent.
1	2	3	

**Site is available**

<b>(b) Schedule of issue of Designs.</b>			
Part	Portion of site	Description	Time period for handing over reckoned from date of issue of letter of intent.
1	2	3	
-NIL-			

<b>Clause 5.2</b>	
<b>Nature of Hindrance Register</b>	Physical
<b>CLAUSE 6</b>	
<b>Clause applicable</b>	Yes
<b>CLAUSE 7</b>	
<b>Gross work to be done together with net payment/adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment</b>	Monthly payment shall be made to the contractor on submission of the monthly RA bill.
<b>CLAUSE 7A</b>	
<b>Whether clause 7A is applicable</b>	Yes
<b>CLAUSE 7 B</b>	Not Applicable

## CLAUSE 10A

### Electrical

List of mandatory testing equipment and accessories to be provided by the contractor at the service center. Electrical Work

1. Megger (500V & 5000V) - 01 No Each;
2. Tong Tester (0-600 Amp) - 03 Nos;
3. Screw Driver set & Plier (For every operator and electrician);
4. Tester (For every operator and electrician);
5. Allen keys sets – 03 Nos.
6. Socket Set (Gotti key set) complete 08mm to 32mm – 02 Nos.
7. Crimping tool box (For 10 sqmm to 400 sqmm cable termination) – 01 Nos.)
8. Earth resistance tester – 01 No;
9. Test Lamp with holder – 03 Nos;
10. Vacuum Cleaner & Blower – 03 Nos;
11. Jet pump – 01 Nos.
12. Accu Chek Energy Meter Tester – 01 Nos;
13. Cable Fault Locator (As & when required);
14. db (Decibel) Meter – 01 Nos.
15. Lux meter – 01 Nos.
16. Multimeter – 05 Nos.
17. Drilling machine – 03 Nos.
18. Aluminum Ladder (5 feet) – 03 Nos.
19. Aluminum Ladder (08 Feet) – 02 Nos.
20. Fawda – 05 Nos.
21. Grass cutter for substation premises – 02 Nos.
22. Mandatory Electric Arc Flash Suit-01 No and necessary PPE's for smooth OPeration and Maintenance of VCB and SF6.

Apart from above said Tools, If any tools related to work it must be made available at site by the contractor without additional cost.)

Requirement of above-mentioned equipment is tentative only; which can be changed by Engineer In-Charge.

<b>CLAUSE 10B (i)</b>	Not Applicable
<b>CLAUSE 10 C</b>	Applicable
<b>Component of labour expressed as % of value of work</b>	Not Applicable
<b>CLAUSE 10CA</b>	Not Applicable

<b>Material covered</b>	Nearest Material (other than cement, reinforcement bars & structural steel) for which all India wholesale price index to be followed.	Nearest Material (other than cement, reinforcement bars & structural steel) for which all India wholesale price index to be followed.
<b>Cement (OPC)</b>	----- ----- -----	Not Applicable
<b>Cement (PPC)</b>	----- ----- -----	
<b>Reinforcement bars TMT-500D (Primary manufacturer)</b>	----- ----- -----	
<b>Structural Steel</b>	----- ----- -----	
<b>Includes cement component used in RMC brought at site from outside approved RMC plants, if any</b>		
CLAUSE 10CC	Not applicable	
CLAUSE 11		
Specification to be followed for execution of work	Relevant CPWD/IIT Ropar Specification with correction slips issued up to the last date of submission of bid along with all relevant codes.	
CLAUSE 12		

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3:		
2.2. & 12.3	Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for Superstructure work.	As per CPWD Manual
	Deviation limit beyond which clauses 12.2. & 12.3 shall apply for Foundation work	

CLAUSE 14		
Carrying out part work at risk & cost of contractor		Applicable
CLAUSE 16		
Competent Authority for deciding reduced rates.		Registrar, IIT Ropar
CLAUSE 18		
List of machinery, tools & plants which may require to be deployed by the contractor at site.		
S. No.	Plant/Equipment	As & when required within 24 Hours.
1	Hydra and Scaffolding for Maintenance work etc. as required;	As per Requirement.
2	Grinder, drilling machine;	
3	Mud Pump with pipes;	
4	Welding machine;	
5	All the machines, tools and safety equipment required by Electrician, Lineman, Operator, Helper etc;	
6	Any other equipment as per requirement of work;	
7	Water pump/motor with pipes;	
Note: Requirement of above-mentioned equipments is tentative only; which can be changed by Engineer In- Charge, IIT Ropar		
Clause 19 C	Associate Dean of Infrastructure /Joint Registrar (E & M ) , IIT Ropar or equivalent officer in charge of work authority to decide penalty for each default clause.	
	Associate Dean of Infrastructure /Joint Registrar (E & M ) , IIT Ropar or equivalent officer in charge of work authority to decide penalty for each default clause.	
	Associate Dean of Infrastructure /Joint Registrar (E & M ) , IIT Ropar or equivalent officer in charge of work authority to decide penalty for each default clause.	

	Associate Dean of Infrastructure /Joint Registrar (E & M ) , IIT Ropar or equivalent officer in charge of work authority to decide penalty for each default clause.
<b>Clause 25</b>	Constitution of Dispute Redressal Committee

**(DRC)- to be nominated by Director IIT Ropar**

Clause 32					
"Requirement of Technical Representative (s) and Recovery Rate" for the work					
	Requirement of Technical Staff		Minimum Experience (Years)	Designation of Technical Staff	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)
	Qualification				
	ITI in relevant trade		5 years of Experience	Sub Station Attendant (Skilled)	Rs 750/- Per Day
	Diploma in Electrical Engg		5 years of Experience	Electrical Supervisor (Highly Skilled)	Rs 1500/- Per Day
	Certificate of OHSAS		1 Year of Experience	Safety Officer (Highly Skilled)	Rs 1500/- per Day
	Matric /Eight Pass		2 Years of Experience	Helper (Semi Skilled)	Rs 500/- Per Day
Clause 32 will be applicable as per CPWD manual 2024. The contractor should provide the above technical staff and biometric attendance is to be marked by them.					
"Assistant Engineer" from Government Services who are holding a Diploma will be treated at par with "Graduate Engineer".					
Diploma holder with minimum 10-year relevant experience with a reputed construction co. can be treated at par with graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.					

CLAUSE 38		
i)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates	DSR 2025 with correction slips issued up to last date of submission of bid.

ii)	Variations permissible on theoretical quantities	
	(a) Cement	As per CPWD manual.
	(i) for works estimated cost put to tender not more than Rs. 25 Lakhs	
	(ii) For works with estimated cost put to tender more than Rs. 25 Lakhs	

	(b) Bitumen for all works	
	(c) Steel reinforcement and structural steel section for each diameter, section and category	
	(d) All other materials	
	RECOVERY RATES FOR QUANTITY BEYOND PERMISSIBLE VARIATION For All Elements	
	Excess beyond permissible limits	As per CPWD manual.
	Less use beyond the permissible limit	Substandard work shall not be accepted

## SALIENT/MANDATORY REQUIREMENTS FOR THE TENDER

**Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar.**

- 1 The tenderer is advised to read and examine the tender documents for the work and the set of drawings available with Engineer-in-charge. He should inspect and examine the site and its surroundings by himself before submitting his tender.
- 2 A separate schedule of quantity is included in this tender for Electrical items of work. The contractor shall quote the item rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.
- 3 Time allowed for the execution of work is **12 Months**.
- 4 The contractor(s) shall submit a detailed program of execution in accordance with the master programme / milestone within **7 days** from the date of issue of award letter.
5. Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras. The contractor shall at all times indemnify and keep indemnified the owner and its officers, servants and agents from and against all third party claims whatsoever (including time not limited to property loss and damage, personal accident, injury or death of/or property or person of any sub-contract and or the servants or agents of the contractor any subcontractor(s) and or the owner and the contractor shall at his own cost and initiative at all times, maintain all liabilities under Workmen's Compensation Act/ Fatal Accident Act, Personal Injuries, Insurance Act and/ or their Industrial Legislation from time to time in force.
- 6 For electricity requirements of the office, the contractor(s) shall be provided with temporary electric connection at a suitable place by the Institute if possible, on request of the contractor. The required cable and electrical meter shall be arranged by the contractor. The monthly consumption of electricity shall be recovered from the running bills of the contractors on the approved rates of the Institute. The institute cannot be held liable to provide any office or location to set up an office.
7. The rates of operation and maintenance (along with complete scope as per NIT) charges shall be inclusive of all taxes, duties octroi, works contract tax, cartage loading, GST and any other statutory taxes complete in all respects, valid for a period of three years from the date of award of contract.
8. The safety of the operation of the Sub-Stations shall be the responsibility of the successful contractor.

9. Substation may be inspected during working hours on any day if required by the bidders.
10. The Contractor will maintain all records of the complaints in a register and get it countersigned by IIT Ropar on a weekly basis.
11. Bid security of the unsuccessful bidders will be returned to them after award of work.
12. In the event of any breach of the terms of the contract, the contractor shall have to bear the penalty specified in the present terms. However, upon a material breach of the contract terms which is not remedied by the contractor within 7 days, IIT Ropar shall be entitled to terminate the present contract without any notice. The contractor shall be required to make good any damage incurred by IIT Ropar.
13. The material parts being replaced shall be of OEM authorized makes and specifications.
14. The contractor will be liable to handover the substation in running condition with all the equipment serviceable at the end of contract or termination of contract.
15. During the process of overhauling or routine maintenance if any modification / improvement of the system is required, it has to be cleared by the Engineer in-charge in writing.
16. The agreement will be valid for Operations & Maintenance Substation incorporated in the contract document. This should be strictly adhered to. The operations & maintenance contract shall remain valid initially for a period of one year and it may be further extended/ renewed annually up to **two** years on the same terms and conditions. The contract once awarded can be terminated by the IIT Ropar after serving one month's notice to the contractor.
17. The service provider shall at his own risk and cost ensure that their employees deployed to carry out the work of IIT Ropar are insured against all risks that may be associated with the job.
18. If rain water enters substation / generator rooms etc. the draining out of water and keeping the substation / generator room clean and dry is in the scope of the contractor.
19. The staff deployed site for maintenance of work shall take all safety precautions and the contractor shall be responsible for compliance of all labour regulations, liabilities and safety measures. If the Institute is not satisfied with the performance of staff, then alternate staff is to be provided immediately.
20. All required documents shall be provided for verification of the staff deployed at site for execution of work.
21. A complaint register/maintenance portal, attendance register and other required register at site shall be maintained by the contractor which will be reviewed by Engineer-in-charge or his representative at regular intervals. The register shall remain in the custody of contractor and photocopy of the same shall be submitted by contractor duly signed by him and representative of Engineer-in-charge weekly. In case of any ambiguity, the decision of Engineer-in-charge shall be final and binding to the contractor.

22. The contractor shall be required to possess during the full currency of the contract a valid license for employing contract labour from the appropriate licensing authority under the contract labour (Regulation and abolition) act 1970. The contractor shall be solely responsible for compliance of various statutory obligations (including the financial liabilities) under contractor labour regulation & abolition Act. Minimum wages act etc. and other applicable laws and rules framed thereunder from time to time. Contract workers are to be paid not less than fair wages which means wages fixed by CLC, Govt. of India under the provisions of the Minimum Wages Act. Wages due to the worker shall be paid to him directly by the contractor through Bank or ECS or Online transfer to his bank account and receipt of wages shall be attested by the worker concerned.
- 23 Authorization from OEM ( any ONE of the following ie. Schneider,Legrand, L & T).
- i) Lowest tenderer will submit following documents from OEM, along with the performance guarantee after the acceptance of tender for equipment mentioned below:
- (a) Authorization certificate.
- (b) The OEM is unconditionally supporting the lowest tenderer technically throughout the Comprehensive Maintenance Contract for the useful life of the system, and
- (c) OEM is providing all the spares required for healthy functioning of the equipment.
- 24 It shall be entirely the responsibility of the contractor to ensure that no unlawful act is done by his persons while on duty. In case any theft/ loss to the department's property due to the negligence or carelessness on part of staff employed by the contractor for the work the contractor shall be fully responsible and shall have to make good the same.
- 25 The Staff Employed by the contractor shall be at the sole responsibility and liability of the contractor and they will be employees of the contractor and all expenses in connection with these Employees shall be borne by the contractor. The department shall not bear any liability whatsoever with regard to these staff. The contractor shall provide at his own cost all statutory benefits to the staff employed by the contractor and the department will not entertain any liability whatsoever on this account.
26. Labour Laws: The contractor will follow all labour laws / acts of Central Govt., Local Govt. applicable from time to time. He should maintain a proper attendance register and record of wages paid to the workers and these documents should be submitted to IIT Ropar on demand along with a record of complaints and whenever asked. He will obtain the necessary Labour license required for engaging labour at site. The bidder should note that wages paid to the workers by the contractor

should not be less than minimum wages notified by the Chief Labour Commissioner (Central) from time to time for their respective category. The agency shall comply with all Acts, Laws and Regulations applicable to the area with regard to performance of the work and including, Minimum Wages Act, 1948, Contract Labour (R&A) Act, 1970, Workmen's Compensation Act, 1923 Industrial Dispute Act, 1947 and take such steps as may be deemed necessary in this regard.

It will be solely the contractor's responsibility to face any consequences arising out of non compliance of various labour laws. The contractor shall keep IIT Ropar in indemnified and if IIT Ropar has to incur some expenditure due to nonpayment of wages to the labour or non compliance of various labour laws by contractor, the same will be recovered from contractor's bill or from performance security or any other amount due, along with 10% on account of departmental charges.

27. Force Majeure: Neither party shall bear responsibility for the complete or partial nonperformance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, EarthQuake, Pandemic and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after signing of the present contract. In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.
28. The Contractor should impart training on emergency procedures and basic maintenance of substations to technicians specified by the Institute.
29. **Arbitration:** In the unfortunate situation if any disputes, disagreement and controversies arising in any manner, which cannot be settled by mutual agreement between the two parties, shall be resolved through arbitration. The number of arbitrators shall be ONE, shall be appointed by the Director, IIT Ropar. The decision of the sole arbitrator shall be final and binding to both the parties. All provisions of Arbitration and Conciliation Act 1996 (with amendments) shall apply and the legal place of arbitration shall be IIT Ropar, Rupnagar, Punjab. The language of arbitration proceedings shall be English. The Court which has jurisdiction in the matter is District Court, Rupnagar, Punjab.

## INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this ..... day of ..... 20.....

### BETWEEN

IIT ROPAR represented through its Registrar, (Hereinafter referred as the 'Principal/ Owner', which expression shall unless repugnant to the meaning or context here of include its successors and permitted assigns)

AND

..... (Name and Address of the Individual/ firm/ Company) through ..... (Hereinafter referred to as the (Details of duly authorized signatory) "Bidder/Contractor" and which expression shall unless repugnant to the meaning or context here of include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No. ....)

(hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for .....(Name of work)

hereinafter referred to as the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

## **Article 1: Commitment of the Principal/Owner**

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

(a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

(c) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

## **Article 2: Commitment of the Bidder(s)/Contractor(s)**

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision

through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

### **Article 3: Consequences of Breach**

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/ determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
2. Forfeiture of EMD/ Guarantee/ Security Deposit: If the Principal/ Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/ Contractor.
3. Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/ Owner will inform the same to law enforcing agencies for further investigation.

#### **Article 4: Previous Transgression**

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country conforming to the anti corruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statements on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

#### **Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors**

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

#### **Article 6- Duration of the Pact**

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority.

**Article 7- Other Provisions**

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Principal/Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is an agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

**Article 8- LEGAL AND PRIOR RIGHTS**

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contract documents with regard to any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....  
(For and on behalf of Principal/Owner)

.....  
(For and on behalf of Bidder/Contractor)

WITNESSES:

1. ....  
(signature, name and address)

2. ....  
(signature, name and address)

Place:

Dated :

**CONTRACT AGREEMENT**

**(ON RS.100 NON-JUDICIAL STAMP PAPER\*)**

(\*= To be purchased and submitted by the Contractor.)

THIS AGREEMENT is made on \_\_\_\_\_ 2026..... Between **Joint Registrar (E&M), Indian Institute of Technology Ropar, Punjab** (hereinafter referred to as “Client” which expression shall include his successors and assigns), and whose principal place of office is at IIT Ropar, Rupnagar Punjab India 140001 of the One Part,

**AND**

M/s.....having its registered office at.....(Hereinafter referred to as “the Contractor”) which expression shall unless excluded by or repugnant to the context be deemed to include his successors, heirs, executors, administrators, representatives and assigns) of the other part for

**WHEREAS** the Client invited bids through open tender, vide Notice Inviting Tender dated .....for the work of “**Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar**”.

I. under **Tender No.**

II. **AND WHEREAS** the Contractor submitted his bid vide..... in accordance with the bid documents and represented therein that it fulfills all the requirements and has resources and competence to provide requisite services to the Client

III. **AND WHEREAS** the Client has selected M/s.....as the successful bidder (“the Contractor”) pursuant to the bidding process and negotiation of contract prices, awarded the **Letter of Acceptance (LoA) No. ....**, to the Contractor on ..... for a total sum of ..... [Rupees ..... Only].

IV. **AND WHEREAS** the Client desires that the “**Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar**” as defined in the Bidding Document) be provided, performed, executed and completed by the Contractor, and wishes to appoint the Contractor for providing requisite services to the Client.

V. **AND WHEREAS** the Contractor acknowledges that the Client shall enter into contracts with other contractors / parties “**Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar.**” for its office in cases the Contractor falls into breach of the terms and conditions as stipulated in the Tender Document and shall waive its claim whatsoever in this regard.

VI. **AND WHEREAS** the terms and conditions of this Contract have been fully negotiated between the Client and the Contractor as parties of competent capacity and equal standing.

VII **AND WHEREAS** the Contractor has fully read, understood and shall abide by all the terms and conditions as stipulated in the Tender Documents for “**Annual operation & maintenance contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid substation, 11/0.433KV substations including all transformers, PSS, DG Set, HT & LT Panel and Cables, RMU, Feeder Panel and allied equipments at IIT Ropar**”. for the Client's office, failing which the Contract is liable to be terminated at any time, without assigning any reasons by the Client.

VIII. The Client and the Contractor agree as follows:

1. In this Agreement (including the recitals) capitalized words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.

- (a) Notice Inviting Tender Form 6, Form No. 7, Performa of Schedules.
- (b) The Letter of Intent /Acceptance (LoI/A) issued by the Client.
- (c) Price Schedule
- (d) Performance Bank Guarantee.
- (e) Integrity Pact.
- (f) The Addenda, if any, issued by the Client.
- (g) Any other documents forming part of this Contract Agreement till date.
- (h) Charges – Schedule annexed to this Article of Agreement
- (i) Supplementary Agreements executed from time to time.

3. Any changes/modifications/amendments required to be incorporated in the Contract Agreement at a later stage shall be discussed and mutually agreed by both the parties and such supplementary agreements shall be binding on both the parties and shall form the part of this contract agreement.

4. This Contract shall be governed by and construed in accordance with the laws of India. Each Party hereby submits to the jurisdiction as set out in the Dispute Resolution Procedure in the Conditions of Contract.

IX. **IN WITNESS WHEREOF** the parties hereto have caused this Agreement to be executed in accordance with the laws of India on the day, month and year indicated above.

Signed on behalf of the Contractor

Signed on Behalf of the Institute

**(Authorised Signatory)**

**(Joint Registrar, IIT ROPAR)**

<b>&lt;On Organization Letterhead&gt;</b>		
<b>(For Works Contracts, including Turnkey contracts)</b> <b>&lt;CERTIFICATE&gt;</b>		
Tender No. :- ..... Date:- .....		
I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries and hereby certify that this bidder is not from such a country and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.		
<b><i>OR (whichever is applicable)</i></b>		
I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries and hereby certify that this bidder is from _____ (Name of Country) and has been registered with the Competent Authority and will not subcontract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I also certify that this bidder fulfills all the requirements in this regard and is eligible to be considered.		
<i>(Copy/ evidence of valid registration by the Competent Authority is to be attached)</i>		
		<b>Signature of Bidder/ Agent</b>
		<b>Name:</b> _____
		<b>Designation:</b> _____
		<b>Organization Name:</b> _____
		<b>Contact No. :</b> _____

(To be given on Company Letter Head – For tender value below Rs.10 Crores)

(To be given by Statutory Auditor/ Cost Auditor/ Cost Accountant/ CA for tender value above Rs.10 Crores)



**<TO BE PROVIDED BY OEM ON LETTERHEAD>**

(To be given on Company Letter Head – For value below Rs.10 Crores)

(To be given by Statutory Auditor/ Cost Auditor/ Cost Accountant/ CA for value above Rs.10 Crores)

To,  
The Registrar,  
Indian Institute of  
Technology Ropar  
Rupnagar, Punjab -  
140001

Subject: - **Declaration of Country of Origin of Goods**

Tender Reference No:

\_\_\_\_\_

Name of Tender/ Work:

\_\_\_\_\_

1. Country of Origin of Goods being offered: \_\_\_\_\_ (OM No. 6/18/2019-PPD dated 23.07.2020)

“\*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.”

Yours faithfully,

(Signature of the bidder, with Official Seal)

## COMPLIANCE SHEET

S. No.	Checklist (Duly attested)	Compliance Y/N
1	Form -07	
2	Firm registration / Enlistment /OEM	
3	GST Registration	
4	GST Return	
5	ESI & EPF Registration Certificates	
6	Experience Certificate of Similar Works	
7	Integrity Pact	
8	Pan Copy	
9	EMD or EMD Declaration as per Annexure A in case of MSME Exemption	
10	Class A Contractor Registration	

I have also enclosed all relevant documents in support of my claims, (as above) in the following pages.

**Signature & Stamp**

**of Bidder Name:**

**Designation: -**

# PART - B

## SPECIAL CONDITIONS

1. In the Contract (as hereinafter defined) the following definitions words and expressions shall have the meaning hereby assigned to them except where the context otherwise required.
  - i) “Institute/Department” shall mean the Indian Institute of Technology, Ropar (IIT Ropar)
  - ii) The “President” shall mean the Board of Governors, IIT ROPAR.
  - iii) The term “Director General of Works” shall mean the Director, IIT Ropar.
  - iv) “Superintending Engineer” shall mean the Registrar of the Institute, who as overall In charge and head of the administration shall direct the contract.
  - v) The “Engineer-in-charge”, who shall administer the work, shall be the Joint Registrar ( E & M ), IIT Ropar.
  - vi) “Accepting authority” shall mean the Registrar, IIT ROPAR on behalf of the Director.
  - vii) “Site Engineers” shall mean the AEE (Civil)/AE (Electrical)/ Junior Engineer (Civil)/Junior Engineer (Electrical) appointed by the Estate & Maintenance department.
  - viii) No labour huts/ jhuggis shall be allowed to be constructed in the campus except for the security persons at work site with proper sanitation arrangements after due approval of the Registrar.
  - ix) Any damage caused to the existing roads, power cables, telephone cables, water lines and structures by the contractor’s equipment, shall have to be made good by the contractor at his own cost.
  - xv) Existing drains, pipes, cables, over-head wires, sewer lines, Lan cable, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.
  - xvi) No payment shall be made to the contractor for any damage caused by rain, snowfall, floods, earthquake or any other natural causes whatsoever during execution of work. The damages of the work will be made good by the contractor at his own cost and no claim on this account shall be entertained.
  - xvii) For construction works which are likely to generate malba/rubbish to the tune of more than a tempo/truck load, the contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at their own cost to the notified/specified dumping. The malba / rubbish shall be required to be removed from site of work on

daily basis, if the same is not removed a token penalty of Rs. 250/- per day shall be levied till the removal of malba. This shall be recovered from the bill. The contractor should not throw the malba from higher floors directly on the ground. It should be brought down through the staircase by the workers or proper chute should be installed for this purpose.

## **2. DUTIES & POWERS:**

- (i) The duties of the Site Engineer(s) are to watch and supervise the works and the workmanship employed in connection with the works, and to test and examine any materials to be used. He shall have no authority to relieve the contractor of any of his duties or obligations under the contract nor, except as expressly provided here under, to order any work involving delay or any extra payment by the Institute, nor to make any variation in the works.
- (ii) The Engineer-in-charge, from time to time in writing, delegates to the Site Engineer(s) any of the powers and authorities vested in them. Any written instruction or written approval given by the Site Engineer(s) to the contractor within the terms of such delegation (but not otherwise) shall bind the contractor and the Institute as though it had been given by the Engineer-in-charge provided always as follows:
  - a) Failure of the Site Engineer(s) to disapprove any work or materials shall not prejudice the power of the Engineer In-charge to subsequently disapprove such work or materials and to order the pulling down, removal or breaking up thereof.
  - b) If the contractor is dissatisfied by reason of any decision of the Site Engineer(s), he shall be entitled to refer the matter to the Engineer- in-charge, who shall thereupon confirm reverse or vary such decision.

## **3. ASSIGNMENT & SUBLETTING:**

The contractor shall not assign the contract or any part thereof or any benefit or interest therein or thereunder without the written consent of the Engineer In- charge. The whole of the works included in the contract shall be executed by the contractor except where otherwise provided in the contract. The contractor shall not sublet any part of the works without the written consent of the Engineer In- charge and such consent, if given, shall not relieve the contractor from any liability or obligation under the contract, and he shall be responsible for the acts, defaults and neglects of sub-contractor, his agents, servants or workmen, as if they were the acts, defaults or neglects of the contractor provided always that the provision of labour contracts on a piece work basis shall not be deemed to be a subletting under this clause.

## **4. PROPOSED ACTION IN CASE OF AN ACCIDENT AT SITE:**

i. In case of any serious accident at work site, the Institute may cause an enquiry / investigation into the accident and depending on the outcome of such enquiry / investigation, the institute may take such action against the contractor as may be deemed fit and appropriate in the discretion of the Director, IIT Ropar which may also lead to termination of the contract, and / or forfeiture of the security deposit made by the contractor, and / or the contractor may be may be debarred from applying for future works in the campus for a specified period.

## 5. LOCATION

The location of work is at Electrical Substation 66/11 KV Grade, Sub-Station-1, 2, 3 4, 5, 6, 7 & 3 Nos. of Package substation in the IIT Ropar permanent campus, Rupnagar, Punjab. The Contractor will be required to operate under the climatic conditions as prevailing for the entire year.

## 6 RELATED DOCUMENTS

These additional specifications are to be read in conjunction with the specification given in the tender. In case any item/items or part thereof are not covered under these specifications, the same shall be carried out as per relevant part of the **CPWD General Specification for Electrical Works amended up to date**-CPWD Part-I: Internal, 2023, Part-II: external, 2023 , HVAC-2017,Part-IV 2013 (Sub stations), Part-V 2020 (Wet Riser & Sprinkler System ), Part-VII 2013 (D.G Set ), Part-VIII-2013 (Gas Based Extinguishers ),Relevant Indian Electricity Rules and Indian Electricity Act amended up to date; Relevant BIS specifications amended up to date; NBC 2016 amended up to date and ECBC-2017 amended up to date and as per direction of Engineer In charge.

These additional specifications are to be read in conjunction with above and in case of variations; specifications given in this additional condition shall apply. However, nothing extra shall be paid on account of these additional specifications and conditions, as the same are to be read along with the schedule of quantities for the work.

## 7 Terminology

The definition of terms used in these specifications shall be in accordance with relevant IS. All components shall conform to relevant Indian Standard Specifications, International Standards and shall bear the stamp of the testing laboratory wherever existing and amended to date.

## 8 Order of Preference:

In case of discrepancy, if any, between the description of items as given in the Schedule of quantities, technical specifications for individual items of work (including additional and commercial conditions) and IS Codes etc., the following order of preference shall be followed:

- i. Schedule of quantities
- ii. Special Conditions
- iii. Technical specifications specified in the tender
- iv. General Conditions of Contract for CPWD Works
- v. Drawings
- vi. CPWD General Specifications
- vii. Relevant IS or any other international code in case IS code is not available.
- viii. Manufacturer's Catalogue, Specifications and Recommendations.

The work shall be carried out in a location, and working time may be restricted by the client, claims for idle labour(s) will not be entitled. The Bidder should in his own interest visit the site and get themselves familiarized with the site condition.

**9 Completeness of the tender, submission of programme, approval of drawings and commencement of work**

**I. Completeness of the tender: -**

All sundry equipments, fittings, assemblies, accessories, hardware items, foundation bolts, supports, termination lugs for electrical connections, cable glands, junction boxes and all other items which are useful and necessary for proper assembly and efficient working of the various equipments and components of the work shall be deemed to have been included in the tender, irrespective of the fact whether such items are specifically mentioned in the tender or not.

**II. Safety Codes and Labour Regulations**

In respect of all labour employed directly or indirectly, for the execution of work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provision, B.I.S. recommendations, factory act, and workmen's compensation act. CPWD code and instructions issued from time to time. Failure to provide such safety requirements would make the bidder liable for penalty. In addition Engineer In charge shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost incurred thereon from the contractor.

The contractor shall provide necessary barriers, signals and other safety measures wherever necessary so as to avoid accidents. He shall also indemnify IIT Ropar against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accident occurring due to any cause. The department shall not be responsible for any accident occurred or damage incurred or claims arising there from during the execution of work. The contractor to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.

**10 General security restrictions are given as under:**

- i) No inflammable materials shall generally be stored at site of work.
- ii) The movement of trucks and vehicles will be regulated in accordance with rules and regulations as approved by competent authorities.

- iii) The contractor shall inform in advance, the truck registration number, ownership of the trucks, names and address of the drivers and labour for necessary action by the security agency.
- iv) Due to the site conditions, no space for construction of storage facilities and stay of site staff may be allowed. However, the engineer-in-charge may consider the request given by the contractor with proper justification.
- v) Names and addresses of labourers/staff along with identity proof and residence address proof etc. working at site shall be furnished in advance for security verification for issue of passes.
- vi) The labourers/staff should not be changed too frequently once the verification of the character and antecedents is done.
- vii) As and when there will be security requirements, certain additional restrictions can be proposed as per the requirement of the situation.
- viii) Identity Cards :- The identity cards will be issued to the workmen employed by the contractor after proper police verification for which Contractor shall submit a list of workers to be deployed on site of work. The cost of photos would be borne by the contractor. They will be required to carry the identity- cards with them during their working inside the building.
- ix) The bidder must visit the site and must get himself acquainted with the proposed site of work, study specifications and conditions carefully before tendering rates. Nothing extra shall be paid on account of compliance of any of these clauses.

## **11 Works to be arranged by the department**

Unless otherwise specified in the tender documents: Space for accommodating all the equipment and components involved in the works, shall be arranged by the Department. However, arrangements to make it lockable and its watch & ward shall be made by the contractor himself.

## **12 Works to be done by the contractor**

Unless otherwise mentioned in the tender documents, the following works shall be done by the contractor and therefore, their cost shall be deemed to be included in their tendered cost-whether specifically indicated in the schedule of work or not: -

- i) Suspenders, brackets and supports for suspending lights and cables etc.
- ii) Sealing of all floor slab/wall openings provided by the Department or made by the contractor for laying pipes & cables from fire safety points of view.

- iii) Painting of all exposed metal surfaces of equipment and components with appropriate colour as per relevant part of bid document.
- iv) Making openings in the wall/floors/slabs or modifications in the existing openings wherever provided for cable/cable tray etc. Opening in the slab/retaining walls/brick wall etc. shall be made by means of core cutting machines only.
- v) All electrical works including cable/wires, earthing etc. beyond power supply made available by the department.
- vi) Making good all damages caused to the structure during installation and restoring the same to their original finish.
- vii) Approval from Local Body as may be required as per local by-laws. The cost penetrating for approval shall be paid by the department. (The contractor's responsibility shall be limited to the work executed by him).
- viii) The water and power supply for installation, testing and commissioning of the complete installation shall be made available by the contractor themselves.

### **13 Rates**

The rate quoted by bidder, shall be firm and inclusive of all taxes, revision of wages from time to time by the office of Ministry of Labour & Employment, Office of Chief Labour Commissioner ( C ), Statutory compliances of labour laws and obligations / liabilities, Labour Licence, BoCW, GST, duties and levies, working at all heights, EPF/ ESIC and all charges for packing, forwarding insurance, freight and delivery, octroi, installation, testing, commissioning, working at all heights etc. at site including temporary constructional storage, risks, overhead charges, general liabilities / obligation etc. Nothing shall be paid Extra. However, statutory deductions shall be made from the bills, as per rule. The rates quoted by the bidder shall also be inclusive of all this, nothing extra shall be paid on this account.

It will be the responsibility of the contractor to provide EPF / ESIC and other facilities to their employees as per current labour laws.

### **14 Taxes and duties**

The tender is for entering into a percentage rate works contract. The rates quoted shall be inclusive of all manpower, design, materials, prevailing taxes, duties, levies, Cess, freight and delivery, labour for installation, testing, commissioning etc. at site including temporary constructional storage, risks, overhead charges, general liabilities / obligation etc.

## **15 Execution**

### **a. Machinery for Erection**

All tools and tackles required for unloading/handling of equipment and materials at site, their assembly, erection, testing and commissioning shall be the responsibility of the contractor.

### **b. Dispatch of Materials to Site and their Safe Custody**

The contractor shall dispatch material to site in consultation with the Engineer-in-Charge. The arrangement to make it lockable/secure by means of partitions, locks etc. shall be the responsibility of the contractor. Watch and ward however, shall be the responsibility of the contractor. The program of dispatch of material shall be framed keeping in view the building progress. Safe custody of all machinery and equipment supplied by the contractor shall be the responsibility of the contractor till final taking over by the department.

### **c. Extent of Work**

The work shall comprise of entire labour including supervision and all material necessary to meet a complete installation and such tests and adjustment and commissioning, as may be required by the department. The term complete installation shall not only mean major items covered by the specification but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in detail in the tender documents in connection with this contract.

### **d. Compliance with Regulations and Indian Standards:**

All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification. In particular, the equipment and installation will comply with the following:

- i) Factories Act.
- ii) Indian Electricity Rules.
- iii) B.I.S. & other standards as applicable.
- iv) Workmen's compensation Act.
- v) Statutory norms prescribed by local bodies like CEA, PSPCL, and Local Bodies etc.
- vi) Nothing in this specification shall be construed to relieve the successful bidder of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.
- vii) Successful bidder shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed

on the work by the bidder. Failure to provide such safety requirements would make the bidder liable for a penalty of Rs. 500/- for each default. In addition, the department will be at liberty to make arrangements for the safety requirements at the cost of the bidder and recover the cost thereof from him.

**e. Indemnity**

The successful bidder shall at all times indemnify the department, consequent on this works contract. The successful bidder shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful bidder in so far as the latter is responsible. The successful bidder shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful bidder on account of the above.

**f. Coordination with other Agencies**

The contractor shall coordinate with all other agencies involved at the site of work so that the work of other agencies is not hampered due to delay in his work. The work, which directly affects the progress of work of other agencies, shall be given priority.

**g. Quality of Materials and Workmanship**

- i. The components of the installation shall be such design so as to satisfactorily function under all conditions of operation.
- ii. The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice.
- iii. All equipment and material to be used in work shall be manufactured in factories of good repute having excellent track record of quality manufacturing, performance and proper after-sales service.
- iv. All equipment and materials installed at various substations the same make to be used in the work shall be brand new having its date of manufacturing not more than 6 months old from the date of delivery at site with manufacturer's certificates, warrantee cards, technical catalogues, instructions, manuals and wiring diagrams etc.

**16 Inspection of materials and equipment's:**

- a. Materials and equipment to be used in the work shall be inspected by the departmental officers. Such inspection will be of following categories:
  - i) Inspection of materials / equipment to be witnessed at the Manufacturer's premises in accordance with relevant BIS / Agreement Inspection Procedure.

- ii) To receive materials at site with Manufacturer's Test Certificate(s)
  - iii) To inspect materials at the authorized dealer's warehouse to ensure delivery of genuine materials at site.
  - iv) To receive materials after physical inspection at site.
  - v) Adequate care to ensure that only tested and genuine materials of proper quality are used in work shall be ensured by the firm. The firm shall ensure that:
- b. Material will be ordered & delivered at site only with the prior approval of the department to ensure timely delivery.
- i. As and when the order is placed for the fittings / fixtures, cables, switchgears, poles, rising main, other main items etc, its copy shall be endorsed to the Engineer-in-charge.
  - ii. The firm will be required to procure material like light fittings, exhaust fans, MCB's & DB's, switches & sockets, wires & cables, conduits and switchgears etc directly from the manufacturer/ authorized dealers to ensure genuineness & quality and as installed at site previously. The same make of the material will be accepted. Proof in this regard shall be submitted by the contractor if required by the department.
  - iii. Inspection at the factory or at the warehouse of the manufacturer, as required, shall be arranged by the firm for a mutually agreed date. Certificate for genuineness of the fittings shall have to be provided duly signed by the manufacturer's officer not below the rank of Regional Manager.
  - iv. Delivery of material shall be taken up only with the consent of the department, after clearance of the material.
  - v. Department shall reserve the right to waive inspection in lieu of a suitable test certificate, at its discretion.
  - vi. The contractor shall give a trial run of the equipment and machinery for establishing its capability to achieve the specifications within laid down tolerances to the satisfaction of the Engineer-in-charge before commencement of work.

## **17 Final inspection and testing**

- i. Final Inspection and testing will be done by the Engineer in charge or his representative as per details indicated in the relevant section of Technical Specifications.
- ii. The installation will be offered for inspection by local bodies, if required. The contractor or his representative shall attend such inspection of the Local Fire authority, Local Body etc, if any and extend all test facilities as are considered necessary, rectify and comply with all observations of the Local Fire authority, Local Body etc, if any, which are part of the

agreement and arrange for obtaining necessary clearance certificate in favor of department. In case a contractor fails to attend the inspection and make desired facilities available during inspection, the department reserves the right to provide the same at the risk and cost of the contractor and impose penalty for the same. The installation will be accepted by the department only after receiving clearance from Local Fire authority, Local Body etc, for the work executed by the contractor under the agreement. Nothing shall be paid extra to the successful bidder.

## **18 Terms of payments:**

Following payment terms shall be applicable.

- a. No advance payment shall be made.
- b. Monthly payment will be made against running bills. The biometric attendance sheet of the deployed staff must be submitted. The wages shall be made through ECS/NEFT on or before the 7th day of month and the contractor has to submit the wages paid in detail with their running bills.
- c. The successful Contractor must submit the bill on 1<sup>ST</sup> / 2nd date of every month.
- d. Standard Payment is usually made upon receipt ,Inspection and acceptance of goods or services typically within a period of 30 days.

## **19 Special condition for safety at the work site**

The contractor will identify one of the supervisors for taking care of implementation of Safety systems. The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

- i) Smoking is strictly prohibited at the workplace.
- ii) Nobody is allowed to work without wearing a safety helmet. Chinstrap of the safety helmet shall be always on. Drivers, helpers and operators are no exception.
- iii) No one is allowed to work at or more than three meters height without wearing a safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
- iv) No one is allowed to work without adequate foot protection. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.
- v) All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles, rain coat etc. shall be arranged before starting the job.

- vi) All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach is to be ensured in every excavation.
- vii) Adequate illumination at the workplace shall be ensured before starting the job at night.
- viii) All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
- ix) Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
- x) Material shall not be thrown from elevated positions. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the trespassers from entering the area.
- xi) Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
- xii) All temporary electrical connections shall be made using 3 or 5 core cables, having an earth wire.
- xiii) Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
- xiv) A tools and tackles inspection register must be maintained and updated regularly.
- xv) Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
- xvi) All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
- xvii) No children shall be allowed to enter the workplace.
- xviii) All the lifting tools and tackles shall be stored properly when not in use.
- xix) Return cables shall be used for earthing. Lamps shall be used on Return cables to ensure proper earthing for welding works.
- xx) All the pressure gauges used in gas cutting apparatus shall be in good working condition.
- xxi) Connectors and hose clamps are used for making welding hose connections.
- xxii) Proper junction boxes must be used for tapping of power for temporary use.

## **20 Quality assurance plans:**

### **a. internal & external electrical work:**

- i. For Internal and External electrical works, the bidder should have a valid electrical contractor license from competent authority in the name of the contractor.
- ii. Electrical agencies shall submit the fortnightly labour report.

- iii. Necessary documents of handing / taking over of the installation will be duly signed by the parties namely E&M IIT Ropar and the main contractors.
- iv. tine maintenance only. However, if any failure is noticed during this period which is attributable to poor quality of material and bad workmanship, the contractor will be required to rectify the same at his own cost, failure of which the department will be at liberty to get the defects rectified at the risk & cost of the contractor. The contractor will also be required to carry out his own inspection/testing during the guarantee/warranty period and attend to any defect taking place during this period.
- v. Material required for the work shall be brought at site at the appropriate time keeping in view the requirement of material depending on progress of the work.
- vi. The work shall be carried out as per direction of Engineer in charge and CPWD specifications for Electrical Works.
- vii. Taxes, levies etc. as applicable shall be deducted from the contractor's bill. No Road Permit or other forms shall be issued by the Department. The rates quoted shall be inclusive of all taxes, duties, levies, EPF & ESIC, T & P and petty items like including log book, complaint register duster, Mobil oil, test lamp, stationary items etc. and no extra payment will be charged by the successful bidder.
- viii. The materials supplied shall be new (Manufactured not earlier than 24 months before the date of tender opening) and ISI marked wherever applicable. If required Test certificate / reports and warranty certificates as required shall be provided by the agency to the entire satisfaction of Engineer-in-charge, AE(E)/JE(E) before bill submission for payment.
- ix. The labour deployed site for execution of work shall take all safety precautions and the contractor shall be responsible for compliance of all labour regulations, liabilities and safety measures. If the Institute is not satisfied with the performance of labour, then alternate staff is to be provided immediately.
- x. All required documents shall be provided for verification of the staff deployed at site for execution of work.
- xi. The contractor shall be required to possess during the full currency of the contract a valid license for employing contract labour from the appropriate licensing authority under the contract labour (Regulation and abolition) act 1970. The contractor shall be solely responsible for compliance of various statutory obligations (including the financial liabilities) under contractor labour regulation & abolition Act. Minimum wages act etc. and other applicable laws and rules framed thereunder from time to time. Contract workers are to be paid not less than fair wages which means wages

fixed by CLC, Govt. of India under the provisions of the Minimum Wages Act. Wages due to the worker shall be paid to him directly by the contractor through Bank or ECS or Online transfer to his bank account and receipt of wages shall be attested by the worker concerned.

- xii. Following tools and tackles must remain available during the duration of the contract.

Each Technician should have own tool bag which consist of the following instruments mention below		
S.no	Name of Tools	Range
1	Digital Multimeter	1mv to 1000 V AC, DC
2	Clamp Meter	Measuring range up to 1000 A
3	Screwdrivers	30 cm, Insulated Type, Flat head, Confirming to IS 844-1979
4	Screwdrivers	insulated type, crosshead, Confirming to IS 844-1979
5	Line Testers	Confirming to IS 844-1979
6	Continuity Tester	
7	Adjustable wrench	205mm, confirming to IS 6149-1984 Grade II
8	Combination Pliers	Confirming to IS 6149-1984 Grade II
9	Hammer with a Claw	Confirming to IS 6546-1989
10	Wire Stripper	
11	Wire Crimping Tool	(up to 16 sqmm )
12	Allen Key Set	1.5 mm to 10mm
13	Measuring Tapes	5 Metres
14	Retractable blade	150 mm

Apart from above the following no of Tools to be kept in the inventory				
S.no	Name of Tools	Range	Qty.	Unit
1	Measuring Tapes	30 Meter -4 No	4	Nos.
2	Digital Insulation Resistance Tester	500/1000/2500/5000 Volts, measuring range up to 5 Giga ohms	2	Nos.
3	Earth Resistance Tester	0 to 100 ohms at 0.1 resolution	1	No
4	Hydraulic crimping tool	up to 400 sqmm	1	No
5	Complete socket set		1	No
6	Ring Spanners set	6x 7 to 30x 32	2	Nos.
7	Double-ended spanner set	6x 7 to 30x 32	2	Nos.
8	Cordless Rotary Hammer Drilling machine	4-22 mm	1	No
9	Corded Rotary Hammer Drilling machine	900-Watt minimum 8-32 mm	1	No
10	Lux Meter (Digital)	0 to 200,000 lux	1	No
11	Milli Tong Tester	0 to 100 mA	1	No

12	1Ph Variac	240 VAC, 6A	1	No
13	DC source	AC to DC upto 240V	1	No
14	Cable Fault Locator		1	No
15	Phase sequence meter		1	No

- xiii. No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall also not be allowed to erect any temporary set up for staff in the campus.
- xiv. Safety codes and Labour Regulations: - In respect of all labour employed directly or indirectly on the work for the performance of the contractor's part of work, the contractor at his own expense, will arrange for safety provision as per the statutory provisions, B.I.S. recommendations, factory act, workmen's compensation act, CPWD code and instruction issued from time to time. Failure to provide such safety requirements would make the bidder liable for penalty as per Part-A for each default. Safety of the staff employed will be the responsibility of the contractor. IIT,Ropar will not be responsible for any mishap, injury / accident or death of the staff. No claim in this regard shall be entertained / accepted by the department.
- xv. The contractor shall be fully responsible for any damages caused to the government. property or allottees property by his or his labour during the carrying out the work. All such damages shall be rectified by the contractor at his own cost, failing which the same will be rectified by Engineer In charge and the expenditure incurred shall be recovered from the contractor bill. The watch and ward of installation shall be the responsibility of the contractor.
- xvi. Contractors are requested to inspect the site before quoting their rates for the tender; later on no further claims in this regard shall be entertained.
- xvii. The staff engaged has to be courteous and maintain good behavior at site. Any person found discourteous or misbehaved shall have to be replaced within 48 hours, failing which, JR(E&M) IIT Ropar has the power to cancel the contract, and the contractor shall have no claim of compensation. The decision of the Director shall be final and binding on the contractor.
- xviii. The staff of the contractor shall maintain the complaint register, logbooks, job diary, maintenance records and registers, which will be supplied by the contractor. The staff should wear clean uniforms and badges (Name plate)/Identity Card to be supplied by the contractor. The Contractor shall provide uniform 2 sets for summer and 2 sets for winter to all the staff including all Personal Protective equipment. The brand of shoes

shall be (Tiger / Lakhani/ woodland/ Bata). The turban must be at least 7 meters where applicable.

- xix. Before the start of contract, the contractor is bound to submit the following details of the workers proposed to be engaged by him:
- a. Name
  - b. Postal Address
  - c. Photograph with specimen signature, Aadhar card/Voter ID etc as proof of identity
  - d. Qualification and Experience
  - e. Details of ESI and EPF of Employees proposed to depute

## **21 List of approved makes**

The materials of first quality approved by the OEM are to be used. In case it is established that the OEM-approved brands are not available in the market, the contractor shall submit an alternative proposal for the approval of the engineer in charge. When two or more alternative brands have been mentioned, the brand to be finally used shall be decided by the Engineer-in-charge and as per sample approved before procurement & installation. The contractor must ensure that the defective parts of equipment are replaced with the new part of the same make installed at site.

## **22. Scope of work:**

### **1) Maintenance or Preventive Maintenance means**

- i) Breakdown maintenance (Excluding material)
- ii) Replacement/ repair of defective equipment/component to make it properly functional without compromising on its performance.
- iii) Preventive and Routine maintenance to keep the system healthy (including all material)
- iv) Arranging all type of Tools and Plants required.
- v) Carrying out necessary testing of installations as prescribed.
- vi) Preventive and Routine maintenance to keep the system healthy (including all material) arranging all types of Tools and Plants required as per as site requirements.

The following services shall be provided only through the manufacturer/OEM/ their competent authorized service dealers.

- a) DG Sets
- b) 66/11 KV transformers
- c) 66 KV SF6 Breakers
- d) 66 KV lightning arrestors
- e) 66 KV CT
- f) 66 KV PT
- g) Control and Relay Panels
- h) Protection relays
- i) 11 KV Capacitor Banks
- j) 433 V Capacitor Banks
- k) 11/0.433 KV transformers
- l) 11 KV HT Panels

- m) LT ACBs and Bus Coupler
- n) Floating cum boost charger
- o) Batteries installed at various substations

Cleaning work includes all materials like Brush, room, cloth, chemicals, Soap, duster etc required for cleaning.

- 2) Energy and water conservation is the theme of the campus hence all the equipment shall be operated and maintained in energy and water efficient manner to get optimum performance.
- 3) At the end of Operation & maintenance contract the contractor shall handover all the equipment in healthy and full functional condition failing which defective equipment shall be got made functional at risk and cost of contractor

### **23. METHODOLOGY AND STAFF:**

- i) **Power Supply:** Unless otherwise specified, power supply for legitimate use shall be available free of cost for execution of the work. For office the electricity charges would be charged based on usage as per the Institute rules.
- ii) **Water Supply:** The water supply for testing and commissioning of the complete installation shall be made available by the Department free of charge to the contractor. Potable water for use of staff or contractors during duty hours shall also be provided by the Department free of cost.
- iii) **T&P:** No T & P shall be supplied by the department. The contractor shall arrange all the necessary T&P as mentioned above in the tender document including specialized equipment, testing equipment etc. for the work and nothing extra shall be paid by the department. The movable T&P shall be kept in tidy condition and shall have proper look. In case the Engineer in charge feels that T & P being used are not proper, the same shall have to be replaced by the contractor immediately.
- iv) It is mandatory that contractors will provide trained staff at site who will be able to perform prescribed O&M functions. Since the firm will be doing the maintenance and/ or operation of critical services like sub-station, standby power, H.T. Power and L.T. distribution, etc. responsible and trained persons should be deputed as required at site who could take initial steps under emergency situations.

Sr. No.	STAFF REQUIRED						
	ITEM DESCRIPTION	SAFETY OFFICER	ELECTRICAL SUPERVISOR	SUB STATION (ATTENDANT)	HELPER		
1	66 KV Sub Station 1 No. DG Set and PSS KV School 1 No. DG Set( In three shifts round the clock)	1 No in general shift	1 No in general shift	3 Nos.	1 Nos.		
2	Sub Station Equipments and 3 Nos. DG Sets at Substation No.1 (In three shifts round the clock) and SubStation Equipment and 3 Nos. DG Sets at Sub Station No. 2 (In three shifts round the clock)			3 Nos.	1 Nos.		
3	SubStation Equipment and 3 Nos. DG Sets at Substation No.3 (In three shifts round the clock) and			3 Nos.	1 Nos.		
	SubStation Equipment and 2 Nos DG Sets at Sub Station no. 4 (In three shifts round the clock.)			3 Nos			
4	SubStation Equipments 2 Nos. DG Sets and PSS Data Center at Sub Station no. 5 (In three shifts round the clock) and			1 No in general shift	1 No in general shift	3 Nos	1 Nos
	SubStation Equipments 2 Nos. DG Sets and PSS Data Center at Sub Station no. 6 (In three shifts round the clock)					3 Nos	
5	Sub Station Equipment's 2 Nos. DG Sets and PSS Sports Field at Sub Station no. 7 (In three shifts round the clock )			3 Nos	1 Nos		
6	Reliever manpower			5 Nos.	2 Nos.		
	<b>Total No. of staff required</b>			<b>29 Nos.</b>	<b>07 Nos.</b>		
	<b>Recovery rate (Rs.) per day for each person not deputed/ absent</b>	<b>Rs 1,500</b>	<b>Rs 1,500</b>	<b>Rs. 750.00</b>	<b>Rs. 500.00</b>		

**Note** – Penalty pertaining to deputation/absence of manpower shall be imposed after **31** days of commencement of work at site.

The qualification of and experience of staff to be deployed for this project shall be as follows:

<b>S.No</b>	<b>Designation</b>	<b>Discipline</b>	<b>Minimum Qualification and Experience.</b>	<b>Number</b>
1	Substation Attendent (Skilled)	Electrical	ITI in relevant trade with 5 Years Substation/relevant Experience	29
2	Safety Officer (Highly Skilled)	Electrical	Relevant certificate (OHSAS) to be produced along with experience of at least 1 year.	01
3	Electrical Supervisor (Highly skilled)	Electrical	Diploma in Electrical Engineering with 05 Years Experience in Electrical Sub Station and allied works	01
4	Helpers (Semi-skilled)		Matric/ Eight Pass with 2 years of Substation/relevant Experience	07

- v) Wherever a contractor has to engage a specialized firm/OEM, they shall make sure that they depute their Engineer, and the work carried out by them is comprehensively controlled and assured with respect to quality, coordination and delivery.
- vi) The firm/ contractor shall have to abide by the Security Rules imposed by concerned Authorities. Proper discipline shall have to be maintained at site of work. The character and antecedents of staff engaged on work shall be verified through Police from time to time as required by the authorities. The staff shall not be changed without the consent of the Engineer in charge once the verification of character & antecedents is done.
- vii) At some occasion due to VIP visit / inspection, restriction may be imposed for working in certain areas, no claim whatsoever on account of loss of time and labour shall be entered in this regard.
- viii) Shutdown for maintenance shall be taken with prior approval of the Engineer incharge.
- ix) The workers engaged by the firm should maintain proper discipline and good behavior with occupants. The firm shall remove such workers from the site whose behavior is found improper. The decision of engineer-in-charge in this regard shall be final.
- x) Agency has to observe all the labour rules and regulations in-force and must be registered with EPFO, ESIC, BOCW and the Labour department.
- xi) The agency has to supply details of all the workers (Name and address etc.) i/c EPF & ESI A/c No. engaged by him and get it approved from the Engineer in charge in the staff register before deployment at site. The staff registers shall be maintained as per detail attached. Any staff deployed without approval & entry in the staff register shall be treated as poor performance on the part of the agency.
- xii) The contractor will issue necessary ID cards to the labour. The list of labourers along with their full particulars and identity proof shall also be given by the contractor to Engineer-in-Charge.

- xiii) No space shall be available for temporary houses of labour. Labour engaged shall not be permitted to stay in the campus beyond duty hours, they have to make their own arrangement for stay, outside the campus.
- xiv) The contractor agrees that it shall at all times indemnify IIT Ropar against all claims for compensation under the provisions of any law for the time being in force or in respect of any person employed by it in carrying out the contract. Such staff shall have no right to claim employment in IIT Ropar.
- xv) Any accident or damage during maintenance/operation will be the responsibility of the contractor and IIT Ropar will not be liable for any claim, compensation, penalty etc. on this account or on account of non-observance of any other requirement of law relevant to this work shall be the responsibility of the contractor.
- xvi) The department shall be at liberty to terminate the contract in between also if the performance of the contractor is found unsatisfactory or otherwise without assigning any reason and the decision of the Engineer-in-charge in this respect shall be final and binding on the contractor and no claim of the contractor of being put to loss by the department because of premature termination of the contract shall be entertained by the department.

#### **24. ATTENDING COMPLAINTS AND PREVENTIVE MAINTENANCE**

- i) Firm should have a round the clock contact telephone number. In case of Emergency, contractor and site engineer/ supervisor shall be made available at site on short notice and make all efforts to make the situation normal at the earliest.
- ii) The agency will display on a board in the substation room/ Fire Control room important telephone numbers and the duty chart of the workers engaged by him, as per requirement of engineer-in-charge.
- iii) A complaint register shall be maintained at designated locations/control room and shall be kept up to date by the firm and the same shall be available for checking & verification. The redressal of complaint shall be recorded in the form of complaint diary & special equipment job card etc. The complaints shall mostly be received on telephone/intercom systems, these complaints shall be recorded and monitored by Supervisor of contractor.
- iv) Contractor may note that various other agencies may also be working at the site simultaneously. Hence proper arrangement be made by the contractor, safety and security of material kept at site as well as erected material.
- v) Contractor shall develop the maintenance schedule / log chart, and get those approved from the department. As most of the Equipment are supposed to be controlled and monitored through BMS, logs may be kept electronically and transferred to Engineer in charge on daily, weekly, monthly, quarterly, yearly basis suitable, as per direction joint Registrar (E&M) in charge of maintenance or whenever asked by the engineer-in-charge the contractor has to provide the details.
- vi) At the start of the contract the firm in consultation as prescribed in CPWD specification with the AE (E) concerned shall prepare a programme for preventive maintenance to be carried out in the Performa below. The record of preventive maintenance carried out shall be submitted as per service

report (Part 'B') at the end of each month.

Probable date of preventive maintenance	Brief Description of equipment/ installation	Preventive maintenance work to be carried out	Remarks
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- vii) Record of preventive maintenance and testing of equipment etc. carried out has to be readily available at site, failing which firm shall be liable for non-execution of its liability under contract. If felt necessary, the Engineer-in-Charge has power to modify preventive /testing schedules.
- viii) The firm shall maintain a staff movement register and T&P movement register. No staff/T&P shall move out of campus without entry in the staff and T&P movement register and movement shall be only for work pertaining to this contract during duty hours. Any violation of this clause shall amount to poor performance.
- ix) All the register shall be in duty bond. No spiral binding shall be allowed. All the agency of registers shall be machine numbered and should have a minimum 100 pages.
- x) All the records pertaining to this contract are the property of the department and the agency has to submit the same to the engineer-in-charge on expiry/termination of contract.
- xi) The dismantled material shall be retained by the contractor and for disposal of all types of dismantled material, the contractor shall comply with CPCB norms and all other statutory regulations.

**25. Conformity with statutory Acts, Rules, Standards and codes**

- i) All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 2003 and Indian Electricity Rules, 1956 amended to date. They shall also conform to CPWD General Specifications for Electrical works, Part-I: Internal, 2013, Part-II: external, 1994 and Part IV (Sub-Station) 2013, Part VII (DG Sets) as amended to date.
- ii) Safety Codes and Labour Regulations: In respect of all labour employed directly or indirectly on the work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provision, B.I.S. recommendations, factory act, workmen's compensation act, Contract clauses as per General Conditions of CPWD Contract, and instructions of engineer in charge. Failure to provide such safety requirements would make the tenderer liable for penalty. In addition the Engineer-in-charge shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost incurred thereon from the contractor.
- iii) The contractor shall provide necessary barriers, signals and other safety measures while executing the job etc. or wherever necessary so as to avoid accidents. He shall also indemnify IIT Ropar against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian laws and Regulations for any accident occurring due to any cause. The department shall not be responsible for any accident occurred or damage incurred or claims arising there from during the execution of work. The contractor to cover all the risk. No extra payment would be made to the contractor due to the above provisions thereof.

## 26. COMPENSATION FOR DEFICIENCY IN SERVICE:

- i) In case of absence of a worker from the duty recovery shall be made **twice the amount** per day per person per shift as specified. (Staff employed of less than the prescribed qualifications shall be treated as absent). The decision of the Joint Registrar (E & M) in this regard shall be final and binding. In case of frequent absence of workers from duty, this shall be sole ground for poor performance on part of the agency. The decision of the Engineer in charge, shall be final and binding as regard to treating the absence of workers as poor performance.
- ii) The firm shall maintain a shift attendance register which can be inspected at any time by the AE/JE. The workman shall not leave the duty point till his reliever has reported for duty. The worker shall mark his presence by signature & indicating time of both arrival & departure in the attendance register/log book. Non marking of attendance in an appropriate manner shall be treated as absence of workers.
- iii) In addition to above any delay in rectifying the fault within stipulated period in other electro mechanical services, compensation shall be as per the Following TABLE

S. No.	ACTIVITY	RECOVERY RATE
<b>(A) 66/11 KV Substation</b>		
1	Any major equipment viz Transformer, SF6 Circuit breaker, Isolator, CTs, PTs, OLTC, C&R Panel, Capacitor bank, and 11 KV HT VCB Panel defective, floating cum boost charger, nifes protection	Rs. 5000/- per complaint per day after one day. <b>The penalty will be calculated as: <math>(n-1) \times [4000+1000*n]</math> for delay by n days.</b>
2	Power supply output not available from 66 KV Substation due to any fault/breakdown on the part of contractor <b>or failure of the contractor to rectify for any fault or failure of the system.</b>	Rs. 1000/- per default after 1 hour. <b>From next hour onwards, the calculation shall be as: <math>500 \times n \times (n-1)</math> for n hours delay.</b>
3	Non maintaining of Power Factor of 0.95	Amount of Penalty levied by PSPCL
<b>(B) 11/0.433 KV Substation and DG Set</b>		
1	Any major equipment viz Transformer, 11 KV HT VCB Panel ACB/MCCB of LT Panels, HT /LT Cable Fault	Rs. 2000/- per complaint after one day. <b>From next day onwards, the calculation shall be as: <math>1000 + [500 \times n \times (n-1)]</math> for n days delay</b>
2	One out of 21 D G Set faulty. Two or more out of 21 DG Sets faulty	Rs. 1000/- per day after 1 day. <b>From next day onwards, the calculation shall be as: <math>[500 \times n \times (n-1)]</math> for n days delay, Rs. 5000/- per D G Set per day after 1 day. <b>The penalty will be calculated as: <math>(n-1) \times [4000+1000*n]</math> for delay by n days</b></b>
3	If Electrical supply is not available either through main or standby source	Rs. 1000/- per complaint after 1 hours. <b>From next hour onwards, the calculation shall be as: <math>500 \times n \times (n-1)</math> for n hours delay.</b>

## 27. TERMINATION OF CONTRACT:

- i) Right is reserved by IIT Ropar for terminating the contract by giving one week notice due to serious default. This includes major breakdown or accidents due to negligence on the part of the firm, failure to attend breakdown, disobedience and abandoning the site etc. In such a case full performance guarantee shall be forfeited by IIT Ropar. The decision of Registrar IIT Ropar in this regard shall be final and binding.
- ii) Right is reserved by IIT Ropar for closure of the contract at any time by giving one month notice for reasons not attributed to the firm. The decision of the Registrar shall be final and binding on the contractor for closure of contract and for which contractor shall not have any claim on account of pre closure.
- iii) IIT Ropar reserves the right to carry out any work at risk and cost of the agency, if the agency fails to perform any duty within the time frame as mentioned in the agreement or within a reasonable time period decided by Engineer-in Charge, in case, no time frame is mentioned in the agreement.
- iv) If the firm fails to rectify the initial faults in all the electro mechanical services indicated at the time of handing over within specified time reckoned from the date of taking over of maintenance, IIT Ropar reserves the right to terminate the contract without any further notice and/ or to carry out the work at risk and cost of the agency.

## 28. SCOPE OF MAINTENANCE

The scope etc mentioned in this part is **only indicative and not exhaustive**, the details shall be worked out by Contractor and Engineer in Charge as per broader meanings of items in SOQ and as per good engineering and maintenance practices.

### Scope of maintenance of Power Transformers

1	Transformers	Weekly	Clean the transformer with cotton rags. Check that temperature rise is reasonable. Check the oil level of the transformer. Check that air passages are free to check the colour of silica gel.
		Quarterly	HT and LT Bushing: Examine for cracks and dirt deposits clean or replaced. Oil in Transformer: Check for dielectric strength and water content. Cooling fan bearings, motors and operating mechanism: Lubricate bearings, examine contacts, check manual control and interlocks.
		Half yearly	Oil cooler: Test for pressure, leakage Oiling and greasing of operating mechanisms etc.

		Yearly	<p>Oil in Transformer: Check for acidity and sludge, filter if required. Gasket joints: Tighten the bolts evenly to avoid uneven pressure. Cable boxes: Check for sealing arrangements for filling holes. Examine: compound for cracks. Replace the gasket if it is leaking.</p> <p>Relay, Alarms, their circuits etc.: Examine relay and alarm contacts, their operation, fuse: etc., check relay accuracy etc. Clean the components and: replace contacts and fuses if necessary.</p> <p>Earth resistance: Record the value of earth resistance of earth pits.</p> <p>Silica gel: Replacement of silica gel and cup oil.</p> <p>Buchholz relay magnetic oil gauge: Check its operation, control circuit and repair/replace required.</p>
2	Outdoor type Breaker	Weekly	Checking of Indicating lamps, gas pressure, earthing connection etc. Cleaning of metallic enclosure.
		Quarterly	Checking of operation. Checking of SF6 pressure checking. Cleaning of polycons of breaker.
		Half yearly	Cleaning of contacts of isolators, and inserting petroleum jelly in contacts, Oiling and greasing of operating mechanism etc.
		Yearly	Checking of control circuits and its accessories i.e. aux contactors, coils, repair/ replace if required.
3	Lighting arrester	Weekly	Visual check, leakage current counter reading to be recorded Cleaning of external insulations.
		Quarterly	
		Half yearly	checking and tightness of connections, checking earthing connections,
		yearly	Checking earthing connection up to earth pit and recording the earth pit value.
4	Over head busbar	weekly	Visual checks for external damage of OH bus bar, connecting clamps, insulators etc.
		Quarterly	Damaged clamps, insulators and nut bolts etc. shall be replaced
		Half yearly	Checking overhead structure earth connections and tightening them.
		yearly	Sagging of overhead bus bars if required including tightening of clamps. Testing of earth pit value of structure earthing pits. Cleaning of insulator string.
5	HT switch gear panel indoor type	weekly	Cleaning of panel externally. Check for proper closing of panel so that no Space should be left which may allow the lizard or insects.
		Quarterly	Checking of indicating lamps, Ammeter, voltmeter along with selector switches i/c replacement of defective ones. Checking of Operation of breakers for trip/ close. Cleaning of panel internally.

		Half yearly	<p>Checking of interlocking.</p> <p>Checking of control circuit and its accessories (I.E. aux contacts, connections, coils etc.)</p> <p>Visual check of earth connections and tightening if reqd.</p>
		Yearly	<p>Checking, tightening and up keeping the insulation of the main bus bar and cable connection.</p> <p>Oil and greasing of the operating mechanism.</p> <p>Cleaning of contacts with CTC, indicating devices, voltmeter, a meter, selector switch etc. and replace if required.</p> <p>Checking of CT and PT's etc.</p> <p>Checking and recording of earth resistance value.</p>
6	Relay and control panel	weekly	<p>Cleaning of panels externally</p> <p>Checking and replacement of indicating lamps if required.</p>
		Quarterly	<p>Cleaning of panel internally with vacuum cleaner.</p> <p>Checking of Aux contractors.</p> <p>Check all fuses and contacts to replace / repair if required.</p>
		Half yearly	<p>Checking the Earth connection of panels. Check operation of auxiliary contractors.</p> <p>Checking CTs &amp; PTs connections.</p>
		yearly	<p>Checking and tightening of all connections.</p> <p>Checking and servicing of all contactors and relays, repair/replace if required.</p> <p>Checking of earth resistance value.</p> <p>Checking, calibrating and repairing all meters/relays. To check contacts of fuses, repair / replace if required.</p>
7	PCC/PDB Panel	weekly	<p>Cleaning of panel externally Visual check of panel meters.</p> <p>Checking indicating lamps to replace/ repair if required.</p>
		Quarterly	<p>Cleaning of the panel internally with vacuum cleaner,</p> <p>Check of switch contacts</p> <p>Check all fuses and contacts to replace / repair if required.</p>
		Half yearly	<p>Checking the Earth connection of panels.</p> <p>Checking and repairing of the operating mechanism of MCCB/ACB etc.</p>
		yearly	<p>To check all switches, contacts, tighten the connection, cleaning of contacts and insert petroleum jelly.</p> <p>Checking of earth resistance value.</p>
8	DG Sets	weekly	<p>Check all fluid levels</p> <p>Inspect for leaks</p> <p>Verify battery condition</p> <p>Record operating hours</p> <p>Test emergency stop function</p> <p>Drain water from fuel filter</p>

			Check drive belt tension Clean air intake vents
		Quarterly	Change engine oil (or per hour meter) Replace oil/fuel filters Clean air filter elements Check coolant concentration
		Half yearly	Load bank testing (minimum 2 hours) Battery load test Inspect mounting bolts Test automatic transfer switch (ATS)
		yearly	Complete coolant replacement Fuel injector service Alternator megger test (min 1M $\Omega$ ) Exhaust system inspection
9	Capacitor banks	Monthly	Visual inspection (damage, corrosion, dust). Verify contactor operation
		Quarterly	Insulation resistance test (min 1 M $\Omega$ ). Tighten all electrical connections. Capacitance measurement (compared to nameplate).
		Annually	Complete bank re-torque. Relay calibration & testing.
10	Battery bank cum charger	weekly	Cleaning of battery charger and performing visual inspection for any abnormality. Checking indicating lamps, replace/ repair if required. Apply petroleum jelly for contacts of batteries.
		Quarterly	To check Voltage of each battery and record. To check the operation of the charger (Boost + float.)
		Half yearly	To check value of specific gravity of electrolyte of each battery To remove sulphation and insert petroleum jelly. Connection tighten of battery charger
		yearly	Internally cleaning with a vacuum cleaner. Tightening of all connections. Checking of the operation of all switches.
11	Earthing systems	Half yearly	Measurement of earth resistance
12	HT Cable & LT Cable	Monthly	Inspection of cable thimble Checking of loose connection

## **Maintenance of Log Books and Reading Books:**

### **a. Maintenance of Daily Log Books:**

The Contractor is required to maintain a detailed daily log book for each substation or as directed by the engineer in charge, recording all activities at the substation, ensuring accuracy for transparency, troubleshooting and compliance with maintenance standards.

### **b. Maintenance of readings:**

The Contractor must meticulously record reading from HT/LT panels DG Sets and wherever required in the format directed by the Engineer in charge.

## **29. SHUTDOWN WORKS / YEARLY PREVENTIVE MAINTENANCE:**

### **➤ Yearly Preventive Maintenance of Power transformers**

- i) Checking for oil leakage, if any, and taking immediate action to stop leakage.
- ii) Checking of Oil level & top up , if required. Oil to be arranged by IIT Ropar.
- iii) Condition assessment of silica gel in breather and replacement of silica gel when required. Silica gel to be arranged by the IIT Ropar.
- iv) Checking breather conditions and conservator oil levels.
- v) Checking of cable boxes, gasket joints, gauges etc
- vi) Testing of transformer safeties such as Buchholz relay, temperature indicators and oil gauges during routine preventive maintenance.
- vii) Oil filtration and dehydration. Oil to be provided by the IIT Ropar
- viii) Operational checks of RTCC
- ix) OLTC (CTR) servicing.
- x) Oil filtration machine/drums to be arranged by vendor. Mandatory to carry out once a year for power transformer.

### **Tests:**

- i) Insulation resistance with PI
- ii) Winding resistance of both HV and LV
- iii) Ratio test
- iv) Magnetic balance test.
- v) Magnetizing current test.
- vi) Oil testing (breakdown voltage, water content, specific resistance, dielectric dissipation factor, interfacial tension, neutralization value, sludge test, flash point test)
- vii) Dissolve gas analysis

### **➤ Yearly Preventive Maintenance of 11kV MV Panels**

#### **MV Circuit Breakers**

- i) Examination of auxiliary switches, indicating devices and interlocks to ensure that they are in good order physically.
- ii) Check fixed and moving contacts.
- iii) Physical checking of Epoxy Housing
- iv) Check close & trip coil
- v) Checking the control circuit & tightening the connections if any.

- vi) Following Tests will be carried out
  - I. Closing & Opening Timing Test for all three poles
  - II. IR Test with megger
  - III. Contact resistance Kit for all three poles

### **MV Panels**

- i) Check the space heater
- ii) Clean the breaker compartment thoroughly
- iii) Clean the Cable chamber
- iv) Check cable end termination & tighten if required.
- v) Check shutter operation.
- vi) Check tightness of circuit & earth connections. Test insulation resistance.
- vii) Check busbar support insulators.
- viii) VCB rack-in & rack out operation
- ix) Check of limit switches, control cable conduit
- x) Following test will be carried out
  - a) IR Test
  - b) Contact resistance test (this will be done without opening of busbar insulation –HT tape & compound)
- xi) Check auxiliary supply and control voltage.
- xii) Check control and power fuses / indication lamps
- xiii) Check the space heater.
- xiv) Check close & trip coil
- xv) Checking the control circuit & tightening the connections if any.
- xvi) Following test will be carried out

### **Current Transformers / Potential Transformers**

1. Insulation resistance test
2. Ratio Test by Primary injection

#### **➤ Preventive Maintenance of 415V LT Panels at S/S**

- Tightening of Busbars
- General upkeep
- Operation Trials on all LT panels including APFC panels.

### **Scope of preventive maintenance of ACBs**

- i) Dismantling, cleaning and assembling of front cover, push button, locking device.
- ii) Dismantling, cleaning of arc chute cover and terminal shield.
- iii) Dismantling, cleaning, checking and assembling of arc chute.
- iv) Dismantling, cleaning / greasing and assembling of electrical spring charging motor (In Electrical only)
- v) Dismantling, cleaning, checking / testing and assembling of tripping coil / closing Coil (In Electrical only)
- vi) Dismantling, cleaning & tightening of Protection relay.
- vii) Checking of main contact wear by physical inspection.
- viii) Cleaning and greasing of Breaker main Mechanism by Schneider recommended fully synthetic imported multipurpose grease to increase the reliability in terms of mechanical as well as electrical properties and their endurance.
- ix) Inspection of Main spring / tripping spring / locking spring.

- x) Dismantling / cleaning & greasing of spring charging handle.
- xi) Inspection / cleaning of breaker rear terminals & greasing them.
- xii) Inspection / cleaning of the changeover contacts of the OF Switch.
- xiii) Dismantling, cleaning, greasing and assembling of clusters (applicable for drawout circuit breaker only)
- xiv) Checking and cleaning / greasing (as required) of hand pullout system, racking mechanism of chassis and function position indicators (in drawout type only)
- xv) Checking and tightening of control unit connection block and chassis rear terminals.
- xvi) Cleaning & checking of tightness of wires
- xvii) Checking healthiness of Protection release

## **Yearly Preventive Maintenance Package Substation**

### **Transformer**

- i) Checking for oil leakage, if any, and taking immediate action to stop leakage.
- ii) Checking of Oil level & top up , if required.Oil to be arranged by Customer.
- iii) Condition assessment of silica gel in breather and replacement of silica gel when required,Silica Gel to be arranged by customer.
- iv) Checking breather conditions and conservator oil levels.
- v) Checking of cable boxes, gasket joints, gauges etc
- vi) Testing of transformer safeties such as Buchholz relay, temperature indicators and oil gauges during routine preventive maintenance
- vii) Insulation resistance of windings
- viii) Operational check of relays and their circuit
- ix) Ratio Test

### **RMU**

- i) Check & cleaning termination & bushing compartment
- ii) Checking of sealing of gland plate area
- iii) Checking of Mechanical interlocks
- iv) Check close & trip coil condition and Gap Setting
- v) Checking of control circuit, Electrical interlocks.
- vi) Following Tests to be carried out
  - a) Test insulation resistance. (Megger ) - using 5kv Megger

### **LT Panel**

- i) Servicing of LT Breakers
- ii) Tightening of Busbars
- iii) General upkeep
- iv) Operational Trials

## **Yearly Preventive Maintenance of DG Sets**

### **Mechanical scope of work**

- i) Checking the engine for its smooth running, un-usual noise and colour of the smoke from exhaust.
- ii) Checking and adjusting Fan Belt and Water Pump belt tensions. Changing of both, if required.
- iii) Cleaning of Air Filters to enhance engine life as well as proper inflow of air. Also changing them, if required.
- iv) Carrying out valve tappet setting as and when required.

- v) End Play checking of crankshaft, Accessory Drive and Turbo Charger whenever required.
- vi) Checking the alignment of Engine and Alternator whenever required.
- vii) Carrying out periodical maintenance B & C checks. Spares required to be changed in scope of contractor.
- viii) Check the proper functioning of various instruments of the dashboard/ instrument panel.
- ix) Diagnosis of various faults and then rectification, limited to minor ones. However if any parts required that will be provided by the end-user.
- x) Health Check of Battery
- xi) Checking of Acoustics Enclosure

### **Electrical scope of work**

- i) Checking and fault finding in the Electrical System associated with the Engine.
- ii) General cleaning of alternator from inside with hand blower.
- iii) Checking carbon brushes, if applicable for their proper length and spring tension (in case of conventional alternator).
- iv) Cleaning battery terminals for sulphation and checking its state.
- v) Maintenance of instruments, relays and connectors fitted in the Genset Control Panel.
- vi) Checking the wiring system for its loose and dry connections.
- vii) Charging of rectifiers whenever required (in case of conventional alternator)
- viii) Checking rotating diode assembly in brushless alternator
- ix) Checking mounting bolts.
- x) Diagnosis of various faults and their rectification at the site.
- xi) Testing of alternators, once in six months only for LT.
- xii) Fault rectification of OEM Supplied AMF Panel, if installed.
- xii) Greasing of alternator bearing as per manufacturer recommendation.

### **Special Terms & Condition for DG Set**

1. The contractor shall be responsible for the servicing and maintenance of these DG sets with and their AMF panels, LT panel located at different Sub stations in the campus.
2. In the scope of maintenance of DG sets the following routine & regular works are covered and it includes the supply of the following maintenance materials/spares.
  - i. Checking, cleaning and general maintenance of engine and alternator on a regular basis to keep the machines always in ready & fit condition.
  - ii. Checking, tightness and providing & replacing of 'V' belts, rubber hoses and gaskets etc. as and when required.
  - iii. Execute the Operation and A-Check, B Check as per norms of Kirloskar Engines/Sudhir Engineers (before completion of 01 years/250 running Hours, whichever is earlier)
  - iv. Execute the preventive maintenance of DG Sets and submit the healthiness report i/c providing information for the all corrective measures required for the maintenance of DG sets to the IIT Ropar.
  - v. De-scaling of water cooling systems from time to time to maintain the efficiency of DG sets as per directions of engineer-in-charge (twice in a year before the completion of 6 months).
  - vi. To keep all batteries in charged condition including checking of distilled water level and topping of distilled water, maintenance of connectors & terminals and providing and replacing of terminal connectors as and when reqd.

- vii. To clean and maintain the cooling tower or the radiators as the case may be including its fan, 'V' belts, motor, pump, electrical, starter and pipe lines etc.
  - viii. To maintain all the indications/interlocks for high temperature or low lub. etc.
  - ix. Arrange to attend all emergency breakdown and all spare part except Battery and alternator is in Contractor scope .
  - x. Performing all preventive measures to take care that DG sets runs at best possible efficiency and comply with the Environmental Clearance Standard.
  - xi. The contractor shall be responsible for Servicing of DG sets installed at the Institute as per OEM recommendation.
  - xii. The Contractor must enclose a certificate taken from OEM for providing the servicing of DG Sets during the contract period.
3. HSD (High Speed Diesel) shall be provided by IIT Ropar; however, the contractor shall be responsible for filling the HSD into the tank and should always maintain its record & a reasonable stock in the DG set room.

### **30. TASKS TO BE PERFORMED WITHIN FIRST 15 DAYS**

- i) Identify a person(s) with necessary competence to be responsible for substation maintenance.
- ii) The person(s) deputed for a substation job should know how to treat the person suffering from electric shock/burn etc.
- iii) Be able to operate a fire extinguisher.
- iv) Make himself familiar with the distribution scheme, the switches controlling various loads and also importance.
- v) Clearly understand what is to be done in case of an emergency. This should be done in consultation with the Engineer-in-charge.
- vi) Carry out general inspection with a view to identify shortcomings if any in the substation installation.
- vii) Check all the switches and meters for proper operation.
- viii) Check availability and working of fire extinguishers at earmarked locations. In case of any if-repairable damage the fire extinguisher shall be replaced by the agency.
- ix) Check operation of all the safety devices like relays and fuses.
- x) Check the earthing system for the proper earth values & continuity of the earthing system.
- xi) Check oil level in all the equipment's to ensure proper levels.
- xii) Check power factor meter, maximum demand meter for proper functioning.
- xiii) Check the tripping of the HT panel i.e. batteries etc, for proper functioning.
- xiv) Check all the electrical connections for proper tightness.

All the results of above inspections to be recorded and brought to be notice of Engineer-in- charge specially highlighting shortcoming for necessary action.

**NOTE:** If anything, adverse is noticed during the daily check, the matter will be reported to the Engineer-in-charge and wherever necessary corrective measures should be taken immediately

Note :The Successful Contractor has to maintain the electrical supply from 66/11 KV SubStation to 11/.433 KV Sub Station and 11/.433 KV Sub Station to Main LT Panel at every building block in the institute-

**32. (SPECIAL CONDITIONS RELEVANT TO PARTICULAR JOB / PARTICULAR SITE)**

1. In case of fire, the maintenance staff of the firm shall organize First Aid operations. Sufficient First Aid material shall always be kept with the firm. He will also inform the control room in-charge/ Fire brigade immediately.
2. Arrange inspection of experts if desired by engineer-in-charge to identify persistent problems.
3. Failure of system during fire will invite action as per clauses of agreement.

Details of the staff employed by the agency for the above said work:

Name & photographs of the employee	Building allotted	Trade	Qualification	Issue Card/ Date	Permanent Address	Date of termination	Reason of termination	Sign of staff	Sign of Contractor

Name of Agency:  
Agreement No.

Complaint received details								Complaint acknowledgement detail		
S. No.	Date	Time	Name & Designation	Building	Nature of Complaint	Staff taking complaint	Complaint Diary/ job Reference	Name of the staff	Technical staff attending complaint	Remarks

**ELECTRICIAN DIARY**

S. NO.	Date	Time	Detail of Repair		Complaint No.			Sign of user
						Name	Sign	

Account of Fuel

NAME OF WORK -

NAME OF AGENCY:-

AGREEMENT NO.: -

**LOG BOOK OF GENERATOR**

Date	Time	Start hour	Stop hour	Supply	Current	Frequency	P. F	Oil Temp	oil press	Battery	Sign of	Ch ec	Open ing	Fuel added	Cons umed	Balan ce

		meter reading	meter reading	Voltage		Meter.		ure		operat or on duty	ke d by				

(PLEASE FILL DAILY CHECKS AT 8.00 A.M. ONWARDS ON BACK SIDE AS PER DETAILS)  
SPECIFIC GRAVITY OF ELECTROLYTE OF BATTERY

Date	DG Set 1		DG Set 2		DG Set 3	
	Cell-1	Cell-2	Cell-3	Cell-4	Cell-5	Cell-6

(TO BE PRINTED ON THE BACKSIDE OF EACH PAGE OF DIESEL SET LOG

BOOK) DAILY CHECKS

List Of Inventory				Annexure-II	
<b>66 KV/11 KV Grid</b>					
S. No	Name of Particulars	Rating	Qty	Unit	Make
1	SF6 Circuit breaker	1600 amp	4	Nos	ABB
2	DG Set	25 KVA	1	Nos	Jackson
3	AMF Panel	433 V 63 amp	2	Nos	Jackson
4	Power Transformer with OLTC	66/11 KV 5/6.25 MVA	2	Nos	Crompton Greaves
5	Power Transformer with OLTC	66/11 KV 5/6.25 MVA	1	Nos	Schneider
6	Distribution Transformer	63 KVA	1	Nos	Recons Power
7	Current Transformer	66 KV, 72.5 KV	15	Nos	Crompton Greaves
8	Potential Transformer	66 KV, 72.5 KV	9	Nos	Mehru
9	ZnO (Gapless)	66 KV, 40 KA	12	Set	Crompton Greaves
10	Isolator with Earth switch	1600 amp, 72.5 KV 31.5 KA	8	Set	Elektrolites
11	HT Panel Board (Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack)	800-amp VCB	8	Nos	Schneider

12	HT Panel Board (Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack)	1250-amp VCB	10	Nos	Schneider
13	HT Panel Board (Dummy)	Bus Riser	2	Nos	Schneider
14	NIFPES along with TSPL Transformer explosion and Fire Protection System	63 Ohm	3	Set	TSIPL
15	Battery Bank	20 amp, 220 V	108	Nos	Chhabi
16	Battery Charger	20 amp, 220 V	1	Set	Chhabi
17	DCDB Panel	Incomer 200amp -01 Nos, Outgoing 100-amp -08 Nos	1	Set	Tricolite
18	ACDB Panel	Incomer 100 amp - 1 Nos, Outgoing 32 amp-5 Nos, 16-amp -5 Nos, Incomer 100-amp -01 Nos, Outgoing 32-amp -12 Nos	2	Set	Tricolite
19	Control and Relay Panel	66 KV -01 Nos, Power Transformer -03 Nos	4	Set	ABB
20	Single Bus Bar	66 KV	1	Set	Wolf
21	NGR	63 Ohm	2	Set	RSI Switchgear
22	Capacitor Bank	600 KVAR	3	Set	Epcos
23	Bay Marshalling Kiosks		3	Nos	
24	Gantry Tower		11	Nos	
25	LED Flood Light Fixture	10700 Lumen, IP 65	12	Nos	Wipro
26	Light Pole with Light Fixture	8 Mtr	7	Nos	
27	Feeder Pillar	100 amp	1	Set	Advance
28	RTCC Panel		3	Set	Schneider
29	Battery Packed power Pack	220/110 V	18	Nos	
<b>Sub Station -01 (11/0.433 KV)</b>					
<b>S.no</b>	<b>Name of Particulars</b>	<b>Rating</b>	<b>Qty</b>	<b>Unit</b>	<b>Make</b>
1	HT Panel Board (Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack )	11 KV ,1250 amp & 800-amp VCB	4	Nos	Schneider
2	DG Set	500 KVA	2	Nos	Jackson
3	DG Set	500 KVA	1	Nos	Kirloskar
4	AMF Panel	500 KVA	3	Nos	Jackson

5	Transformer	11KV/ 0.433 KV 1250 KVA	2	Nos	Crompton Greaves
6	Incomer ACB	2000 amp ACB	1		Schneider
7	Outgoing Feeder	1250 amp ACB	1		Schneider
8		800 amp ACB	1		Schneider
9		200 amp mccb	2		Schneider
10		800 amp mccb	1		Schneider
11		800 amp ACB	1		Schneider
12		200 amp mccb	1		Schneider
13		100 amp mccb	1		Schneider
14	Bus Coupler	1600 amp ACB	1		Schneider
15	Outgoing Feeder	800 amp ACB	4		Schneider
16	Bus Coupler	2000 amp ACB	1		Schneider
17	Incomer Feeder	2000 amp ACB	1		Schneider
18	Outgoing Feeder	800 amp ACB	1		Schneider
19		250 amp mccb	1		Schneider
20		100 amp mccb	1		Schneider
21		800 amp mccb	1		Schneider
22		400 amp mccb	2		Schneider
23		1250 amp ACB	1		Schneider
24	Incomer ACB	800 amp ACB	1		Schneider
25	Outgoing Feeder	400 amp mccb	3		Schneider
26		250 amp mccb	2		Schneider
27		160 amp mccb	2		Schneider
28		100 amp mccb	1		Schneider
29	Bus Coupler	800 amp ACB	1		Schneider
30	Incomer Feeder	800 amp ACB	1		Schneider
31	Outgoing feeder	800 amp ACB	1		Schneider
32		100 amp mccb	5		Schneider
33		125 amp mccb	1		Schneider
34		400 amp mccb	3		Schneider
35	Bus Coupler	800 amp ACB	1		Schneider
36	Incomer Feeder	1000 amp ACB	1		Schneider
37	Outgoing Feeder	630 amp mccb	2		Schneider
38		160 amp mccb	3		Schneider
39	Capacitor Panel	457.5 kvar	2		Schneider

**Sub Station -02 (11/0.433 KV)**

S.no	Name of Particulars	Rating	Qty	Unit	Make
1	HT Panel Board (Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack)	11 KV,1250 amp & 800 amp VCB	5	Nos	Schneider
2	DG Set -01	500 KVA	2	Nos	Jackson
3	DG Set -02	500 KVA	1	Nos	Kirolsar
4	AMF Panel	500 KVA ( 800 amp )	3	Nos	Jackson

5	Transformer	11KV/ 0.433 KV 1000 KVA	2	Nos	Crompton Greaves
6	Transformer	11KV/ 0.433 KV 1000 KVA	1	Nos	Kirloskar
7	Incomer Feeder	1600 amp ACB	1	Nos	Schneider
8	Outgoing Feeder	800 amp ACB	2	Nos	Schneider
9		630 amp mccb	1	Nos	Schneider
10		250 amp mccb	3	Nos	Schneider
11		125 amp mccb	2	Nos	Schneider
12	Bus Coupler	600 amp ACB	1	Nos	Schneider
13	Incomer Feeder	1600 amp ACB	1	Nos	Schneider
14	Outgoing Feeder	800 amp ACB	2	Nos	Schneider
15		630 amp mccb	1	Nos	Schneider
16		250 amp mccb	3	Nos	Schneider
17		125 amp mccb	1	Nos	Schneider
18	Bus Coupler	1600 amp ACB	1	Nos	Legrand
19	Incomer ACB	1600 amp ACB	1	Nos	Legrand
20	Outgoing Feeder	800 amp ACB	1	Nos	Legrand
21		320 amp mccb	3	Nos	Legrand
22		250 amp mccb	8	Nos	Legrand
23		160 amp mccb	3	Nos	Legrand
24		800 amp ACB	1	Nos	Legrand
25		800 amp mccb	1	Nos	Legrand
26	Incomer Feeder	800 amp ACB	1	Nos	Schneider
27	Outgoing Feeder	800 amp ACB	1	Nos	Schneider
28		250 amp mccb	2	Nos	Schneider
29		200 amp mccb	1	Nos	Schneider
30		125 amp mccb	3	Nos	Schneider
31	Bus Coupler	800 amp mccb	1	Nos	Schneider
32	Incomer ACB	800 amp ACB	1	Nos	Schneider
33	Outgoing Feeder	400 amp mccb	2	Nos	Schneider
34		250 amp mccb	4	Nos	Schneider
35		100 amp mccb	3	Nos	Schneider
36		63 amp mccb	1	Nos	Schneider
37	Bus Coupler	1250 amp ACB	1	Nos	Legrand
38	Incomer Feeder	800 amp ACB	1	Nos	Legrand
39	Outgoing Feeder	250 amp mccb	4	Nos	Legrand
40		200 amp mccb	2	Nos	Legrand
41		100 amp mccb	2	Nos	Legrand
42	Capacitor Panel	360 KVAR	3	Nos	Core Metal Krafts Ltd

**Sub Station -03 (11/0.433 KV)**

S.no	Name of Particulars	Rating	Qty	Unit	Make
1	HT Panel Board (Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch,	11 KV,1250 amp & 800 amp VCB	5	Nos	Schneider

	Battery Packed power Pack )				
2	DG-1	500 KVA	2		Cumins
3	DG-2	750 KVA	1	Nos	Kirolsakar
4	AMF Panel	750 KVA	1	Nos	Jackson
5	AMF Panel	500 KVA	2	Nos	Jackson
6	Transformer	11KV/ 0.433 KV 1000 KVA	2	Nos	Crompton Greaves
7	Transformer	11KV/ 0.433 KV 1000 KVA	1	Nos	Kirolsakar
8	Incomer Feeder	1600 amp ACB	1	Nos	Schneider
9	Outgoing Feeder	630 amp mccb	3	Nos	Schneider
10		200 amp mccb	1	Nos	Schneider
11		1250 amp ACB	1	Nos	Schneider
12	Bus Coupler	1600 amp ACB	1	Nos	Schneider
13	Incomer Feeder	1600 amp ACB	1	Nos	Schneider
14	Outgoing Feeder	1250 amp ACB	1	Nos	Schneider
15		200 amp mccb	2	Nos	Schneider
16		800 amp ACB	1	Nos	Schneider
17		630 amp mccb	1	Nos	Schneider
18	Bus Coupler	1600 amp ACB	1	Nos	Legrand
19	Incomer Feeder	1600 amp ACB	1	Nos	Legrand
20	Outgoing Feeder	1250 amp ACB	2	Nos	Legrand
21		800 amp ACB	2	Nos	Legrand
22		800 amp mccb	1	Nos	Legrand
23		160 amp mccb	2	Nos	Legrand
24	Incomer Feeder	1250 amp ACB	1	Nos	Schneider
25	Outgoing Feeder	800 amp ACB	1	Nos	Schneider
26		630 amp mccb	2	Nos	Schneider
27		400 amp mccb	1	Nos	Schneider
28		100 amp mccb	2	Nos	Schneider
29	Bus Coupler	1250amp ACB	1	Nos	Schneider
30	Incomer Feeder	1250 amp ACB	1	Nos	Schneider
31	Outgoing Feeder	400 amp mccb	6	Nos	Schneider
32		160 amp mccb	2	Nos	Schneider
33		100 amp mccb	2	Nos	Schneider
34	Bus Coupler	1250 amp ACB	1	Nos	Legrand
35	Incomer Feeder	1250 amp ACB	1	Nos	Legrand
36	Outgoing Feeder	630 amp ACB	2	Nos	Legrand
37		500 amp mccb	1	Nos	Legrand
38	Capacitor Panel	360 KVAR	1	Nos	Core Metal Krafts Ltd

<b>Sub Station -04 (11/0.433 KV)</b>					
<b>S.no</b>	<b>Name of Particulars</b>	<b>Rating</b>	<b>Qty</b>	<b>Unit</b>	<b>Make</b>
1	HT Panel Board ( Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter,Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack )	11 KV, 800 amp VCB	4	Nos	Schneider
2	DG-1	500 KVA	1	Nos	Kirolsakar
3	DG-2	250 KVA	1	Nos	Kirolsakar
5	Transformer	11KV/ 0.433 KV 630 KVA	2	Nos	Kirolsakar
6	Incomer ACB	1000 amp	2	Nos	Legrand
7	Bus Coupler	1250 amp	1	Nos	Legrand
8	DG Incomer MCCB	400 amp (250 KVA )	1	Nos	Legrand
9	Outgoing Feeder	630 amp mccb	2	Nos	Legrand
10		500 amp mccb	1	Nos	Legrand
11		200 amp	1	Nos	Legrand
12		125 amp mccb	2	Nos	Legrand
13		63 amp mccb	1	Nos	Legrand
14		DG Incomer ACB	800 amp (500 KVA )	1	Nos
15	Outgoing Feeder	630 amp mccb	2	Nos	Legrand
16		500 amp mccb	1	Nos	Legrand
17		400 amp mccb	1	Nos	Legrand
18	Capacitor Panel	220 KVAR	2	Nos	Core Metal Krafts Ltd
<b>Sub Station -05 (11/0.433 KV)</b>					
<b>S.no</b>	<b>Name of Particulars</b>	<b>Rating</b>	<b>Qty</b>	<b>Unit</b>	<b>Make</b>
1	HT Panel Board ( Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter,Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack )	800 amp & 630 amp VCB	5	Nos	Schnieder
2	DG Set	1010 KVA	2	Nos	Cumins
3	DG Incomer	3200 amp (1000 KVA) ACB	1	Nos	L & T
4	Light Panel	800 amp ACB	1	Nos	L & T
5	ESS Panel -02	1600 amp ACB	1	Nos	L & T
6	Fire Fighting Panel	630 amp mccb	1	Nos	L & T
7	DG Incomer	3200 amp (1000 KVA) ACB	1	Nos	L & T
8	APFCR Panel	1250 amp ACB	1	Nos	L & T
9	Incomer Feeder	4000 amp ACB	1	Nos	L & T
10	APFCR Panel	800 amp ACB	1	Nos	L & T
11	Light Panel	800 amp ACB	1	Nos	L & T

12	HVAC Panel	3200 amp ACB	1	Nos	L & T
13	Power Panel	3200 amp ACB	1	Nos	L & T
14	Outgoing Feeder	630 amp mccb	1	Nos	L & T
15		125 amp mccb	1	Nos	L & T
16	Transformer	11KV/ 0.433 KV 2000 KVA	2	Nos	Schnieder
17	Bus Coupler	4000 amp ACB	1	Nos	L & T
18	Incomer Feeder	4000 amp ACB	1	Nos	L & T
19	HVAC Panel	3200 amp ACB	1	Nos	L & T
20	ESS Panel	1250 amp ACB	1	Nos	L & T
21	APFCR Panel	800 amp ACB	1	Nos	L & T
22	Outgoing Feeder	630 amp mccb	1	Nos	L & T
23		400 amp mccb	2	Nos	L & T
24	Capacitor Panel	600 KVAR	2	Set	Advance

**Sub Station -06 (11/0.433 KV)**

S.no	Name of Particulars	Rating	Qty	Unit	Make
1	HT Panel Board ( Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack )	800 amp & 630 amp VCB	5		Schneider
2	DG Set	380 KVA	2		Cumins
3	Incomer DG	800 amp ACB	2		L & T
4	Main LT Panel	2000 amp ACB	1		L & T
5	Fire Fighting Panel	630 amp mccb	1		L & T
6	Transformer	11KV/ 0.433 KV 630 KVA	2		Schnieder
7	Incomer DG	2000 amp ACB	1		L & T
8	Outgoing Feeder	2000 amp ACB	1		L & T
9		200 amp mccb	1		L & T
10		400 amp mccb	1		L & T
11		250 amp mccb	1		L & T
12		200 amp mccb	2		L & T
13		160 amp mccb	1		L & T
14	Incomer ACB	2000 amp	2		Advance
15	Bus Coupler	2000 amp	2		Advance
16	Capacitor Panel	300 KVAR	2		Advance
17	Incomer Transformer-01	1250 amp ACB	1		L & T
18	Outgoing Feeder	630 amp mccb	2		L & T
19		200 amp mccb	1		L & T
20		160 amp mccb	1		L & T
21	Incomer Transformer-02	1250 amp ACB	1		L & T
22	Outgoing Feeder	1000 amp ACB	1		L & T
23		630 amp mccb	2		L & T
24		400 amp mccb	3		L & T

25		250 amp mccb	2		L & T
26		160 amp mccb	1		L & T
<b>Sub Station -07 (11/0.433 KV)</b>					
S.no	Name of Particulars	Rating	Qty	Unit	Make
1	HT Panel Board ( Relay, Voltmeter, Master Trip Relay, Multifunction meter, Ammeter, Local Remote Switch, Breaker Control Switch, Emergency Switch, Battery Packed power Pack )	800 amp & 630 amp	4	Nos	Schindler
2	DG Set	380 KVA	2	Nos	Cumins
3	Incomer DG	800 amp (380 KVA )	2	Nos	L&T
4	Outgoing DG	2000 amp	1	Nos	L&T
5	Firefighting Panel	630 amp	1	Nos	L&T
6	Transformer	11KV/ 0.433 KV 1000 KVA	2	Nos	Schnieder
7	Incomer from Transformer 2	2500 amp	1	Nos	L&T
8	Capacitor Panel incomer	800 amp	1	Nos	L&T
9	Outgoing Feeder	630 amp mccb	1	Nos	L&T
10		400 amp mccb	1	Nos	L&T
11		250 amp mccb	6	Nos	L&T
12		160 amp mccb	6	Nos	L&T
13	Incomer from Transformer 1	2500 amp ACB	1	Nos	L&T
14	Incomer DG Panel	2000 amp ACB	1	Nos	L&T
15	Capacitor Panel incomer	800 amp ACB	1	Nos	L&T
16	Outgoing Feeder	250 amp mccb	6	Nos	L&T
17		200 amp mccb	8	Nos	L&T
18		160 amp mccb	6	Nos	L&T
19	Bus Coupler	2500 amp	1	Nos	L&T
20	Capacitor Panel	400 KVAR	2	Nos	Advance
<b>Package SubStation ( Data Center )</b>					
S.no	Name of Particulars	Rating	Qty	Unit	Make
1	DG	380 KVA	2	Nos	Jackson
2	Incomer DG	800 amp ACB	2	Nos	L&T
3	Transformer	11KV/ 0.433 KV 630 KVA	2	Nos	Sudhir Power
4	Incomer ACB	1000 amp	2	Nos	advance
5	DG Incomer Future	800 amp	2	Nos	L&T
6	Bus Coupler	1000 amp	2	Nos	L&T
7	Capacitor Panel	225 KVAR	2	Nos	advance

<b>Package SubStation (KV School)</b>					
<b>S.no</b>	<b>Name of Particulars</b>	<b>Rating</b>	<b>Qty</b>	<b>Unit</b>	<b>Make</b>
1	DG	62.5 KVA	1		kirolskar
2	Transformer	11KV/ 0.433 KV 250 KVA	1		Recons Power
3	Incomer ACB	400 amp	1		Schenider
<b>Package SubStation ( Sports Field)</b>					
<b>S.no</b>	<b>Name of Particulars</b>	<b>Rating</b>	<b>Qty</b>	<b>Unit</b>	<b>Make</b>
1	Ring Main Unit	630 amp VCB	1	Nos	
2	Transformer	11KV/ 0.433 KV 315 KVA	1	Nos	Schneider
3	Incomer ACB	630 AMP FP MCCB	1	Nos	Schneider
4	PDB Panel	630 AMP FP MCCB	1	Nos	Tricolite

<b>Sr. No.</b>	<b>Name of Substation</b>	<b>Connected Buildings</b>
1	ESS-1	Boys hostel Sutlej,
2		Boys Beas Hostel
3		Boys Chenab Hostel
4		AC Plant
5		Water Treatment plant
6		Admin Block
7		SPS System
8		Gate Complex
9		Sewerage treatment plant (new)
10		Street Lights
11	ESS-2	Mechanical Dept.
12		Chemistry Dept.
13		Lecture hall
14		Raavi Girl Hostel
15		Dining hall
16		Utility Block
17		Sewerage treatment plant (old)
18		Road Light
19	ESS-3	New Dinning Hall
20		Workshop complex
21		Computer Science Dept.
22		Electrical Dept.
23		Director Residence
24		Road Lights
25		CRF Building
26	Library & Lecture Hall	
27	ESS-4	Nitrogen plant
28		Residence T2 Block A, B & Type 4 Block A, B, C
29		Visitor Hostel
30		Residence T5 & T6 Block A
31		ESS-5
32	ESS-6	Brahmaputra Hostel

33	ESS-7	Residence T3, A B block, T5, E F G, Girl Hostel T6 B, C D, E, F, G
34	Data Centre Package Sub station	Data centre in Library Building
35	KV School Package sub station	KV school
36	Sports Field Package Sub station	Sports Field
37	63 KVA Station T/F	Lighting load of 66 KV
38	66 KV Sub station	All ESS

## ACCEPTABLE LIST OF MATERIALS

### LIST OF APPROVED MAKES/AGENCIES FOR WORKS COVERED UNDER THIS CONTRACT

- 1) All materials and products used in the work shall conform to the relevant standards/ specifications and shall be of approved make and design. Lists of approved manufacturers/ vendors for Civil works, Plumbing works, Fire fighting & Fire Alarm works, Electrical works etc. is given below. The approval of a manufacturer/ vendor shall be given only after review of the sample/specimen by the Engineer-in-charge. The complete system and installation shall also be in conformity with the "Applicable Codes Standards and Publications".
- 2) List of Approved makes for Products, Materials and specialist agencies is given below. Other equivalent manufacturers may be considered with prior approval; however the decision of the Engineer-in-Charge shall be final.

S. No.	ITEM	MAKE
1.	GREY CEMENT	J.P., ACC, LARSEN & TOUBRO, GUJARAT AMBUJA, VIKRAM, BINANI J.K, BIRLA, SHREE OR ANY OTHER BRAND WITH APPROVAL OF ENGINEER- IN-CHARGE.
2.	WHITE CEMENT	JK WHITE, BIRLA WHITE OR EQUIVALENT
3.	REINFORCEMENT/STRUCTURAL STEEL	SAIL, TISCO, RINL, JINDAL
4.	NON STRUCTURAL STEEL	SAIL, TATA, RINL, JINDAL
5.	ANTI-TERMITE TREATMENT	PEST CONTROL INDIA LTD, PEST CON INDIA, PEST CONTROL INCORPORATED, OR ANY OTHER AGENCY TO BE APPROVED BY THE ENGINEER- IN-CHARGE.
6.	CONCRETE ADDITIVE	FOSROC CICO-TL, SIKA, PIDILITE
7.	FLUSH DOORS, SHUTTERS	KUTTY FLUSHDOOR, KITPLY INDUSTRIES (SWASTIK), CENTURY, ANCHOR, MERINO.
8.	PLYWOOD / BLOCK BOARD / SOFT BOARD	ANCHOR, DURO, GREEN LAM, CENTURY, ARCHID PLY,
9.	PRELAMINATED PARTICLE BOARD	ACTION TESA, NOVAPAN, ANCHOR, MERINO, GREEN LAM, CENTURY, ARCHID

		PLY
10.	VENEERED PARTICLE BOARD	KITPLY, ACTION TESA, GREENLAM MERINO.
11	LAMINATED PARTICLE BOARD/ LAMINATES	KITPLY, ACTION TESA, GREENLAM, CENTURY PLY, MERINO, SUNMICA, FORMICA,GVK
12.	LAMINATES	CENTURY, MERINO, GREEN LAMP, ARCHID LAM
13.	ADHESIVE FOR WOOD WORK	DUNLOP, FEVICOL, VAMICOL, PIDILITE
14.	POLYURETHANE SEALANT	MBT, CHOKSEY, PIDILITE
15.	SILICON SEALANT	DOWN CORNING, ALSTONE OR EQUIVALENT
16	FALSE CEILING- GYPSUM	SAINT GOBAIN, LAFARGE, VANS GYPSUM, INDIA GYPSUM, BERAL GYPSUM, ARMSTRONG
17	FALSE CEILING- METAL	SAINT GOBAIN, ARMSTRONG, DEXTURE, SAS, AURA, LINDNER
18.	POLYETHYLENE BOARD	SUPREME OR EQUIVALENT
19.	ALUMINIUM EXTRUSIONS	JINDAL, HINDALCO, INDALCO OR EQUIVALENT
20.	STAINLESS STEEL	SALEM, JINDAL OR EQUIVALENT
21.	EXPANSION, FASTENERS	FISCHER, HILTI, ANCHORS, AXEL
22.	<b>FLOAT GLASS</b>	MODI GUARD, SAINT GOBAIN, ASAHI, ATUL
23.	CERAMIC TILES	NITCO, KAJARIA, SOMANY, JOHNSON, VARMORA
24.	VITRIFIED PORCELINE TILES	NAVEEN DIAMOND TILES, NITCO, JOHNSON,  MARBITO BRAND, RAK, KAJARIA, VARMORA, CT  TILES
25.	INTERLOCK TILES/GRASS PAVER BLOCKS/ KERB STONE	DALAL TILES, UNISTONE, MODERN OR EQUIVALENT
26.	TERRAZZO TILES	NITCO, MODERN, A-1, NTC, DALAL TILES OR EQUIVALENT AS PER ISI SPECIFICATION
27.	CEMENT CONCRETE TILES	UNISTONE, ULTRA, DALAL TILES OR

		EQUIVALENT
28.	HANDMADE CERAMIC TILES	RAJA, ARIHANT, JAIN
29.	ROOF WATERPROOFING	NINA CONCRETE SYSTEM PVT. LTD, C R S ASSOCIATES AND ENGINEERS PVT.LTD, CREATIONS,PIDILITE
30.	PAINT	NEROLAC, JOHNSON & NICHOLSON, BERGER, ASIAN PAINTS, SHALIMAR
31.	TEXTURED COATING	UNITILE, SPECTRUM, HERITAGE OR EQUIVALENT
32.	DOOR FITTINGS	GODREJ, DOORSET, OZONE, INDOBRASS
33.	LOCKS AND HANDLES	EVERITE, GODREJ, HARRISON, INDOBRASS
34.	NON METALLIC COMPOUND	HARDENER FOSROC, S TP, PIDILITE, CICO
35.	ROLLING SHUTTER	RAMA, PRAKASH, SANJEEV OR EQUIVALENT AS PER CPWD SPECIFICATIONS.
36.	DOOR CLOSER	DOORSET, EVERITE, GREEZ,GODREJ
37.	FLOOR DOOR SPRING	D-LINE,OZONE,DOORSET,EVERITE,INDOBRASS
38.	HDF LAMINATED BOARD	ARMSTRONG, BVG, EGO FLOORS, SQUARE FOOT, ACTION TESA
39.	EXPANSION FASTENERS	HILTI, FIHSER, GKW, AXEL
40.	FASTENERS	HILTI, FIHSER, GKW, AXEL
41.	GYPSUM CEILING	INDIA GYPSUM, LAFARGE
42.	CALCIUM SILICATE BOARD FALSE CEILING	AEROLITE, HYLUX
43.	PATCH FITTING	DORMA, GEZE, OZONE OR AS APPROVED
44.	WORKSTATION AND MODULAR FURNITURE	GODREJ, BP ERGO, FEATHERLIGHT, WIPRO
45.	BLINDS	VISTA, MAX, ARMSTRONG
46.	ADHESIVE	FEVICOL, VEMICOL OR EQUIVALENT
47.	FURNITURE HARDWARE	HETTICH INDIA, EBCO, EARL BEHARI
48.	LACQUERED GLASS	SAINT GOBIN, ASAHI, ATUL
49.	MELAMINE POLISH	ASIAN PAINT, BERGER, TIMBER STONE OF ICI

		DOLEXZ, WUDFINE OF PIDILITE
50.	Sandwich PUF Panel	SINTEX, JINDAL, SYNERGY THYRISLINGTON

**Approved Make List**

<b>S.No.</b>	<b>Items</b>	<b>Makes</b>
1	MS Conduit (ISI marked)	BEC/AKG/NIC/Steel craft/M-Key, SK(E.R.W)
2	PVC Conduit and accessories	Polycab/AKG/Asian
3	1.1 KV aluminium armoured XLPE insulated and PVC Sheathed Cable (LTcable)	Havells/KEI/Gloster/Grandlay /Plaza/ National/ Paragon
4	FRL SPVC insulated copper conductor stranded flexible wire/control cables	Havells/Finolex/KEI/Grandlay/RRKabel/Gloster/Poly cab/Plaza
5	Cable Raceway floor/wall mounted and accessories	Schenider/Legrand/Cooper
6	Modular Switch & Socket	Legrand (Myrus, Arteor)/M.K.(Element)/Schneider (ZenceloIndia)/Havells/ABB/Northwest
7	Metal clad Industrial Socket	Legrand/Siemens/Schneider/C&S/ABB
8	Cat-6 Cable	Beldon/Siemon/Legrand/Penduit( Pannel)
9	Cable Glands	Dowells/Commet/Gripwell/Raychem
10	Crimp Patch Cord	Beldon/Siemon/Legrand/Penuit(Pannel)
11	Protection Device (MCB/RCCB/DB/ELCB)	Siemens(Betagard),/Hager/Schneider/Legrand/ C&S/ ABB Legrand / ABB / L&T /Siemens / Havells / C&S /Schneider / GE / Hagger / Anchor / Standard
12	MCCBs	Siemens(3VA)/L&T/Schneider/Legrand/C&S/ ABB
13	Power contactor	Siemens/L&T/ Schneider/ Legrand/ ABB/C&S
14	Surge Protection Devices	Siemens/L&T/Schneider/Legrand
15	Panel Accessories	Siemens/L&T/Schneider/Legrand/Tecnic/ ABB/ C&S/Neptune
16	Selector Switch	Salzer/Siemens/BCH/ Kacee
17	Auxiliary Relays	Siemens/L&T/Schneider/Legrand/ABB
18	LED/Metal Halide/Fluorescent Internal Lighting Fixture	Philips/Wipro/Havells/Crompton/Decon/Bajaj
19	External Lighting Fixture	Philips/Wipro/Havells/Crompton/Bajaj

20	Emergency Lighting/Exit Sign boards	Philips/Havells/Lighting Technologies/Trilux/Prolite
21	Ceiling Fan(ISI marked & BEE rated 5 star)	Havells/Almonard/Orient/Usha/Bajaj/Crompton
22	Paint	Nerolac/Asian/Berger
23	Advance Lighting Protection System (Early Streamer Emission Type)	LPI(Australia)-by allied power/SGI(Duval Messien/satellite (France)- by SGI/Bradlay (USA)-byJMV/Erico (USA)-by security shoppe/ABB
24	GI Pipe	Tata/Jindal/SAIL
25	Main LT Panels/MCC Panel	(Main LT panel / MCC Panel board should be IEC61439 part-1 and II manufacturer has to produces the relevant test certificate as per IEC code for the same failing which panel shall be rejected). Tricolite/Siemens / Schneider/ Milestone/Neptune.
26	Air Circuit Breaker	Siemens/Schneider/L&T/Legrand/ C&S/ABB
27	Surge Voltage Protection	Siemens/Schneider/L&T/Legrand/ABB
28	Earth fault module	Siemens/Schneider/L&T/Legrand
29	Protection relays	Siemens/Areva/L&T/Legrand
30	CTs and PTs	Kappa/AE/Matrix

31	DigitalMeters	Siemens(PAC)/ Schneider/(conzerv)/Secure Enersol /L&T/Neptune
32	Change Over Switch	L&T/Havells/Socomec/ABB/C&S/HPL
33	Indicating lamps	ESBEE/Schneider/Siemens/Vaishno/Neptune/L&T
34	Power capacitors	Epcos/Neptune/Legrand/ABB/L&T/ Siemens/ CGL
35	Automatic Powerfactor correction relay/controller	Epcos/Siemens(PAC)/Schneider (Conzerv)/L&T/Neptune/Sigma
36	Sealed Maintenance Free Batteries	Exide/Panasonic/Hitachi/Shinkobe
37	Battery charger	Caldyne/ChhabiElectricals/Statcon/MaxPower
38	CableTrays (Factory Fabricated/Overhead & Floor Raceways	Legrand/MEM/OBO/Milestone/Neptune
39	HDPE underground cable duct	RexPolyextrusion/Tirpura/Plasomatics /Duraline

40	Insulation Mats	DLMiller&Co.Ltd.?PremierPolyfilmLtd./RMG PolyvinylIndiaLtd/Jyoti
41	Smoke/Heat detectors	Apollo/SystemSensor/ Agni
42	Manual Call point	PRD/System-Tek/Simplex/SystemSensor/Agni
43	Response indicators	PRD/System-Tek/Simplex/SystemSensor/Agni
44	Fire Exit Signs	System-Tek/Simplex/Agni
45	Fire Control Panel	System-Tek/Morley/Agni
46	Speaker/ Hooter	System-Tek/Philips/Agni
47	Occupancy Sensors/Movement Sensor	Legrand/Philips/Wipro
48	Flush type switch/socket	Anchor/Kinjal/SSK/HavellsReo
49	Fuses witches unit/switchfuse unit/HRC fuse	L&T/Siemens/Havells/C&S
50	Exhaust fan	Almonard/Alstom/Crompton/Havells
51	XLPE insulated HT cables	Gloster/KEI/Havells
52	Cablelug	Ascon(Heavygauge)/Jainson/Dowells/IsmaI
53	Lamp Holder (Brass)	Kay/SSK/Kinjal
54	Telephone wires/Telephone Cable/jelly filled telephone cables	Finolex/Delton/Havell's/R.R.Kabel
55	Telephone tag blocks	Krone/ Pouyet
56	Telephone outlet	MKElectric/Legrand(Mosaic)/Crabtree (Piccadilly)
57	Graceways	MilestoneEngineering/Legrand/MDS/Neptune SystemsPvt.Ltd./MK
58	PVC raceways	Legrand/MK
59	Electronic ballast	Philips/Wipro/Bajaj/Decon/Crompton/Havells
60	DLP plastic trunking	Legrand/MK
61	Geysers	Recold/Venus/Usha Lexus /Spherehot
62	TowerLight	Ligman/Simes/Bega
63	HT/LT transformers	ABB/Schneider/CGL / Kirloskar/Siemens

64	HTSF-6 circuit breakers/VCB	Siemens/ABB/CGL/Schneider/Areva
65	Programmable Logic Controller(PLC)	Siemens/Allen-Bradley/Schneider
66	Earthing(Chemical Earthing) Plate Earthing	JMV/AsperCPWDNorms
67	Octagonal Pole	Bajaj/ Crompton/ Phillips
68	11kV HT panel Incoming relay	CGL/Schneider/ABB/Siemens
69	Control Relay Panel	CGL/Schneider/ABB
70	Lightning Arrestor	ABB/Alltec/JMV
71	Temp. Gauge	Guru
72	Gate Valve	Leader/Sant
73	Electrical Backup	Sparehot/ Racold
74	PVC Tank	Syntex/ Polycon
75	Thermostat	ISIMarked
76	Flat Collector Plate	Solo crome/Tata BP/ Racold
77	S.S Sheet	Jindal /National
78	HT/LT cable joints (Straight through/outdoor/indoor)	3M/Denson/MSeal/Raychem/Cabseal
79	Alternator	STAMFORD/CromptonGreaves/Kirloskar
80	DG Set-Engine	Sterling & Wilson/Caterpillar/ComminsPower/ /Kirloskar
81	Makes of accessories of HT/ LT Panel/Transformers	As per standard practice of the manufacturer.
82	Bus Trunking	C&S/ L&T/Schneiderasper standard practice of OEMmanufacturer/ channel partner
83	HT Panel 11 KV	ABB/Schneider/CGL (Crompton GreavesLtd.)
84	Bus Duct	Neptune/Milestone/Tricolite
85	Switch Fuse Unit (HRC Type)	Schnider/GE/L&T/Siemens/C&S/Havells/MDS
86	Selector Switch	Salzer- L & T /Kaycee

**Note: Material make list should be as per above table until or unless individual items model no. specified in BOQ.**

**Dean of Infrastructure / Joint Registrar (E & M) IIT Ropar reserves the right to add or delete any material and brands in the list of preferred material/brands on the recommendation of Engineer-In –charge and respective officers.**

# PART – C

**Note: Price bid should be uploaded in given BOQ\_XXXX.xls format online and not in the technical bid failing which your bid shall stand rejected. However, the price bid is as follows for your reference.**

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Tender Inviting Authority: Indian Institute of Technology Ropar

Name of Work: Annual Operation &amp; Maintenance Contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid Substation, 11/0.433KV Substations including all transformers, PSS, DG Set, HT &amp; LT Panel and Cables, RMU, Feeder Panel, and allied equipments at IIT Ropar (All the 06 sheets of BOQ need to be filled failing which tender stand rejected)

Contract No: IITRPR/ENM/T/26/105

Name of the Bidder/ Bidding Firm / Company :						
<b>PRICE SCHEDULE</b>						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE is inclusive GST and other taxes Rs. P	TOTAL AMOUNT with Taxes Rs. P	TOTAL AMOUNT In Words
1.01	Sub Head-RMO of Substation Machinery (DG sets, Transformer, LT panel, HT panel & all accessories of equipment's etc.), Maintenance complaints, additional works etc. as required: a)- Routine operation and maintenance of all Electrical substation equipment's, control panels, EDB's / SDB's, Feeder pillars, DG sets and maintenance of all electrical installations as required on all working days i/c Sunday and holiday in different shifts as per duty chart (Manpower to be deployed as given below) and terms and conditions attached. b)- Details of Sub Station : 1) 66/ 11 KV Grid -01 Nos . 2) 11/.433 KV ESS-01, ESS-02, ESS-03, ESS-04, ESS-05, ESS-06, ESS-07. 3) 11/.433 KV PSS-01,PSS-02 and PSS-03. c)- Tentative details of Sub Station items are attached. d)- Deployment of Manpower as per duty chart in three shift round the clock is attached. e) The wages of manpower is taken w.e.f. 01.04.2026. The manpower will be increase or decrease as per site conditions and accordingly successful contractor will submit the bill for payment. f) Staff required at site is as : Sub-Station Attendant (skilled) 29 nos., Helper (semi-skilled) 07 nos., Safety Officer (Highly skilled) 01 no. and Electrical Supervisor (Highly skilled) 01 No. g) The bidder should pay the minimum wages to the manpower as per Gol Rules. h) The service charges taken for 3 years on manpower including cost of tools & tackles etc. should be given by the bidder.					
1.02	For 1st year	1.000	year	12457812.00	<b>12457812.00</b>	INR One Crore Twenty Four Lakh Fifty Seven Thousand Eight Hundred & Twelve Only
<b>Total in Figures</b>					<b>12457812.00</b>	INR One Crore Twenty Four Lakh Fifty Seven Thousand Eight Hundred & Twelve Only
<b>Quoted Rate in Figures</b>				<b>Select</b>	0.00	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>			

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Tender Inviting Authority: Indian Institute of Technology Ropar

Name of Work: Annual Operation &amp; Maintenance Contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid Substation, 11/0.433KV Substations including all transformers, PSS, DG Set, HT &amp; LT Panel and Cables, RMU, Feeder Panel, and allied equipments at IIT Ropar (All the 06 sheets of BOQ need to be filled failing which tender stand rejected)

Contract No: IITRPR/ENM/T/26/105

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Sl. No.	Item Description	Quantity	Units	BASIC RATE is inclusive GST and other taxes Rs. P	TOTAL AMOUNT with Taxes Rs. P	TOTAL AMOUNT In Words
1.01	Sub Head-RMO of Substation Machinery (DG sets, Transformer, LT panel, HT panel & all accessories of equipment's etc.), Maintenance complaints, additional works etc. as required: a)- Routine operation and maintenance of all Electrical substation equipment's, control panels, EDB's / SDB's, Feeder pillars, DG sets and maintenance of all electrical installations as required on all working days i/c Sunday and holiday in different shifts as per duty chart (Manpower to be deployed as given below) and terms and conditions attached. b)- Details of Sub Station : 1) 66/ 11 KV Grid -01 Nos . 2) 11/.433 KV ESS-01, ESS-02, ESS-03, ESS-04, ESS-05, ESS-06, ESS-07. 3) 11/.433 KV PSS-01,PSS-02 and PSS-03. c)- Tentative details of Sub Station items are attached. d)- Deployment of Manpower as per duty chart in three shift round the clock is attached.. e) The wages of manpower is taken w.e.f. 01.04.2026. The manpower will be increase or decrease as per site conditions and accordingly successful contractor will submit the bill for payment. f) Staff required at site is as : Sub-Station Attendant (skilled) 29 nos., Helper (semi-skilled) 07 nos., Safety Officer (Highly skilled) 01 no. and Electrical Supervisor (Highly skilled) 01 No. g) The bidder should pay the minimum wages to the manpower as per Gol Rules. h) The service charges taken for 3 years on manpower including cost of tools & tackles etc. should be given by the bidder.					
1.02	For 2nd year	1.000	year	12831546.00	<b>12831546.00</b>	INR One Crore Twenty Eight Lakh Thirty One Thousand Five Hundred & Forty Six Only
<b>Total in Figures</b>					<b>12831546.00</b>	INR One Crore Twenty Eight Lakh Thirty One Thousand Five Hundred & Forty Six Only
<b>Quoted Rate in Figures</b>				<b>Select</b>	0.00	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>			

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Contract No: IITRPR/ENM/T/26/105

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<b>PRICE SCHEDULE</b>						
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NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE is inclusive GST and other taxes Rs. P	TOTAL AMOUNT with Taxes Rs. P	TOTAL AMOUNT In Words
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1.02	For 3rd year	1.000	year	13216492.00	<b>13216492.00</b>	INR One Crore Thirty Two Lakh Sixteen Thousand Four Hundred & Ninety Two Only
<b>Total in Figures</b>					<b>13216492.00</b>	INR One Crore Thirty Two Lakh Sixteen Thousand Four Hundred & Ninety Two Only
<b>Quoted Rate in Figures</b>				<b>Select</b>	<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>			

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Name of Work: Annual Operation &amp; Maintenance Contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid Substation, 11/0.433KV Substations including all transformers, PSS, DG Set, HT &amp; LT Panel and Cables, RMU, Feeder Panel, and allied equipments at IIT Ropar (All the 06 sheets of BOQ need to be filled failing which tender stand rejected)

Contract No: IITRPR/ENM/T/26/105

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<b>PRICE SCHEDULE</b>						
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NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE is inclusive GST and other taxes Rs. P	TOTAL AMOUNT with Taxes Rs. P	TOTAL AMOUNT In Words
1.01	a) Yearly preventive maintenance of 5/6.25 MVA power transformers, CT, PT, Isolator, LA, 11 KV VCB, Control & Relay Panel, Battery Charger & Battery Bank of 66/11 KV Grid as per scope defined in tender (1 job), b) Yearly preventive maintenance of distribution transformers as per scope defined in tender (16 nos.), c) Yearly preventive maintenance of 11kV panels as per scope defined in tender (32 nos), d) early preventive maintenance of 415V panels along with associated switchgear (ACB/MCCB) as per scope defined in tender (115 nos.), e) Yearly preventive maintenance of Package substation as per scope mentioned in tender (03 nos.), f) Yearly preventive maintenance of DG sets as per OEM standards (22 nos.) The work shall be carried out by OEM / OEM authorized agency.					
1.02	For 1st year	1.000	job	5815426.00	<b>5815426.00</b>	INR Fifty Eight Lakh Fifteen Thousand Four Hundred & Twenty Six Only
<b>Total in Figures</b>					<b>5815426.00</b>	INR Fifty Eight Lakh Fifteen Thousand Four Hundred & Twenty Six Only
<b>Quoted Rate in Figures</b>			<b>Select</b>		<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>			

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Tender Inviting Authority: Indian Institute of Technology Ropar

Name of Work: Annual Operation &amp; Maintenance Contract for round the clock routine services, preventive maintenances and break down services for 66/11KV Grid Substation, 11/0.433KV Substations including all transformers, PSS, DG Set, HT &amp; LT Panel and Cables, RMU, Feeder Panel, and allied equipments at IIT Ropar (All the 06 sheets of BOQ need to be filled failing which tender stand rejected)

Contract No: IITRPR/ENM/T/26/105

<p align="center"><b>PRICE SCHEDULE</b></p> <p align="center">(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )</p>						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	BASIC RATE is inclusive GST and other taxes Rs. P	TOTAL AMOUNT with Taxes Rs. P	TOTAL AMOUNT In Words
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1.02	For 2nd year	1.000	job	6106197.00	<b>6106197.00</b>	INR Sixty One Lakh Six Thousand One Hundred & Ninety Seven Only
<b>Total in Figures</b>					<b>6106197.00</b>	INR Sixty One Lakh Six Thousand One Hundred & Ninety Seven Only
<b>Quoted Rate in Figures</b>			<b>Select</b>		<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>			

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<b>PRICE SCHEDULE</b> (This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )						
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1.02	For 3rd year	1.000	job	6411506.00	<b>6411506.00</b>	INR Sixty Four Lakh Eleven Thousand Five Hundred & Six Only
<b>Total in Figures</b>					<b>6411506.00</b>	INR Sixty Four Lakh Eleven Thousand Five Hundred & Six Only
<b>Quoted Rate in Figures</b>			<b>Select</b>		<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>			<b>INR Zero Only</b>			