Kanan Devan Hills Plantations Company Private Limited

The Secretary,
Kerala State Electricity Regulatory Commission,
KPFC Bhavanam,
C.V. Raman Pillai Road,
Vellayambalam,
Thiruvananthapuram 695010.
Tel No.0471 2735544

10th November 2023

Dear Sir,

Sub: Petition for approval of constructing 33/11 kV Substation at Munnar.

Reference: Our letter dt. 18.07.2023
Letter from the Hon'ble. Commission No.955/Con (Engg)/ 2023/KSERC/1882 dt. 18.10.23

We submit herewith for the consideration of the Hon'ble Commission one original and five copies of the petition for approval of constructing 33/11 kV Substation at Munnar pursuant to Order of the Hon'ble Commission dt 01.02.2022 in OP No.35/2021.

A Demand draft favouring the Hon'ble Commission for Rs.10,000/- towards filing fee is duly enclosed herewith this letter.

Yours faithfully,

For **Kanan Devan Hills Plantations Company Private Limited**

Suman Ghosh
Chief Financial Officer

KANAN DEVAN HILLS PLANTATIONS COMPANY PRIVATE LIMITED
KDHP House
Munnar P. O
Kerala-685612

cc. TRAC (With a copy of the above petition)
The Chief Engineer- Commercial & Planning,
Kerala State Electricity Board Limited
Vydhuti Bhavanam,
Pattom,
Thiruvananthapuram- 695004.

Encls: Demand Draft drawn on the Hon'ble Commission bearing reference No.305139 dated 8th November 2023.

AFFIDAVIT VERIFYING THE PETITION FOR
APPROVAL OF CONSTRUCTING 33/11 KV SUBSTATION PURSUANT TO ORDER OF THE HON'BLE COMMISSION OP 35/2021 DT 01.02.2022

I, Suman Ghosh, aged 45 years, son of late Mr. Ekkari Ghosh, residing at Munnar Bungalow, Munnar, Kerala – 685612, do hereby solemnly affirm and state as follows:

I am the Chief Financial Officer of Kanan Devan Hills Plantations Company Private Limited (KDHP), Munnar and the petitioner in the above matter and I am duly authorized by the Company to make this affidavit on its behalf. I solemnly affirm at Munnar on this the 10th November 2023, that –

(i) contents of the above petition are true to my information, knowledge, and belief. I believe that no part of it is false, and no material has been concealed therefrom.

(ii) that the statements made in the paragraphs of the accompanying application are true to my knowledge and are derived from the official records made available to me and are based on information and advice received which I believe are true and correct.

Deponent

Chief Financial Officer
Kanan Devan Hills Plantations Company
Private Limited, Munnar, Kerala –
685612.

VERIFICATION

I, the above-named deponent, solemnly affirm at Munnar on this the 10th November 2023 that the contents of the affidavit are true to my information, knowledge and belief, that no part of it is false and that no material has been concealed therefrom.

Deponent

Chief Financial Officer
Kanan Devan Hills Plantations Company
Private Limited, Munnar, Kerala –
685612.

Solemnly affirmed and signed before me.

10-11-2023.

N. S. SUKUMARAN
ADVOCATE & NOTARY
Reg. No.10/97/IDKY
ADIMALY, IDUKKI DISTRICT
KERALA STATE, INDIA-685 561

NOTARIAL REGISTER
Vol.No. VII Page No. 223
Sl.No. 273 Date 10.11.23

BEFORE THE KERALA STATE ELECTRICITY REGULATORY COMMISSION

In the matter of: Petition for approval of constructing 33/11 kV Substation at Munnar pursuant to Order of the Hon'ble Commission dt 01.02.2022 in OP No.35/2021.

Petitioner: Kanan Devan Hills Plantations Company Private Limited ("KDHPCL"/ "Petitioner"), KDHP House, Munnar – 685 612. Represented by its Chief Financial Officer.

1. The Petitioner is a corporate tea plantation in Munnar, Kerala. Formed in 2005 with majority of the shares being held by employees/ex-employees, the Petitioner took over 17 tea estates from Tata Tea Limited (presently, Tata Consumer Products Limited), and thereafter amalgamated these estates to 7 estates. Currently, the Petitioner is one of the largest tea producers in South India. The Petitioner is also the Distribution Licensee in Munnar region catering mostly to plantation workers, tea factories in the region including that of the Petitioner and commercial establishments in the region.

2. The problem of power shortage has been a vexing problem since long in Munnar. Through multiple rounds of deliberation with the Hon'ble Commission, Kerala State Electricity Board Limited (KSEBL) and the Petitioner, it was finally ordered by the Hon'ble Commission vide Order 35/2011 dt. 01.02.2022 ("Order") to:

    a. The transmission system development in the area should be done by the STU. Hence works detailed in Para 10, table 2 of the Order shall be carried out by KSEBL and the expenses shall be accounted in the capital investment expenses of KSEBL SBU-T in the respective accounting years.

    b. The Petitioner shall avail 33 KV supply from 33 KV feeder already available at Munnar. A 33 /11 KV substation of sufficient capacity shall be established by the Petitioner at Munnar at its cost, and distribution system of the Petitioner be rearranged through this substation. The substation and associated works should be completed before March 2024 positively.

    c. KSEBL shall take immediate action to provide quality power to its consumers from its own distribution system. The back feeding interconnection /drawl points existing at 15 points should be discontinued before March 2024.

    d. KSEBL and the Petitioner should provide a report of progress of the above matters in every six months interval beginning July 2022.

3. The Petitioner had last submitted a status update on the matter before the Hon'ble Commission vide cover of letter dt. 18.07.2023. Though the Petitioner had represented in the status update that a Detailed Project Report (DPR) would be submitted before the Hon'ble Commission for its kind consideration before 31.07.2023, on account of unforeseen delays in completing the DPR including finalizing the specifications of the substation, seeking suppliers and quotations, the same could not be obliged. The Petitioner regrets the delay and would humbly request the Hon'ble Commission to condone the delay on its part.

4. The Petitioner hereby submits along with this Petition, the Detailed Project Report detailing the technical plan, techno-economic feasibility, cost estimates, funding proposal, and timeliness for the consideration of the Hon'ble Commission. The total cost of the project is estimated at Rs.12,06,64,141/- (Rupees Twelve Crore Six Lakh Sixty-Four Thousand and One Hundred and Forty-One Only).

5. The Petitioner plans to fund the Project out of external loans from Banks. Discussions were held with multiple Banks and shall be finalized once the final approval for the Project is obtained from the Hon'ble Commission.

6. The Petitioner had submitted its ARR-ERC Petition for the control period from FY 2022-23 to FY 2026-27 for the consideration of the Hon'ble Commission vide cover of its letter dt 24.02.2022. Though initial hearings were held on the matter, final orders are still awaited. The Petitioner would like to draw the attention of the Hon'ble Commission to the fact that the proposed Capital Project has not been factored in the Petitioner's estimation of ARR-ERC and revenue surplus/(deficit). An amended ARR-ERC Petition would be submitted post acknowledgement of final approval for the Proposed Project from the Hon'ble Commission.

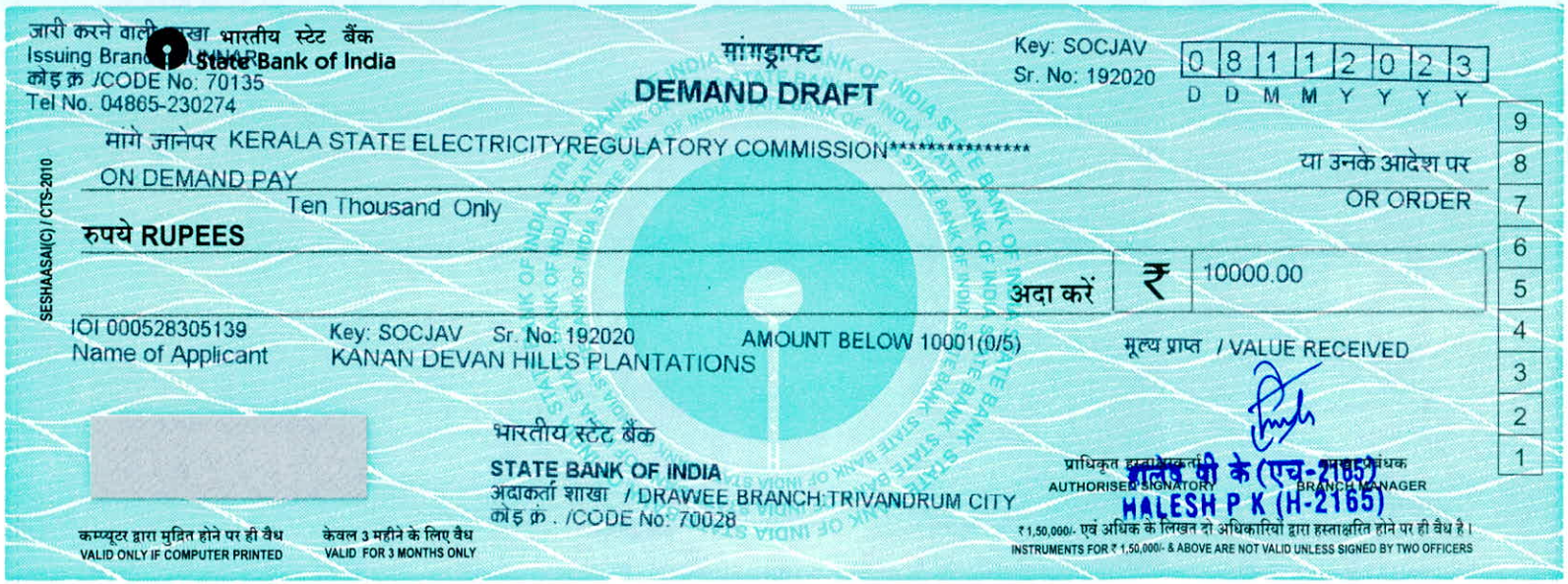
Prayer.

It is prayed before the Hon'ble Commission that Proposal for the construction of the 33/11 kV substation at an estimated cost of Rs. Rs.12,06,64,141/- (Rupees Twelve Crore Six Lakh Sixty-Four Thousand and One Hundred and Forty-One Only) and as per the specifications detailed in the Detailed Project Report be kindly approved.

KANAN DEVAN HILLS PLANTATIONS COMPANY PRIVATE LIMITED
KDHP House
Munnar P.O
Kerala-685612

Suman Ghosh
Chief Financial Officer

November 10, 2023.



जारी करने वाली शाखा भारतीय स्टेट बैंक
Issuing Branch : KANNAPURAM
कोड क्र /CODE No: 70135
Tel No. 04865-230274

State Bank of India

मांगड्राफ्ट
DEMAND DRAFT

Key: SOCJAV
Sr. No: 192020

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मांगे जानेपर KERALA STATE ELECTRICITYREGULATORY COMMISSION**********
या उनके आदेश पर

ON DEMAND PAY
OR ORDER

Ten Thousand Only

रुपये RUPEES

अदा करें ₹ 10000.00

IOI 000528305139 Key: SOCJAV Sr. No: 192020 AMOUNT BELOW 10001(0/5)
Name of Applicant KANAN DEVAN HILLS PLANTATIONS

मूल्य प्राप्त / VALUE RECEIVED

भारतीय स्टेट बैंक
STATE BANK OF INDIA
अदाकर्ता शाखा / DRAWEE BRANCH:TRIVANDRUM CITY
कोड क्र . /CODE No: 70028

प्राधिकृत हस्ताक्षरकर्ता / शाखा प्रबंधक
AUTHORISED SIGNATORY / BRANCH MANAGER
हलेश पी के (एच-2165)
HALESH P K (H-2165)

कम्प्यूटर द्वारा मुद्रित होने पर ही वैध
VALID ONLY IF COMPUTER PRINTED

केवल 3 महीने के लिए वैध
VALID FOR 3 MONTHS ONLY

₹1,50,000/- एवं अधिक के लिखत दो अधिकारियों द्वारा हस्ताक्षरित होने पर ही वैध है।
INSTRUMENTS FOR ₹ 1,50,000/- & ABOVE ARE NOT VALID UNLESS SIGNED BY TWO OFFICERS

SESHAASAI(C) / CTS-2010

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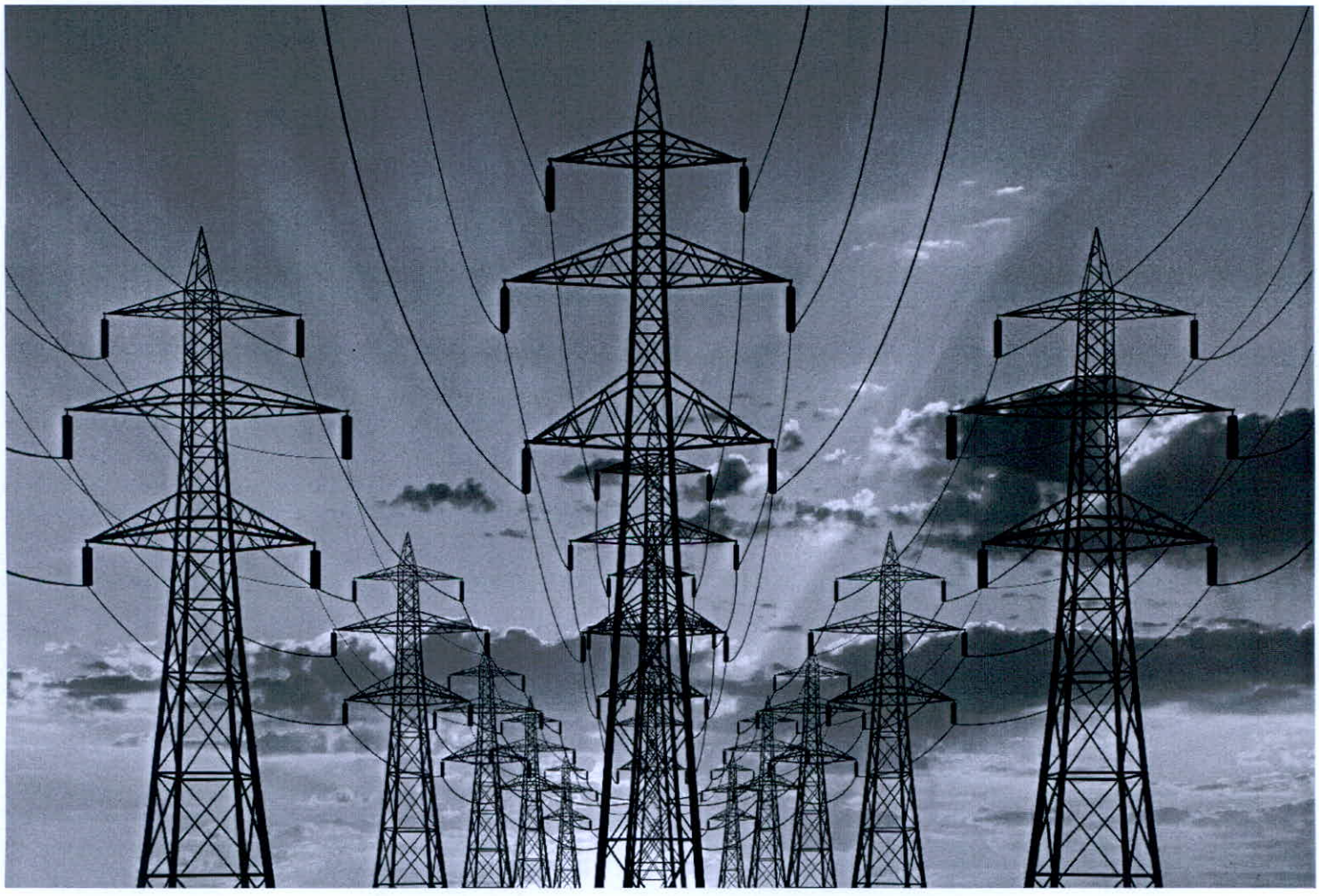
DETAILED PROJECT REPORT

Construction of 33KV/11KV receiving station at Munnar for KDHP distribution network



KANNAN DEVAN HILLS PLANTATIONS COMPANY PRIVATE LIMITED
KDHP House
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INTRODUCTION

Before independence, a British Company by name Kanan Devan Hills Produce Company Limited, was responsible for the development of tea plantations and processing of tea in Munnar. The Kanan Devan Hills Produce Company Limited also took responsibility for electric power generation as well as distribution in and around Munnar. After independence, when the power generation was taken over by the Kerala State Electricity Board (KSEB), the Company continued with the distribution of electricity in Munnar and suburbs. The distribution license given to Kanan Devan Hills Produce Company Limited for electricity distribution was then transferred to the Tata Tea Limited. M/s Tata Tea Limited transferred the license to Kanan Devan Hills Plantation Company Private Limited (KDHP), with effect from 1 July 2007.

Reducing aggregate technical and commercial (AT&C) losses and improving operational efficiency are crucial for distribution licenses. Recognizing this need, KDHP has been taking several measures for energy conservation including replacement of electromagnetic meters with electronic meters, checking power theft, re-conducting over loaded feeders etc.

KDHP receives power from KSEB through three 11KV overhead lines from Chithirapuram generating station. Two feeders, namely HR1 and HR2 connect the Chithirapuram generating station and KDHP receiving station. The two feeders are connected in parallel at the receiving station. From the receiving station power is distributed at 11KV through six overhead feeders. In addition to this, a third 11KV over headline known as Pipeline feeder was also connected to meet the growing demand.

The maximum demand recorded so far is 12MVA and the actual contract demand is 9MVA. The present arrangement is unsuitable to meet the growth. Hence KDHP requested KSEB to enhance the contract demand. KSEB informed KDHP to avail power supply in 66KV voltage level and enhance the contract demand to 12MVA. KSERC also intimated in the order OP33/2011, for increasing the required demand of KDHP, a higher voltage substation above 11KV is essential in Munnar. On 3rd February 2020, KSEB called KDHP for a meeting in Transmission Director's chamber at Thiruvananthapuram and in the meeting, they have informed that if KDHP agreed, KSEB can construct 33KV double circuit from Pullivasal to Munnar out of which one circuit can be extended to Marayoor and the second one will terminate

at Munnar to facilitate KDHP for connecting the new 33 KV substation. Subsequently, a hearing was conducted, and an order was passed wide OP No 35/2021 dated 01-02-2022, based on the order KDHP proposed to install a 33/11KV substation at Munnar. The capacity of the 33KV substation is decided as 20MVA assuming a very low demand of a 2% increase per annum. KDHP proposed to install two numbers of 16/20MVA - 33/11KV transformers meeting N+1 conditions. This will ensure reliability of supply in the event of maintenance of one of the transformers. KDHP have also decided to receive 33KV supply from Pullivasal generating station through a single over headline of approximately 4.5km long.

DISTRIBUTION INFRASTRUCTURE OF AREA UNDER KDHP

KDHP distributes power to the following areas listed below.

a) Tea plantation and factories

b) Residential buildings in and around Munnar.

c) Hotels and Resorts in and around Munnar

d) Commercial establishments.

In addition to the above, the electric power is transmitted back to KSEB through their feedback points at the following 16 locations.

1. Kuttiyar Valley.
2. Vattavada.
3. Kundalay dam
4. Kundalay Harijan Colony
5. Madupatty Dam colony
6. Madupatty Powerhouse
7. Devikulam Town
8. All India Radio
9. Water Pumping Station, Devikulam.
10. Edamalakkudy
11. Letchmi colony, resorts etc.
12. Munnar Colony
13. Munnar KSEB colony
14. Munnar KSEB quarters.
15. Munnar Head works.
16. Marayoor.

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Power received at the receiving station is distributed in Munnar and Suburbs by the following overhead 11KV distribution lines.

1. Nyamakad feeder.
This feeder starts from the receiving station and distributes power to Nullatanni, Periavurrai, Kanniamallay, Nyamakad, Kadalaar, Rajamallay, Thalayar, Vagavurrai and Marayoor. This feeder has 34 Nos. of transformers with total rating of 5115 KVA.

2. Pullivasal feeder
This feeder starts from the receiving station and distributes power to Attukkad, Pullivasal factory and Pullivasal packeting center. There are 5 Nos. of transformers in this feeder with total rating of 1613 KVA.

3. Nettigudy feeder
This feeder starts from the receiving station and distribute power to Head Works, Chokkanad, Lad Broke, Lockhart, Manila, Devikulam, Guderale, Periakanal and Silent Valley. There are 28 Nos. of transformers in this feeder with total rating of 4567 KVA.

4. ITD feeder
This feeder starts from the receiving station and distributes power to Instant Tea Factory, Sevenmallay, Letchmi, Viriparai, Nadayar and Kalaar estates. There are 23 No. of transformers in this feeder with total rating of 5200 KVA.

5. Munnar Town feeder.
This feeder starts from the receiving station and distributes power to Old Munnar, KDHP Workshop, Hotels, Engineering College etc. There are 25 Nos. of transformers in this feeder with total rating of 4361 KVA.

6. Madupatty feeder
This feeder starts from the receiving station and distribute power to Grahamsland, Madupatty, Gundumallay, Thenmallay, Arivikad, Yellapatty, Chittavurrai, Chundavurrai, Koviloor, Indo Swiss Project etc. There are 52 Nos. of transformers in this feeder with total rating of 8023 KVA.

7. Station Feeder
One Transformer of 15 KVA is connected in this feeder.

Hence 168 total No of Transformers are connected in the system with total rating of 28894 KVA.

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SCOPE OF WORK

Scope of work includes the supply and installation of the following.

- 33KV metering station - It is proposed to construct 4 pole metering station with outdoor LA, CT, PT and ABT meter.
- Laying 33KV cable to control room
- 3 Panel 33KV Vacuum Circuit Breaker.
- Two numbers 16/20MVA 33/11KV Transformers.
- 13 Nos 11KV Vacuum Circuit Breakers and 2 Nos Bus PT
- 100 KVA 11/0.433KV Outdoor oil cooled auxiliary transformer-1No
- 62.5KVA Diesel Generator-1No
- MV switch boards for substation operation.
- Battery and Battery charger.
- Substation and Control room civil works
- Fencing work.
- 11 KV line connectivity work 7 KM.

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TECHNOLOGY FEATURES

Technical standards of construction of electrical plants and electrical lines Regulation 2010 is mainly considered for the design of the substation.

- As per regulation 48 (6), 33/11KV normally have two or more transformers.
- As per regulation 48(8), independent circuit breaker control for incoming feeders and transformers are provided.
- The site of the substation is selected as per regulation 49.
- The site is suitable for terminating 33KV HV overhead line.
- The land is reasonably leveled and has no open drain or road crossing.
- The substation layout is as per regulation 50.
- Equipment maintenance is possible without interrupting the entire supply.

Switching arrangement

Switching arrangements are as per regulation 51. Switching arrangements ensure operation flexibility, system safety and reliability.

Salient Features Of 33KV Substation Equipment and Facilities

33KV Current Transformer

As per regulation 63 the current transformer complies with IEC 61869-2: 2012 &
IS 16227-Part 2 & KSEBL specifications. The primary side rating depends upon the rating of the transformer. Oil filled CT is used for outdoor use and Cast resin type is used for indoor use. The accuracy class of the meter is as specified by Central Electricity Authority (Installation and operation of meters regulation 2006)

33KV Voltage Transformer

As per regulation 63(2) the voltage transformer complies with IEC 61869-3: 2011; IS 16227-Part 3 & KSEBL specifications. Voltage transformer is electromagnetic type. The Voltage transformer is oil filled for outdoor use and cast resin for indoor use. The accuracy class of the metering core is as per Central Electricity Authority (Installation and operation of meters regulation 2006)

33KV & 11KV VCB Panels

The circuit breaker is selected as per regulation 59 and is of Vacuum type. The rated short circuit current is 25kA for 1 Sec. or more as per regulation 59(2).

Sl. No	Technical Description	33KV	11KV
1	Impulse withstand voltage	170KVA	75KVA
2	Maximum fault current	31.5kA	25kA
3	Duration of fault	3 Sec.	3Sec.
4	Continuous current capacity	1250A	1250A
5	Rated power frequency withstand voltage	70KV	28KV
6	Standards	IEC62271-200 IEC62271-1	IEC62271-200 IEC62271-1
7	BUS bars make	Al.	Al.

16/20MVA 33/11KV 3Phase, 50 Hz. Transformer

The transformer is a device that transfers electrical energy from one circuit to another through the medium of magnetic field without the change in frequency. The primary and the secondary of the transformer are coupled magnetically. In a step-down transformer, the Primary has a large number of windings than the secondary, such that the secondary voltage is lower than the primary voltage. As there are no moving parts, this is high efficiency and requires a negligible amount of maintenance and supervision. The transformer has a central laminated core over which windings are made. This tank is provided with fins, radiators, conservator, and silica gel breather. The transformer is selected based on regulation 54. The transformer is an oil filled type and outdoor type. As per regulation 54(6) the transformer shall withstand, without injurious heating, combined voltage, and frequency fluctuation, which produce over fluxing condition as 125% for 1 minute and 140% for 5 sec. The transformers provide gas and oil actuated Buchholz relay with alarm and trip contacts.

Sl. No	Technical Description-Transformer	Value
1	Rating	2Nos - 16/20 MVA
2	Duty	Continuous
3	Type	Outdoor
4	Primary Voltage	33 KV
5	Secondary Voltage	11 KV
6	Winding Material	Copper
7	Type of Cooling	ONAN/ONAF
8	Type of Connection	Delta / Star
9	OLTC Taping Range	+5% to -15%, Steps @ 1.25 %
10	Temperature Rise	15 Degrees
11	Terminal Arrangement	HV & LV Side - Cable Box

Cables

Cables shall conform to IS :5831/IS:7098. Standards.

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Cable armor of low resistivity material meets IS:3975.

Cable insulation shall meet IS:5831.

Cables are sequentially marked for length of every matter throughout its length.

33KV 3C 400sq mm XLPE Al cable for feeding transformers from KSEB 33KV 3phase 50Hz incoming supply.

11KV 4 Runs 1C 630sq mm XLPE Al cable for feeding 11KV panels from Transformer.

Lightning protection

Lightning protection is provided as per regulation 62. Station class heavy duty gapless metal oxide (ZnO) type surge arresters are provided on high voltage and low voltage side of the transformer. The surge arresters are single phase units suitable for outdoor duty. Arresters shall draw negligible operating current at operating voltage and at the same time offer least resistance during flow of surge current. The rated voltage of the surge arrestor is 30 KV for use on 33KV and 9KV for 11KV system. Surge arresters shall be connected to two independent earth electrodes.

SHORT CIRCUIT STUDY

KDHP distributes Power to Munnar and Suburbs and has 168 Nos of total transformers with total capacity of 28894 KVA. The power allocation to KDHP is only 9000KVA (7000+2000 through supplementary power purchase agreement temporarily) which is the total maximum power that can be supplied by KSEB through the Three existing 11KV overhead lines. Of the total 9000KVA supplied to KDHP, KSEB is drawing around 2000KVA to feed the areas mentioned earlier. The electric power requirements at Marayoor, Kanthalloor, Vattavada and Devikulam are increasing rapidly due to construction of tourist resorts and hotels in the area.

There is a severe shortage of power and present demand is met by captive diesel generators installed in tea factories. The Nyamakad feeder and Madupatty feeders are overloaded. It is seen that the networks are growing in an unscientific manner increasing the line losses. The actual demand is suppressed resulting in inadequate quality of power.

A short circuit study is conducted to determine the short circuit rating of Circuit Breakers and associated equipment. Even though the short-circuit level at present is extremely low, the switch gears are selected based on Central Electrical Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulation 2010.

ESTIMATE FOR THE PROPOSED 33KV SUBSTATION

Total Estimate for 33/11 kV Substation at Munnar				
	Particulars	**Unit**	**Qty**	**Total Amount (incl. GST)**
A	**Description of Transformer and 33 & 11 kV Breakers**			
1	16/20 MVA 33 KV Transformer	Nos	2	2,91,12,960
2	11 KV Panel with all accessories (ABB)	set	1	97,94,000
3	33 KV Panel With accessories (ABB)	set	1	1,07,97,000
	Sub Total			**4,97,03,960**
B	**Description of Yard Equipment**			
1	33 KV /110 Volt PT 100 va (Out Door)	Nos	3	1,20,360
2	33 KV CT, 250/1-1-1-1 Amps, 4 Core, Core 1. 30 VA, Class 5P, Core 2, class 0.2 30 VA, core 3.PS core 4 Class Ps	Nos	3	1,20,360
3	ABT Meter/ computer	Nos	1	8,26,000
4	33 KV Double break 800 Amps Isolator (Out-Door)	Set	2	3,20,016
5	33 KV DO fuse assembly	Nos	6	2,52,048
6	33 KV, 10 KA Lightning Arrester	Nos	6	54,516
7	Mat Earthing	LS	1	5,90,000
8	630 Sqmm Single core 11 KV XLPE Cable	Mtrs	600	9,02,700
9	KUNDHA Conductor	Mtrs	25	5,015
10	33 KV Pin Insulators	Nos	25	8,850
11	3 Core 400 Sqmm 33 KV XLPE cable	Mtrs	75	3,09,750
12	4 pole structure with accessories	LS	1	2,36,000
13	GI Bolt & nuts in Varies size	Kgs	100	23,600
	Sub Total			**37,69,215**
C	**Description of Switching station Equipment**			
1	3 x 300 Sqmm 11 Al Cable	Mtrs	700	14,00,070
2	11 kV Heat Shrinkable 300 Sqmm Cable Jointing Kit	Nos	20	60,062
3	LT Cables	LS	1	2,00,001
4	Chequer plates	MT	1	7,67,000
5	Cable Rack	Mt	1	88,500
6	Lighting	LS	1	2,36,000
7	100 KVA Out-door Transformer with Structure	LS	1	5,90,000
8	Sub-station earthing with Earth plate	LS	1	59,000
9	Battery Charger	No	1	4,50,005
10	Battery	Set	1	3,00,003
11	Rubber Mat	Nos	15	1,02,920
12	NFPS free protection system	No	2	30,08,400
13	Generator 25 kVA	No	1	5,01,500
14	Testing and commissioning	LS	1	57,99,995
15	Design / Consultancy Charges	LS	1	16,76,300
16	Statutory charges	LS	1	3,98,840
	Sub Total			**1,56,38,596**
D	**Computor /Scada with cabling /CCTV Etc**	**LS**	1	15,34,000
	Sub Total			**15,34,000**
E	**Description of connectivity materials**			
1	Total Single circuit	KM	3.23	26,67,980
2	Total Double Circuit	KM	5.71	67,37,800
3	Four Pole Structure	Set	7	16,52,000
	Sub Total			**1,10,57,780**
F	**Misc Expenses**			
1	Transportation	LS	1	10,03,000
2	Labour	LS	1	27,03,600
	Sub Total			**37,06,600**
G	**Civil Work**			
1	33-KV Sub-station Building Civil Work (Including GST)			98,25,098
2	Painting, Grill, Al Door & Window Rolling Shutter Floor tails for toilet Battery Room plus Finishing work (Including GST)			15,03,969
3	33 KV Yard, Road work, Site cutting, leveling, Drain, Cable trench, Retaining wall, RCC culvert, Fencing Rcc pillar and gate, Paving Tail Water Tank With well (including GST)			2,15,58,960
	Sub Total			**3,28,88,027**
	Total Expenditure (A+B+C+D+E+F+G)			**11,82,98,178**
	Contingency 2%			**23,65,964**
	Total Expenditure			**12,06,64,141**

FUNDING PLAN

The estimated cost of the Proposed Project is Rs.12,06,64,141/-. The funding for the Proposed Project is currently planned through earmarked term loans from Banks against security of the Property, Plant and Equipment at the Proposed Substation. Request for Proposals have been made with several Bankers, both nationalized and private. Based on the evaluation of the quotes and the best interests of the Licensee and consumers in mind, the final decision on banking partner will be made.

TIMELINES

Sl. No	Milestone	Timeline	Status
1.	Site preparation- earth removal and levelling	30-Nov-23	In-progress
2.	Procurement of two 33/11 kV Transformer and 33 kV and 11 kV Panels	15-Nov-23	In-progress
3.	KSEB connectivity application fee	15-Nov-23	In-progress
4.	Procurement of connectivity materials (Fabrication and Erection)	31-Dec-23	To commence
5.	Completion of all connectivity work including 11 KV cabling	31-Jan-24	To commence
6.	Control Room Construction	31-Mar-24	To commence
7.	Receiving of Control Panel	31-Jan-24	To commence
8.	Transformer delivery and erection	7-Apr-24	To commence
9.	Earthing work for yard and Control room	15-Mar-24	To commence
10.	Incoming 33 KV yard work installation of CT/PT, cabling and metering work	30-Apr-24	To commence
11.	Installation of NFPS system	30-Apr-24	To commence
12.	Testing and commissioning	30-Apr-24	To commence

Procurement process

The Company has a robust procurement process. All procurement of goods and services are routed through the centralized Purchase and Logistics Department and Engineering Department. The suppliers are carefully vetted, and work is awarded after thorough verification of the supplier profile, benchmarking market rates with multiple quotes, ensuring requisite quality control and other necessary checks and balances.

Civil Materials

For constructing Control Room and 33/11 KV substation yard, we have decided to procure the Materials like sand, bricks, and cements from our standard suppliers. The work contract was given to an outside contractor who was experienced in the construction field, we will obtain rates from three contractors and finally one contractor will be selected, who offers the mos beneficial rate. The above materials rates will be finalized by the Engineering Department.

Though we have an in-house construction team, in view of urgency it has been decided to get it done through an outside contractor. The work will be supervised by our civil engineers and one of our civil site engineers will be posted on the site exclusively for supervising the Job undertaken by the civil Contractor.

The control room size is designed to be 30-meter x10 Meter, hence the building must be constructed with RCC supporting concrete columns, this column size and main building foundation will be designed in consultation with reputed structural engineering firms. For the foundation and Transformer base design the necessary soil test was carried out by one of the external agencies on the site.

Electrical Work

We have appointed an experienced Electrical Consultant (Subject Matter Expert, i.e., SME) for this project with credentials for working with reputable Government agencies in this field. The entire substation and control room is designed in consultation with the SME. For earthing design, the earth resistivity test was conducted by the Deputy Electrical Inspector of the Office of District Electrical Inspectorate.

We have appointed one "A' grade Electrical Contractor to carry out the work in the substation and the control room. After completion of the entire work the electrical contractor will submit

the Completion report to the Chief Electrical Inspector to the Government and he must obtain the Safety certificate from the Electrical inspector.

KSEB will carry out the 33KV incoming side work, Structure, CT/PT, LA. up to Metering cubic.

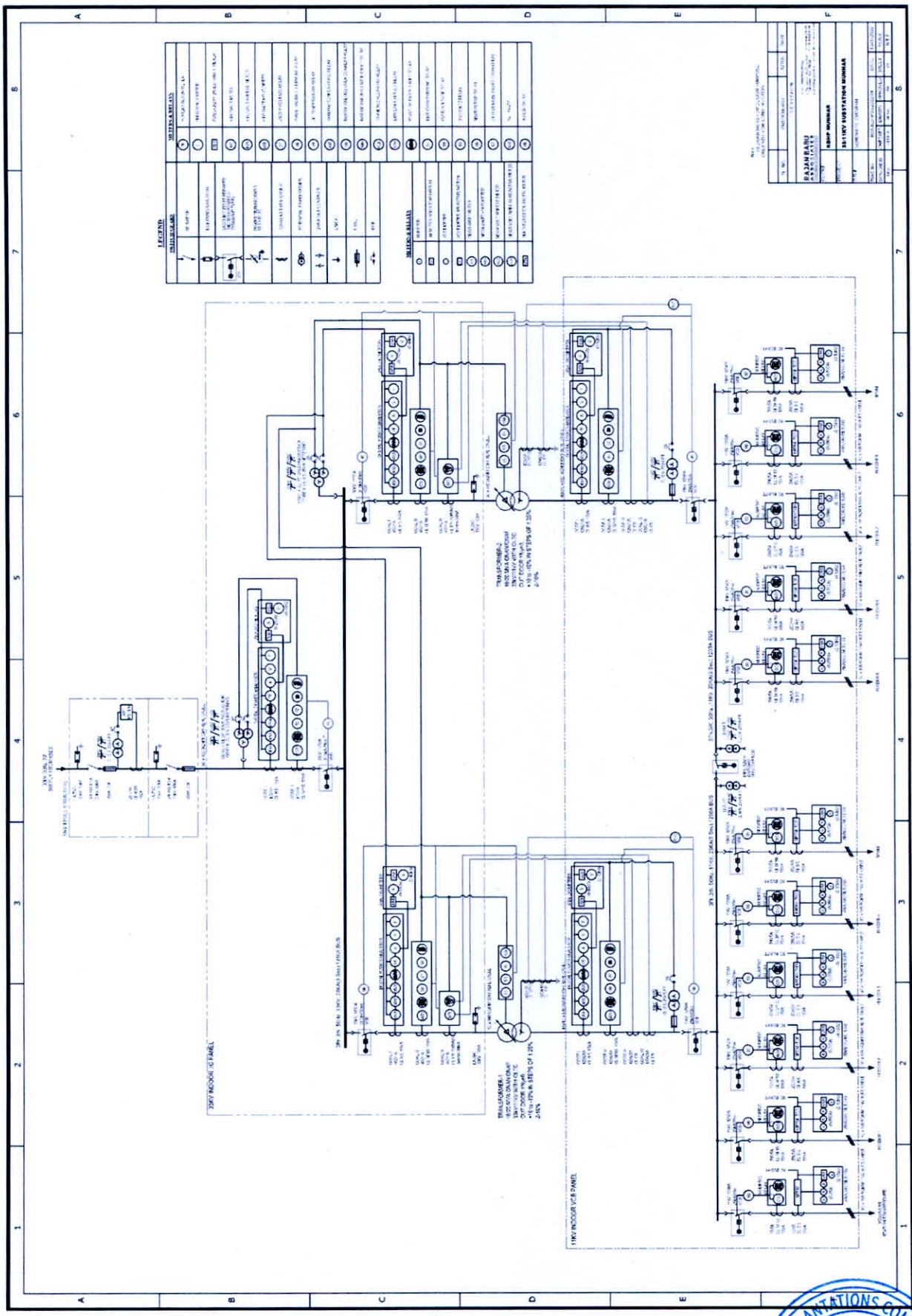
Electrical Material Procurement

The Major and costly items of this project is Power Transformer and 33 and 11 KV panel Boards. We have obtained the quotation from major Power transformer manufacturers. (TELK, KEL, Volt amps, Crompton, Supreme Power.)

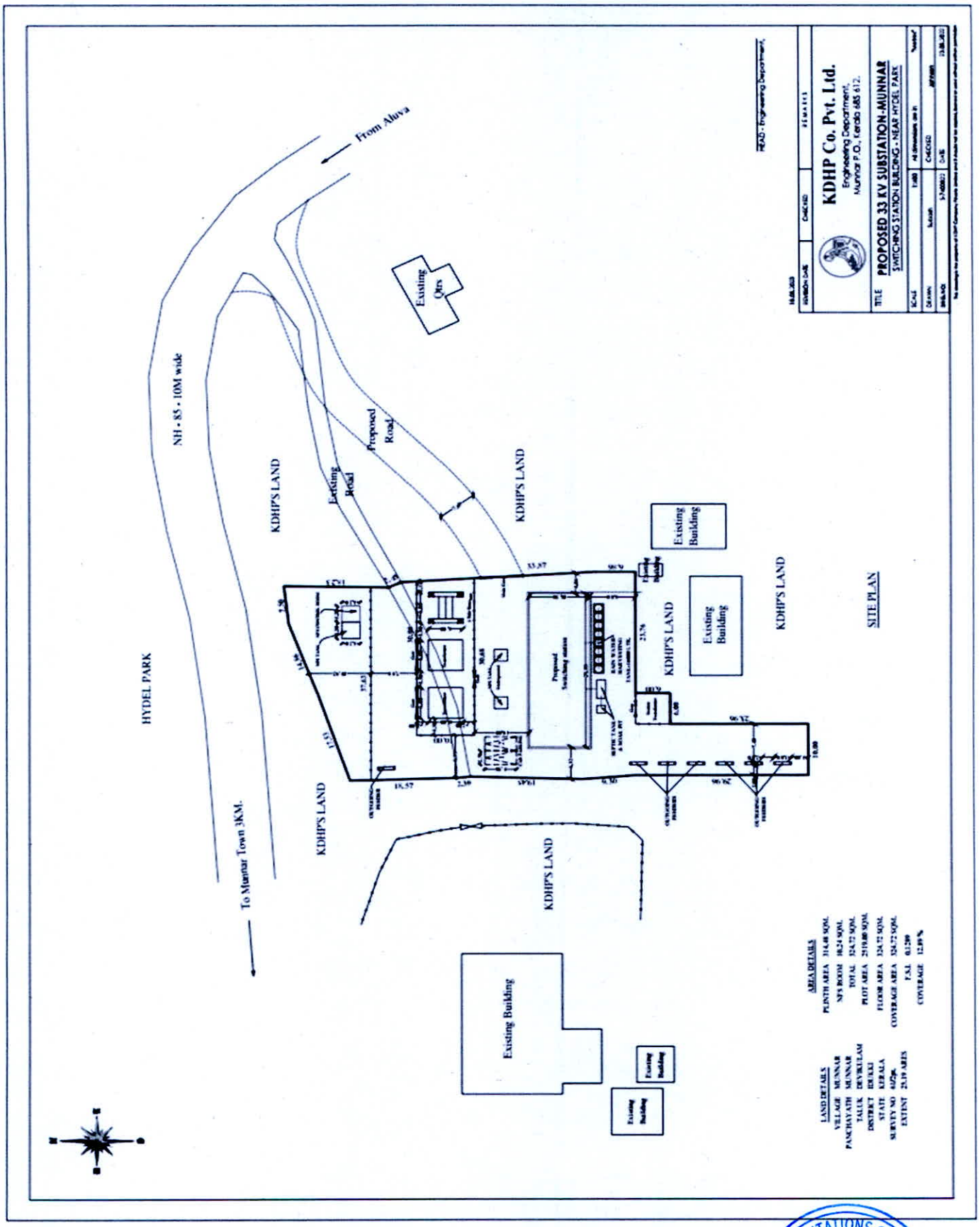
Similarly For 33 and 11 KV Control Panel we have obtained quotes from ABB, Crompton, L&T, and Siemens and one VTMK. Finally, after making so many negotiations we selected Transformer from Supreme Power. In panel board we have selected ABB.

The above quotation is evaluated by our companies Purchase committee team and finalized based on their merits. Orders have been placed.

SCHEMATIC DIAGRAM



DRAWING - SITE PLAN



Conclusion:

We are humbly submitting our Detailed project report for your kind consideration and approval, we shall be grateful if you would kindly accord your sanction at the earliest to enable us to start the work.