

CONTRACT AGREEMENT

FOR

CONSTRUCTION OF 220/33KV GIS SUBSTATION AT PHOJAL

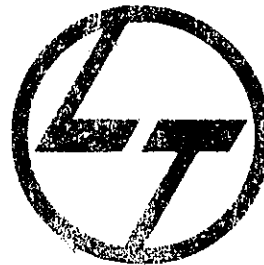
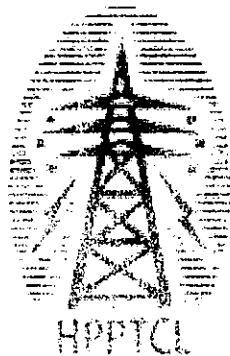
BETWEEN

HP POWER TRANSMISSION CORPORATION LIMITED

AND

LARSEN & TOUBRO LIMITED

VOLUME – 1B (BOOK- 2 OF 5)



CONTRACT AGREEMENT

FOR

CONSTRUCTION OF 220/33KV GIS SUBSTATION AT PHOJAL

BETWEEN

HP POWER TRANSMISSION CORPORATION LIMITED

AND

LARSEN & TOUBRO LIMITED

VOLUME -- 18 (BOOK- 2 OF 5)

INDEX

Volume – 1A: Supply Contract

Volume – 1B: Erection Contract Pages 001 to 055

(Present Volume)

Section – I Erection Contract Agreement Pages 001 to 003

Section – II Notification of Award dated 08-03-2013 Pages 004 to 027

Section – III Notification of Award dated 23-12-2010
and Amendment dated 08-02-2011 Pages 028 to 055

Volume – 1C: CORRESPONDENCE AND CONDITIONS OF CONTRACT

Volume – 2: Proposal Submitted By the Bidder

Volume – 3: Technical Specifications



A handwritten signature in black ink, likely belonging to the General Manager (Contracts).

Gen. Manager (Contracts)
H.P. Power Transmission Corpn. Ltd
Darowalia House, Khalini, Shimla-2

SECTION – I



A handwritten signature in black ink, consisting of a few stylized letters.

Joint Manager (Contracts)
Power Transmission Corpn. Ltd.
Powellia House, Khalini, Shimla-2

001



हिमाचल प्रदेश HIMACHAL PRADESH

402474

(ERECTION & CIVIL WORKS CONTRACT)

This agreement made on the 16th day of April 2013, between H.P. POWER TRANSMISSION CORPORATION LIMITED, (hereinafter referred to as "the purchaser or HPPTCL" which expression shall unless repugnant to the context or meaning thereof, include its successors, Administrators & assigns) of the one part, and M/S LARSEN & TOUBRO LIMITED-ECC DIVISION, CHENNAI, INDIA (hereinafter called "the Contractor" which expression shall unless repugnant to the context or meaning thereof, include its successors, Administrators & Assigns) of the other part.

WHEREAS the purchaser is desirous that the Contractor should provide certain Ancillary Services viz Civil works and Erection of Equipment & Materials against LOA No:HPPTCL/DGMC/L&T-ERECTION/2010-5099-5104 Dated 23.12.2010 for construction of 220/33KV PALCHAN GIS substation now Amended vide No. HPPTCL/DGMC/L&T-ERECTION/2013-6862-68, Dated:08/03/2013 for construction of 220/33KV GIS substation at Phojal, Distt.-Kullu and has accepted and a Bid by the Contractor for the performance of these services in the sum of Rs Seven Crores Ninety Three Lacs Twelve Thousand One Hundred Eighty Only (INR. 7,93,12,180/-) (Hereinafter called "the Contract Price".)

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, Words & Expression shall have the same meaning as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to Form & be read and construed as part of this Agreement, viz :
 - a) The Bid Form and the Price Schedule submitted by the Bidder;

Seelapuri
Larsen & Toubro Limited

H. P. Power Transmission Corp. Ltd.
General Manager (Contracts)
H.P. Power Transmission Corp. Ltd.
Bawal House, Khalini, Shimla-2

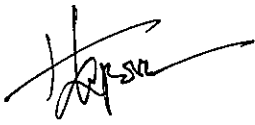
[illegible]

- b) The Technical Specifications;
 - c) General Conditions of Contract;
 - d) Erection Conditions of Contract;
 - e) Special Conditions of Contract;
 - f) The Purchaser's Notification of Award and Amendment thereafter;
 - g) Correspondence/Clarifications.
3. In consideration of the payments to be made by the Purchaser to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the purchaser to provide the Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Contractor in consideration of the provision of the Services and the remedying of defects therein, the Contract price or such other sum as may become payable under the provisions of the Contract at the times & in the manner prescribed by the Contract.

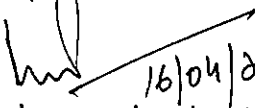
IN WITNESS whereof the PARTIES hereto have caused this Agreement to be executed in accordance with their respective laws, the day & year first above written.

Signed, sealed & delivered by the said.

(For HPPTCL)

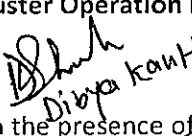

 Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalia House, Rhalini, Shimla-2

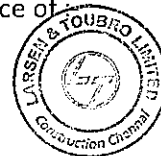
In the presence of:-


 16/04/2013
 E.P. Amar Singh Shandil
 Senior Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd
 Barowalia House, Rhalini, Shimla-2

Signed, sealed & delivered by the said.

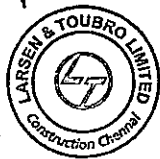
(For L&T Ltd)


 (Amit Kumar Rajput)
 Cluster Operation Head (Delhi)

 In the presence of



SECTION -II

Deelapet



[Signature]

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Bawolia House, Khalini, Shimla-2



HP POWER TRANSMISSION CORPORATION LIMITED
(A State Government Undertaking)
BAROWALIAS HOUSE, KHALINI, SHIMLA - 171002
Ph:- 0177-2626784, (Telefax: 0177 - 2620227)

Reference: HPPTCL / DGMC / L & T - ERECTION / 2013 ~~LS69-08~~ DATED: 8/03/13

From,

Dy. GENERAL MANAGER (CONTRACTS),
BAROWALIAS HOUSE, KHALINI,
SHIMLA - 171002

To,

M/S LARSEN & TOUBRO LIMITED,
ENGINEERING CONSTRUCTION & CONTRACTS DIVISION,
MOUNT POONAMALLEE ROAD, MANAPAKKAM,
P. B. No. 979, CHENNAI - 600089

FAX No.: 044 - 22493317; 044 - 22526345

Subject: LETTER OF AWARD (LOA) No.: HPPTCL / DGMC / L & T - ERECTION / 2010 - 5099 - 5104 DATED 23.12.2010 (SECOND CONTRACT) FOR CIVIL WORKS AND ERECTION OF EQUIPMENTS / MATERIALS FOR CONSTRUCTION OF 220 / 33 kV GIS SUBSTATION AT PHOJAL (EARLIER PALCHAN) - AMENDMENT THEREON

Reference: This has reference to the following: -

- ✓ 1) This office Letter of Award No.: HPPTCL / DGMC / L & T - Erection / 2010 - 5099 - 5104 dated 23.12.2010
- 2) This office letter No.: HPPTCL / Palchan S / Str. / 2011 - 12 - 6113 dated 03.12.2011
- 3) Minutes of Meeting held on 06.01.2012 in Shimla
- 4) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2403 dated 21st April, 2012
- 5) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2404 dated 24th April, 2012
- 6) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2405 dated 10th May, 2012
- 7) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2406 dated 18th May, 2012
- 8) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2409 dated 11th June, 2012



Handwritten signature

Page 1 of 6

Handwritten signature
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

- 9) This Office letter No.: HPPTCL / DGM& Head (T) / Phozal Sub Station - 12 - 516 - 17 dated 21.07.2012
- 10) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2410 dated 30th July, 2012
- 11) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2411 dated 1st August, 2012
- 12) Your Letter No.: L&T / PT&D / SSB / KULLU / HPPTCL / 220 kV SWYD / 2412 dated 6th August, 2012
- 13) This Office letter No.: HPPTCL / DGM& Head (T) / Phozal Sub Station - 12 - 573 - 74 dated 07.08.2012
- 14) This Office letter No.: HPPTCL / DGM& Head (T) / Phozal Sub Station - 12 - 834 - 35 dated 28.09.2012
- 15) This Office letter No.: HPPTCL / DGM& Head (T) / Phozal Sub Station - 12 - 884 - 85 dated 03.10.2012
- 16) Your Letter No.: LTCD / DLRO / HPTCL / PHOZAL / 002 dated 5th October, 2012

Sir,

I have been directed to issue Amendment to this office Letter of Award (LOA) No.: HPPTCL / DGMC / L & T - Erection / 2010 - 5099 - 5104 dated 23.12.2010 for Civil Works and Erection of Equipments / Materials (also referred to as 'Second Contract') required for Construction of 220 / 33 kV GIS Sub Station at Phozal (earlier Pakhan) in Kullu District of Himachal Pradesh amounting to Rs. 7,93,12,180 (Rupees Seven Crores Ninety Three Lakhs Twelve Thousand One Hundred Eighty) only.

The Scope of Work under this Contract shall also include all such Items, Equipment, and Materials, which are not specifically mentioned in the Bill of Material attached with this Amendment (Annexure - ECW1, Annexure - ECW2 and Annexure - MC) but are necessary for successful completion of the Scope of Work under the Contract.

This 'Second Contract' includes performance of all other activities including Inland Transportation, Insurance, Delivery on F. O. R. Destination Site(s) basis, Loading, Unloading, Handling, Storage (including watch and ward), Erection including associated Civil Works, Testing and Commissioning of all Equipment and Materials, including the Equipment and Material supplied under the 'First Contract', including Civil Works, training etc for complete execution of Construction of 220 / 33 kV GIS Sub Station at Phozal in Kullu on Single Source Responsibility basis.

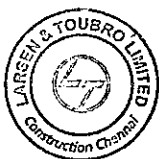
Major terms and conditions of this amendment are as under:-

1. The detailed Civil Works and Erection of Equipment / Material along with their tentative Quantities and Unit Rates under the subject LOA are given in Annexure - ECW1, Annexure - ECW2 and Annexure - MC to this Letter of Award.
2. Payments shall be released for the Quantities as finalised during detailed engineering and approved Bill of Material / actually measured by HPPTCL's Engineer at Site, based on per Unit Rates as per Award.

[Handwritten signature]

Page 2 of 6

[Handwritten signature]



[Handwritten signature]
 Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalia House, Khalini, Shimla-2

3. Size of 33 kV XLPE Cable viz. 630 sq. mm. / 1000 sq. mm. shall be finalised during detailed engineering and payment of the same along with suitable Termination shall be released on the Unit Rates specified in this Award.
4. It is expressly understood by you that any breach under the contract for supplies (First Contract) awarded, shall automatically be deemed as breach of this Contract and any such breach or occurrence giving us a right to terminate the 'First Contract' and / or recover damages under that Contract shall give us right to terminate this Contract and / or recover damages under this Contract as well. However, such breach or occurrence in the 'First Contract' shall not automatically relieve you of any of your obligations under this Contract. It is expressly understood and agreed by you that the Equipment / Materials supplied under this 'First Contract', when erected, tested, and commissioned shall give satisfactory performance in accordance with the Bidding Document.
5. It will be your responsibility to take delivery, unload, and store the Equipment / Materials to be supplied by you under 'First Contract' and execute an Indemnity Bond. You shall execute Indemnity Bond in favour of HPPTCL against loss, damage and any risks involved for the full value of the Equipment / Materials. This Indemnity Bond shall be furnished before commencement of the Supplies at Site and shall be valid till the testing and commissioning and handing over of the complete Construction of 220 kV GIS Phojal Sub Station.
6. The Maintenance of the Sub Station for the first year shall be carried out by your Firm for which Annual Charges amounting to Rs. 1,19,74,232.00 (Rupees One Crore Nineteen Lakhs Seventy Four Thousand Two Hundred Thirty Two) only shall be paid at the end of the Maintenance Period.
7. **CONTRACT PRICE:**
- 7.1 The Contract Price for the complete Scope of Work under this Amended LOA is as per the following break up: -

Sr. No.	PRICE COMPONENT	VALUE in Rupees
1	Erection of Material / Items (As per Annexure - ECW1)	2,44,22,485
2	Civil Works (As per Annexure - ECW2)	4,29,15,463
3	Annual Charges for Maintenance of Sub Station for the first year	1,19,74,232
	TOTAL CONTRACT PRICE	7,93,12,180

Rupees Seven Crores Ninety Three Lakhs Twelve Thousands One Hundred Eighty only

- 7.2 Further breakup of the Contract Price for the purpose of payment is given at Annexure - ECW1, Annexure - ECW2 and Annexure - MC of this LOA.

[Handwritten Signature]

Page 3 of 6



[Handwritten Signature]
 Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalia House, Khalini, Shimla-2

7.3 Notwithstanding the breakup of the Contract Price, the Contract shall at all times be construed as a 'Single Source Responsibility Contract' and any breach in any part of the Contract shall be treated as breach of the entire Contract.

7.4 The Price of Items indicated at Annexure – ECW1, Annexure - ECW2 and Annexure – MC for, which quantities are assessed by you and are on lump sum basis, shall remain constant irrespective of any increase or decrease in quantities of any Items, addition of any new item or deletion of any existing item for completion of Scope of Work as per Technical Specification unless there is any change of Scope of Work by the Purchaser / Owner.

In case, the actual requirement of quantity of such Items is more than the quantities identified in the LOA / Contract Agreement / approved BOQ / Billing break up or some additional Items are required for the successful completion of the Scope of Work as per the Technical Specification, such additional Items / quantities shall be supplied by you without any additional cost to HPPTCL. Further, in case actual requirement of quantities for successful completion of Scope of Work is less than the quantities identified in the LOA / Contract Agreement / approved BOQ / Billing break up or some existing Items are not required, the lump sum price for these Items / Civil Works shall remain unchanged and no deduction shall be made from the lump sum price due to such reduction of quantities.

In case quantities of these Items supplied at Site are in excess of that required for successful completion of Scope of Work as detailed in the Bidding Documents, such additional quantities shall be your property and you shall be allowed to take back the same from the Site for which no deduction from lump sum price shall be made. It shall, however, be your responsibility to pay all statutory taxes, duties, and levies to the concerned authorities for such surplus material, which would otherwise have been lawfully payable. You shall submit an indemnity bond to keep HPPTCL harmless from any such liability, before release of such material to you by HPPTCL.

8. TAXES AND DUTIES:

8.1 The Contract Price is inclusive of all Taxes and Duties such as Excise Duty, Sales Tax / VAT, Service Tax for all Materials required for Civil Works and Erection of Equipment / Materials under the Contract and no claim on this behalf will be entertained by HPPTCL. Further any such Taxes and Duties as aforesaid payable including statutory variation thereon will be to your account and no claim on this behalf will be entertained by HPPTCL.

8.2 The above Contract Price is inclusive of Service Tax and Surcharge / Cess etc on it as applicable and HPPTCL shall not entertain any claim whatsoever in this regard.

8.3 The above Contract price is inclusive of Sales Tax on Works Contract, Turnover Tax or any other similar taxes under the Sales Tax Act. HPPTCL shall not entertain any claim whatsoever for sales tax on Works Contract on the above Contract Price during the execution of the Contract.

8.4 HPPTCL shall be entitled to deduct Income Tax, Surcharge on Income Tax and other Corporate Taxes / other Taxes at source in accordance with the provisions of the Income Tax / other Laws as applicable from time to time. TDS so deducted shall be deposited with the relevant tax Authority and necessary TDS Certificate shall be issued to you by HPPTCL.

Page 4 of 6



By. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

9. **PRICE ADJUSTMENT:**

Rates for Civil Works are VARIABLE as per IEEMA Circular with Base Date as 1st September 2011 i.e. after stipulated completion period as per Original Award.

10. **TIME SCHEDULE OF CONTRACT:**

- 10.1 The basic consideration and the essence of the Contract is strict adherence to the Time Schedule of the Contract. You shall so organise your resources and perform your work as to complete successful testing and commissioning of the GIS Palchan Sub Station covered under the subject Contract within 14 (fourteen) months from the date of issue of this Amendment and the same shall be applicable for all contractual purposes.
- 10.2 You shall develop and furnish a detailed Schedule in the form of a Bar Chart indicating relating to allied Civil Works and Erection of all the Equipment and Materials covered under this Contract within 15 days of this Letter of Award.
- 10.3 For the purpose of levy of Liquidated Damages for delay, the time for completion of work of construction, testing and successful commissioning of 220 / 33 kV GIS Sub Station at Phojal shall be reckoned as 14 months from the date of this Amendment.

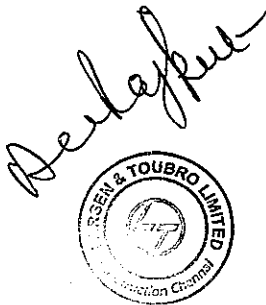
11. **LIQUIDATED DAMAGES (LD) FOR DELAY:**

- 11.1 If you fail to successfully complete the Commissioning of the Sub Station within the Time Schedule stipulated (14 months) under the Contract, you shall pay to HPPTCL as Liquidated Damages and not as a penalty, a sum of one half of one percent (0.5 %) of the Contract Price for each calendar week or part thereof of delay.
- 11.2 The Total Amount of Liquidated Damages for delay under the Contract shall be subject to a Maximum of 10 % of the Contract Price.

12. **SIGNING OF CONTRACT:**

You shall execute a Contract Agreement at the office HPPTCL, on the Terms and Conditions envisaged in the Tender Documents and this detailed Letter of Award, within 30 (Thirty) calendar days of the receipt of Notification of this Amendment. It is a legitimate obligation of you to execute and to stamp the Contract, in accordance with the Indian Stamp Act and to supply Six Copies of Contract Drawings, Technical Particulars as finally approved by HPPTCL and other Literature and Instruction Books regarding Handling, Use and Maintenance of Equipment / Material. The cost of all these and such other items have been included in the Prices and you will not be entitled to any extra payment on these accounts. However, non - execution of the Contract Agreement by you shall not absolve you of the responsibility of the faithful execution of the Contract.

Page 5 of 6



Handwritten signature

Handwritten signature
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

13. It is understood and agreed by both the parties to the contract that no claim, whatsoever, shall be raised by either of the parties on account of the period already lapsed under the contract.
14. All other Terms and Conditions shall be as per Original Letter of Award No.: HPPTCL / DGMCL / L & T - Supply / 2010 - 5099 - 5104 dated 23.12.2010 (SECOND CONTRACT) and Tender Document No. DGMCL/PALCHAN SUBSTATION/02/2009

Please acknowledge receipt of the Letter of Award and take necessary action to commence the work immediately.

Enclosure:

Annexure - ECW1, ECW2 & MC

Yours faithfully,


Dy. General Manager (Contracts)

Reference: HPPTCL / DGMCL / L & T - ERECTION / 2013 -

DATED:

Copy for information and necessary action to:-

1. P. S. to Director (Planning & Contracts), HPPTCL, Barowalia House, Khalini, Shimla - 171002.
2. P. S. to Director (Projects), HPPTCL, Barowalia House, Khalini, Shimla - 171002.
3. General Manager (Projects), HPPTCL, Barowalia House, Khalini, Shimla - 171002.
4. DGM & Head Transmission, HPPTCL, Anu, Hamirpur.
5. DGM(Finance), HPPTCL, Sangla House, Khalini, Shimla - 171002.
6. Sr. Manager, HPPTCL, Sarabai, Bhunter, District Kullu - 175125 (H. P.)

Enclosures:

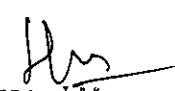
Annexure - ECW1, ECW2 & MC


Dy. General Manager (Contracts)

Page 6 of 6



--- 010


Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

ANNEXURE - ECH-1

NAME OF WORK : CONSTRUCTION OF 33 / 220 KV SUB STATION AT PHOZAL IN KULLU DISTRICT

ERECTION PORTION

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
---------	-------------------------	------	-----	------------	-------------

A POWER TRANSFORMER

1	26.66 / 33.33 MVA, 33 / 220 KV Single Phase Transformer including Bushing, Accessories and First Filling of Oil	Nos.	4		4,82,759
2	Oil Storage Tank	No.	1		
3	Oil Sampling Bottle	Nos.	4		
4	Micro Gas Analyzer / On-line DGA / PPM Meter	Nos.	1		
5	260 KVA, 33 / 0.433 KV Three Phase Transformer including Bushing, Accessories and First Filling of Oil	Nos.	1	1,35,040	1,35,040

SUB TOTAL - A

6,17,799

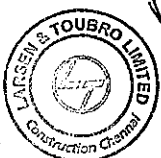
B 245 KV GIS EQUIPMENT

1	245 KV, 1680 A, 50 kA SF ₆ Gas Insulated Transformer Bay Module each comprising of SF ₆ Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, with Surge Arresters (198 KV), SF ₆ Gas Monitoring System for complete Bay, LCC, Three 1 - Phase SF ₆ Ducts and SF ₆ / Oil Bushing to connect to 33 / 220 KV, 26.66 / 33.33 MVA Transformers and Accessories with GIS etc to complete Transformer Bay Module	Nos.	1	5,17,959	5,17,959
---	---	------	---	----------	----------

2	245 KV, 2000 A, 50 kA SF ₆ Gas Insulated Feeder Bay Module each comprising of SF ₆ Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Line	Nos.	2	5,17,959	10,35,918
---	---	------	---	----------	-----------

DSM/Contracts

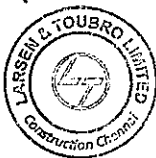
ECH-1



Deelapit

011

Dy. General Manager (Contracts)
 T.P. Power Transmission Corpn. Ltd.
 Barowalia House, Khalini, Shimla-2



Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
---------	-------------------------	------	-----	------------	-------------

Disconnector with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF₆ Gas Monitoring System for complete Bay, LCC, GIS Duct and Air / SF₆ Bushing Termination Enclosure and Accessories with GIS etc to complete Feeder Bay Module

3 245 KV, 4000 A, 50 kA, 3 Single Phase (Isolated) Units SF₆ Gas Insulated, Metal Enclosed Bus Bars each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of the Circuit Breaker Bay Modules Each Bus Bar Set shall be complete with Voltage Transformers complete with Safety Grounding Switch Nos. 2 4,57,323 9,14,646

4 245 KV, 4000 A, 50 kA SF₆ Gas Insulated Bus Coupler Bay Module comprising of SF₆ Gas Insulated Circuit Breaker, Current Transformers, Two Disconnectors with Safety Grounding Switches, SF₆ Gas Monitoring System for complete Bay, LCC etc Nos. 1 5,17,959 5,17,959

5 245 KV, CVT with Junction Box Nos. 6 8,662 51,972

6 198 KV Lightning Arrester with Counter and Leakage Meter Nos. 7 5,197 36,379

SUB TOTAL - B 30,74,833

C 36 KV, 2000 A, 40 kA for 3 sec., SF₆ Gas Insulated, Metal Enclosed BUS BARS each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of the Circuit Breaker Bay Module. Each Bus Bar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch

1 36 KV, 1600 A SF₆ Gas Insulated Feeder Bay Module each comprising of SF₆ Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Line Disconnector Nos. 6 51,974 3,11,844

with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF₆ Gas Monitoring System for complete Bay, LCC, Enclosure and Accessories with GIS etc to complete Feeder Bay Module

DGM (Contracts)

EDW1-2

012

By. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

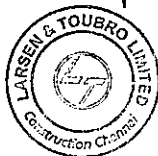
Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
2	35 KV, 2000 A SF ₆ Gas Insulated Bus Coupler Bay comprising of SF ₆ Gas Insulated Circuit Breaker Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, SF ₆ Gas Monitoring System for complete Bus Coupler Panel	Nos.	1	51,974	51,974
3	35 KV, 1600 A SF ₆ Gas Insulated Power Transformer Panel each comprising of SF ₆ Gas Insulated Circuit Breaker, Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, Surge Arrester (30 KV), SF ₆ Gas Monitoring System for complete Power Transformer Panel	Nos.	1	51,974	51,974
4	35 KV, 630 A SF ₆ Gas Insulated 250 KVA, L. T. Transformer Panel each comprising of SF ₆ Gas Insulated Circuit Breaker, Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Disconnect Switch, Surge arrester (30 KV), SF ₆ Gas Monitoring System for complete LT Transformer Panel	Nos.	1	51,974	51,974
SUB TOTAL - C				4,67,786	
D	SUBSTATION AUTOMATION SYSTEM complete including Hardware and Software complete Sub Station Automation System including Hardware and Software for the Sub Station and Remote Control Station alongwith Associated Equipments as per Technical Specification	Ld (9 Bays)	1	1,55,921	1,55,921
BAY CONTROL UNITS					
1	220 KV Bays	Nos.	3	INCLUDED ABOVE	1,55,921
2	33 KV Bays	Nos.	6		
SUB TOTAL - D					1,55,921
E1	220 KV CONTROL AND RELAY PANEL				
1	Circuit Breaker Control Panel				
a)	With Auto Reclose	Nos.	2	17,324	34,648
b)	With Out Auto Reclose	Nos.	3	17,324	51,972
2	Line Protection Panel (Main I + Main II)	Nos.	2	17,324	34,648
DGM (Contracts)					ECMT - 3

013



Deviya

HS
 Dy. General Manager (Contracts)
 T.P. Power Transmission Corpn. Ltd.
 Barowalia House, Khalini, Shimla-2



Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
3	220 KV (Double Bus Bar Protection)	Set	1	17,324	17,324
4	Transformer Protection Panel - H. V. Side including one number for Spare Single Phase Transformer	Nos	2	17,324	34,648
	SUB TOTAL - E1				1,73,240

E2	33 KV CONTROL AND RELAY PANEL				
1	Circuit Breaker Control Panel	Nos.	6	17,324	1,03,944
	a) With Auto Reclose	Nos.	4	17,324	69,296
	b) With Out Auto Reclose	Nos.	6		
2	Line Protection Panel	Nos.	2		
3	Transformer Protection Panel - L. V. Side including one number for Spare Single Phase Transformer	Nos.	2		
	SUB TOTAL - E2				1,73,240

F	PLCC FOR 220 KV LINE FEEDER				
1	2000 A, 0.5 mH / 1.0 mH, 50 kA Line Traps	Nos.	4	13,859	55,436
2	Coupling Device (Phase to Phase)	Nos	4	10,395	41,580
3	HF Cable	LS	2	8,662	17,324
4	Carrier Equipment (for Speech + Protection and for Speech + Data)	Nos	6	10,395	62,370
5	Protection Coupler	Nos	4	10,395	41,580
6	Print Testing Kit	Set	1	10,395	10,395
7	EPBAX (24 / 8) with Telephone Sets	Set	1	10,395	10,395
	SUB TOTAL - F				2,39,080

F.1	FOTE Equipment	Set	1	48,41,813	48,41,813
	SUB TOTAL - F1				48,41,813

G	AIR CONDITIONER AND VENTILATION SYSTEM				
1	Split AC (Capacity - 2T)	Nos	10	17,324	1,73,240
2	Ventilation System for 220 KV & 33 KV GIS Hall	LS	1	23,72,488	23,72,488
	SUB TOTAL - G				25,45,728

ECWT - 4

[Signature]
DGM(Contracts)

[Signature]
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khelini, Shimla-2

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
H LT SWITCHBOARD					
1	415 V Main Switchboard	Nos	1	1,47,259	1,47,259
2	415 V A.C Distribution Board	Nos	1	1,03,947	1,03,947
3	220 V DCD8	Nos	2	86,623	1,73,246
4	48 V, DC DB	Nos	2	86,623	1,73,246
	SUB TOTAL - H				5,97,598
I BATTERIES					
1	220 V, 400 AH	Set	2	86,623	1,73,246
2	48 V, 400 AH	Set	2	51,794	1,03,588
	SUB TOTAL - I				2,76,834
J BATTERY CHARGER SYSTEM					
1	220 V	Set	2	17,324	34,648
2	48 V	Set	2	17,324	34,648
	SUB TOTAL - J				69,296
K DG SET ALONGWITH CONTROL PANEL (100 KVA, 440 V for 220 KV Sub Station)					
	SUB TOTAL - K				86,623
L FIRE PREVENTION AND EXTINGUISHING SYSTEM					
1	Nitrogen Injection Fire Prevention & Extinguishing System for Transformer	Set	4	3,14,718	12,58,872
2	Fire Protection for GIS cum Control Room Building, etc. (Portable type the Extinguishers System)	Lot	1	5,12,322	5,12,322
	SUB TOTAL - L				17,71,194
M ILLUMINATION SYSTEM					

DGM(Contracts)

ECMT-5



By. General Manager (Contracts)
H.P. Power Transmission Corp. Ltd.
Barowalla House, Khalini, Shimla-2



See copy

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1.0	MLDB	Nos.	1	38,870	38,870
2.0	ELDS	Nos.	1	28,504	28,504
3.0	GIS cum Control Room Building Illumination with CFL / Metal Halide Lamps a 2 x 36 Watts Fluorescent Lamp in Industrial Reflector type Fixtures suitable for surface / pendant CGL Cat Ref. IBA1424EB	Nos.	37	1,940	68,080
	b 230 V, 5 / 15 A, Indoor Receptacle 3 Pin type - R1	Nos.	20	648	12,960
	c 15 A, 1 - Ph, 3 Pin Industrial Type Switch Socket Outlet	Nos.	4	778	3,112
	d 32 A, SPN MCB in 2 mm thick Sheet Steel Enclosure with 3 Pin Socket for A.C (indoor)	Nos.	3	1,555	4,665
	e 32 A, SPN MCB in 2 mm thick Sheet Steel Enclosure with 3 Pin Socket for A.C (outdoor)	Nos.	3	2,073	6,219
	f 450 mm Exhaust Fan	Nos.	2	1,684	3,368
	g 450 mm Acid Proof Exhaust Fan (for Battery Room)	Nos.	1	4,146	4,146
	h 1400 mm Ceiling Fans with Electronic Regulator	Nos.	6	1,684	10,104
	i Point Wiring	Nos.	72	1,425	1,02,600
	j Indoor Lighting Panel (ACP - 1 type) as per Technical Specification	Nos.	2	41,461	82,922
	k DC Lighting Panel (DCP type) as per Technical Specification	Nos.	1	41,461	41,461
4.0	220 / 33 KV GIS Building Illumination				
	a 1 x 250 W - Industrial Metal Halide Luminaire CGL Cat ref. No. FAD 1314	Nos.	14	2,073	29,022
	b 1 x 60 W GLS Bulk Head Light Fixture of CGL type 1BH 1110 BC or equivalent	Nos.	8	648	5,184
	c 230 V, 5 / 15 A, Indoor Receptacle 3 Pin type - R1	Nos.	9	648	5,832
	d 32 A, SPN MCB in 2 mm thick Sheet Steel Enclosure with 3 Pin Socket for A.C (indoor)	Nos.	4	1,555	6,220
	e 32 A, SPN MCB in 2 mm thick Sheet Steel Enclosure with 3 Pin Socket (outdoor)	Nos.	4	2,073	8,292
	f 1 x 11 W Portable Battery operated (3 hrs. Backup) CFL Emergency Lamp (MS BPL make)	Nos.	4	2,202	8,808
	g Point Wiring	Nos.	43	1,425	61,275
	h Indoor Lighting Panel (ACP-1 type) as per Technical Specification	Nos.	2	41,461	82,922
	i DC Lighting Panel (DCP type) as per Technical Specification	Nos.	2	41,461	82,922
	j 32 A, TPN MCB in 2 mm thick Sheet Steel Enclosure with 3 Pin Socket (indoor)	Nos.	2	1,684	3,368

ESWH-6

DGM(Contracts)

HWS
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
5.0	Switchyard Lighting				
a	Flood Light Luminaire with 2 x 400 W HPSV / 1+ Lamp - Bajaj cel. BLUE22 CA - R0	Nos.	4	5,163	20,732
b	Lighting JB with 5 nos of Terminal Blocks	Nos.	4	914	3,656
c	250 A Oil Filtration Socket	Nos.	1	6,459	6,459
6.0	Street Lighting (Solar lighting system)				
a	120 W Solar Lighting System for Street Lighting with 9 m height Pole, Inbuilt in long life maintenance free Batteries (Capacity is 12 V, 120 Ah)	Nos.	8	11,660	93,280
7.0	Transformer Area Lighting as per specification				
1 x 70 W, HPSV 240 V, AC Industrial Wall Glass Fixture for pendant mounting with Control Gear Box (BLDVI - 70SV) Lighting JB	Nos.	2	2,073	4,146	
	Nos.	2	914	1,828	
SUB TOTAL - M				8,30,957	
N	Power Cables and Copper Conductor Armoured Control Cables alongwith Lugs, Glands and Straight Joints				
	XLPE POWER CABLE				
1 C X 630 sq.mm.	km	0.75	6,11,931	4,58,948	
Terminations for the above	Nos.	12	1,469	17,628	
1 C X 630 sq.mm.	Nos.	36	2,040	73,440	
3.5 C X 300 sq.mm.					
PVC POWER CABLE (Other than those available in the Contract)					
4 C X 6 sq.mm.	km	0.33	1,10,147	36,349	
2 C X 6 sq.mm.	km	3.15	74,246	2,33,875	
1 C X 150 sq.mm.	km	0.6	2,04,787	1,22,872	
Terminations for the above					
3.5 C X 90 sq.mm.	Nos.	24	1,526	36,624	
3.5 C X 70 sq.mm.	Nos.	24	1,069	25,656	
3.5 C X 35 sq.mm.	Nos.	63	709	44,657	



Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalia House, Khalini, Shimla-2



Seelap Kumar

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	4C X 16 sq. mm.	Nos.	21	384	8,064
	4C X 6 sq. mm.	Nos.	81	310	25,110
	2C X 6 sq. mm.	Nos.	354	318	1,12,572
	1C X 150 sq. mm.	Nos.	60	587	35,220
	HR - FRLS CONTROL CABLE				
	5C X 2.5 sq. mm	km	3	88,749	2,69,247
	27C X 2.5 sq. mm.	km	0.75	2,44,771	1,83,578
	4P 0.75	km	0.3	88,749	26,925
	Terminations for the above				
	2C X 2.5 sq. mm.	Nos.	84	310	26,040
	4C X 2.5 sq. mm.	Nos.	249	384	95,616
	5C X 2.5 sq. mm.	Nos.	516	481	2,48,196
	7C X 2.5 sq. mm.	Nos.	429	548	2,35,092
	10C X 2.5 sq. mm.	Nos.	555	587	3,25,785
	12C X 2.5 sq. mm.	Nos.	93	645	59,985
	14C X 2.5 sq. mm.	Nos.	60	791	47,460
	16C X 2.5 sq. mm.	Nos.	78	881	68,718
	19C X 2.5 sq. mm.	Nos.	78	1,118	87,204
	27C X 2.5 sq. mm.	Nos.	48	1,399	67,152
	4P 0.75	Nos.	3	402	1,206
	2C X 4 sq. mm.	Nos.	81	603	48,843
	4C X 4 sq. mm.	Nos.	63	481	30,303
	7C X 4 sq. mm.	Nos.	54	880	47,520
	SUB TOTAL - N				30,99,835

0 33 HV XLPE POWER CABLE AND ACCESSORIES
1 XLPE POWER CABLE

Hm
DGM(Contracts)

ECM-1

Hm
By. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
2	3.5 C x 300 sq. mm.	km	0.75	1,03,236	77,427
	PVC POWER CABLE				
	3.5 C x 80 sq. mm.	km	0.3	79,849	23,955
	3.5 C x 70 sq. mm.	km	0.75	79,849	59,887
	3.5 C x 35 sq. mm.	km	0.3	56,459	16,938
3	4 C x 16 sq. mm.	km	0.75	56,459	42,344
	4 C x 4 sq. mm.	km	1.5	33,072	49,608
	HR FRLS CONTROL CABLE				
	2 C X 2.5 sq. mm.	km	1.5	31,512	47,268
	4 C X 2.5 sq. mm.	km	3	31,512	94,536
4	7 C X 2.5 sq. mm.	km	1.5	35,151	52,727
	10 C X 2.5 sq. mm.	km	1.125	40,608	45,684
	12 C X 2.5 sq. mm.	km	0.75	40,608	30,456
	16 C X 2.5 sq. mm.	km	0.75	47,971	35,978
	19 C X 2.5 sq. mm.	km	0.3	49,703	14,911
	2 C X 4 sq. mm.	km	1.5	34,632	51,948
	4 C X 4 sq. mm.	km	1.5	40,867	61,301
	7 C X 4 sq. mm.	km	1.5	60,617	90,926
	36 KV XLPE CABLE				
	a) 33 KV XLPE Cable for connecting Transformer to 33 KV GIS of size 1 x 630 sq. mm.	km	1	1,80,130	1,80,130
P	(Three Cables with one Spare Cable in each Circuit)				
	b) 33 KV Indoor Termination Suitable for above Cable	Nos	4	3,514	14,056
	c) 33 KV Outdoor Termination Suitable for above Cable	Nos	4	3,514	14,056
SUB TOTAL - 0					10,04,134

GROUNDING / EARTHING SYSTEM

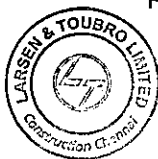
DGM(Contracts)

ECM-3



Deelapet

Hus
 Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalia House, Khalini, Shimla-2



Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
a)	40 mm MS Rod for Earthing (*)				
	40 mm MS Rod for Earthing	km	4.797	3,69,511	17,24,574
	75 x 12 G. S. Flat	km	0.364	2,98,577	1,08,882
	50 x 6 G. S. Flat	km	0.091	2,62,017	23,844
	50 x 6 M. S. Flat	km	0.208	2,62,017	54,500
	Cleat type Clamp to suit 75 x 12 G. S. Flat	Nos	79.3	158	12,529
	3 Mtr long, 40 mm dia M. S. Pipe Earth Electrode with Test Link and without Pit	Nos	22.1	2,084	46,056
	3 Mtr long, 40 mm dia Earth Rod Electrode with untreated Pit	Nos	28.9	1,475	44,103
	3 Mtr long, 20 mm dia Earth Rod Electrode without Pit	Nos	10.4	829	8,622
	3 Mtr long, 40 mm dia GI Pipe Earth Electrode	Nos	3.9	931	3,631
	Lightning Protection				
	7/3.66 mm GS Earth Wire	km	0.299	21,351	6,384
	Cleat Clamp on Structure to suit 7/3.66 mm GS Earth Wire	No	59.8	165	9,867
	Pad Clamp on Structure to suit 7/3.66 mm Earth Wire and 75 x 12 GS Flat	No	5.2	797	4,144
	25 x 3 GI Flat	km	0.568	27,420	16,397
	1.5 Mtr. long GI Spike	Nos	10.4	402	4,181
	Test Links	Nos	10.4	165	1,716
	SUB TOTAL - P				20,69,229

Q STEEL STRUCTURES FOR TOWERS, BEAMS AND EQUIPMENT

Tower and Beams
220 KV Tower

CA Type	kgs.	7,650	11.58	88,587
BG1 (WITH DEV) - 16 m	kgs.	3,232	11.58	37,427
Lighting - cum - Lightning Mast	kgs.	4,750	11.58	55,008
Tower - 3T	kgs.	4,599	11.58	53,256
Girder - 3G	kgs.	1,374	11.58	15,911
DGM (Contracts)				ECW-10

33 KV Tower

Huz
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
---------	-------------------------	------	-----	------------	-------------

Equipment

Standard Structures for 220 kV Equipments

CVT	kg.	990	12.79	12,662
WT	kg.	2,200	12.79	28,138
SA	kg.	942	12.79	12,048
BPI	kg.	960	12.79	12,278
SUB TOTAL - Q				3,15,315

R EOT CRANE

a.	3.5 T for 220 kV GIS ROOM	Set	1	2,06,215	2,06,215
b.	2.5 T for 33 kV GIS ROOM	Set	1	1,54,621	1,54,621
c.	Moveable ladder of suitable Capacity for 220 kV & 33 kV GIS Room	Nos	2	48,418	96,836
SUB TOTAL - R					4,57,872

S

Insulator Strings / Disc Insulators, Hardware, Conductor, Bus Bar Material, Cable Trays, Clamps, Connectors, Including Equipment Connectors, Pipes for Equipments & Lighting, all Accessories etc

220 kV CLAMPS & CONNECTORS

Terminal Connector on 26.56 / 33.33 MVA Transformer SF ₆ to Oil bushing to suit GIS Bus Duct	Nos.	4	3,047	12,188
Terminal Connector on 198 kV LA to suit 1 or 2 x MOOSE / ZEBRA ACSR	Nos.	6	2,011	12,066
Terminal Connector on 245 kV CVT to suit 1 or 2 x MOOSE / ZEBRA ACSR	Nos.	6	1,536	9,216
Terminal Connector on Wave Trap to suit 1 or 2 x MOOSE / ZEBRA ACSR	Nos.	8	1,359	10,872
Terminal Connector on 220 kV BPI to suit 1 or 2 x MOOSE / ZEBRA ACSR	Nos.	6	1,737	10,422
Tee Connectors to suit 1 or 2 x MOOSE / ZEBRA ACSR on both ways	Nos.	12	1,846	22,152
Suspension Hardware Assembly along with Insulators (220 / 33 kV side)	Lot	2	25,341	50,682

33 kV CLAMPS & CONNECTORS

Terminal Connector on 30 kV Lightning Arrestor, to suit 1 or 2 x MOOSE / WOLF ACSR Conductor	Nos.	18	1,079	19,422
--	------	----	-------	--------

DGM(Contracts)

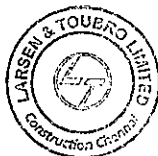
ECM-11



Deviappan

Hs

Dy. General Manager (Contracts)
N.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



Deviyapuri

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	Terminal Connector on 26.66 / 33.33 MVA Transformer LV Bushing to suit 1 x MOOSE	Nos.	4	1,261	5,044
	ACSR Conductor				
	Terminal Connector on Cable Sealing End to suit 1 x MOOSE ACSR Conductor	Nos.	5	905	4,525
	Terminal Connector to suit 1 C x 630 sq. mm. XLPE Cable Sealing End	Nos.	6	1,536	9,216
	BUS BAR MATERIALS				
	MOOSE / ZEBRA / WOLF ACSR Conductor	km	0.1	1,76,709	17,671
	CABLE TRAYS				
	800 mm Wide Perforated Tray	km	0.8	1,03,588	82,870
	300 mm Wide Perforated Tray	km	0.12	73,121	8,775
	150 mm Wide Perforated Tray	km	0.12	42,654	5,118
	Structural Steel for above	MT	3	85,308	2,55,924
	PVC Pipes:				
	50 mm dia	km	0.4	67,027	26,811
	Sump Pumps				
	5 HP	Nos.	1	67,027	67,027
	0.5 HP	Nos.	4	11,577	46,308
	220 KV Bus Post Insulators	Nos.	6	36,562	2,19,372
	SUB TOTAL - S				8,95,681
	TOTAL - 1 = SUB TOTAL A to S				2,37,63,949

NEW ITEMS

- A-1 220 kV Single Phase Breaker Bay Module for Spare Transformer
- A-2 For Additional Bays - 245 kV, 4000 A, 50 kA, 3 Single Phase (Isolated) Units SF₆ Gas Insulated, Metal Enclosed Bus Bars each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of Circuit Breaker Bay Module. Each Bus Bar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch etc.

[Signature]
DGM(Contracts)

ECWA-12

[Signature]
By, General Manager (Contracts)
L.T.E. Power Transmission Corpn. Ltd.
Barowalla House, Khalini, Shimla-2

Sr. No.	DESCRIPTION OF MATERIAL	UNIT	QTY	UNIT PRICE	TOTAL PRICE
---------	-------------------------	------	-----	------------	-------------

A-3	1 - Phase SF ₆ Duct to connect to 220 / 33 KV, 26.66 / 33.33 MVA Transformer / Lines with GIS etc (only the Additional quantity over and above 85.5 to be paid).	Mtr.	Unit Rate	15,500	
B-1	33 KV Single Phase Breaker Bay Module for Spare Transformer	Set	1	22,500	22,500
	36 KV OUTDOOR EQUIPMENT				
C-1	30 KV, Single Phase, Surge Arrestors with Surge Counter, Leakage Meter and Junction Box	Nos.	19	2,650	50,350
C-2	36 KV, Line Isolator Switch with Earth Switch	Set	6	16,500	99,000
D	SUBSTATION AUTOMATION SYSTEM	Lst	1	1,21,272	1,21,272
	Complete Sub Station Automation System including Hardware and Software for the Sub Station and Remote Control Station alongwith Associated Equipments	(2-5 days)			
E	For Additional Feeder - 220 KV C & R Panel for Bus Bar Protection Panel		1	5,717	5,717
F	36 KV XLPE CABLE				
I	33 KV XLPE Cable for connecting Transformer to 33 KV GIS of size 1 x 1000 sq.mm Aluminium	Mtr.	Unit Rate	450	
II	33 KV Indoor Termination Suitable for above Cable suitable at GIS conforming to IEC: 60899	Nos	Unit Rate	24,000	
III	33 KV Outdoor Termination Suitable for above Cable	Nos	Unit Rate	11,500	
	TOTAL OF NEW ITEMS				6,58,536

GRAND TOTAL FOR ERECTION EGM = TOTAL (I) + TOTAL OF NEW ITEMS

2,44,22,485

NOTE:

- The above quantities are TENTATIVE which shall be finalised during detailed engineering to complete the Scope of Work and successful commissioning of the Sub Station.
- The Payment shall be made on Unit Rates for the quantities actually measured at Site and as approved Bill of Material.
- Size of 33 KV XLPE Cable alongwith Terminations shall be finalised during detailed engineering and the payment thereof shall be made on the Unit Rates specified above for the same.

DGM(Contracts)

EGM - 13



Debagjit

AS
Dy. General Manager (Contracts)
L.P. Power Transmission Corp. Ltd.
Barowalia House, Khalini, Shimla-2



ANNEXURE - ECW2

NAME OF WORK : CONSTRUCTION OF 33 / 220 KV SUB STATION AT PHOZAL IN KULLU DISTRICT

CIVIL WORKS PORTION

Sr. No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
CIVIL WORKS					
1.0	Soil Investigation	LS	1	3,65,605	3,65,605
2.0	Excavation & Filling for Land Development.				
3.0	Retaining Wall (Qty as per Annex.)				
i	Excavation & Backfilling	cu.m.	126	525	66,150
ii	PCC 1:3:6	cu.m.	16	4,604	73,664
iii	RCC M20	cu.m.	11	7,147	78,617
iv	Uncoursed Rubble Masonry	cu.m.	146	3,013	4,39,898
v	Reinforcement	kg	1120	64,011	71,692
vi	Structural Steel	kg	168	73,923	12,419
4.0	Tower & Equipment Foundation, Transformer Foundation, Fire Wall, Cable Trenches, including all of Crossings & all Metallic Works including Steel Racks for Cables, Cable Supports, MS Angle Edging and RCC Covers with lifting arrangements.				
a)	Tower (Qty as per Annex.)				
i	Excavation & Backfilling	cu.m.	975.55	525	5,12,164
ii	RCC M20	cu.m.	182.244	7,147	13,02,498
iii	Reinforcement	kg	21869.346	64,011	13,99,879
iv	PCC 1:4:8	cu.m.	20.962	4,043	84,749
b)	Equipment Structures (Qty as per Annex.)				
i	Excavation & Backfilling	cu.m.	212.236	525	1,11,424

ECW2/11

Handwritten signature and stamp: DGM(Contracts)

Handwritten signature and stamp: Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Sr. No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
b	RCC M20	cum.	44.88	7.147	3,19,328
	Reinforcement	kg	2293.23	64.011	1,47,176
	PCC 1:4:8	cum.	7.446	4.043	30,104
c)	Transformer Foundation including Fire Wall (Qty as per Annex)				
	Excavation & Backfilling	cum.	841.5	525	4,41,788
	RCC M20	cum.	280.64	7.147	1,99,279
	Reinforcement	kg	18393.84	64.011	11,77,408
	Structural Steel	kg	7734.284	73.923	5,71,741
	PCC 1:4:8	cum.	70.744	4.043	2,86,018
d)	40 mm Metal Filling	cum.	104.256	1.728	1,80,154
	Cable Trenches including all type of Crossings (Qty as per Annex)				
	Excavation & Backfilling	cum.	1253.172	525	6,57,915
	RCC M20	cum.	270.126	7.147	1,93,091
	Reinforcement	kg	19994.925	64.011	12,79,885
	Structural Steel	kg	23301.348	73.923	17,22,506
5	PCC 1:4:8	cum.	52.641	4.043	2,12,828
	Chequered Plate 6 mm Thk.	sq.m.	767.964	3.990	3,06,476
	PCC 1:2:4	cum.	9.495	5.183	49,213
	300 dia PVC Pipe	RM	11.189	650	7,280
		RM	150	2,540	3,81,000
		sq.m.	4170	259	10,80,656
7.0 Cement Concrete Roads including all types of Crossings.					
a)	5.00 metres wide Road cum Rail Track*	RM	41	35,532	14,56,816
b)	3.5 metres wide	RM	81	8,890	7,20,038

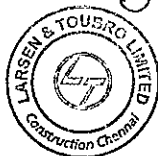
DGM(Contracts)

EDM212



Dy. General Manager (Contracts)
M.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

025



Sr. No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
8.0	Storm Water Drainage including Culverts	RM	265	2,487	6,59,042
9.0	Security Fencing along with Gates and Security Room.	RM	182	5,803	10,19,790
10.0	Control Room Building cum 220 KV GIS Room along with Battery Room, PLCC Room, SCADA Room Offices and Stores.				
a) - I	220 KV GIS Room	sq.m.	193.155	29,330	56,65,236
a) - II	Control Room Building along with Battery Room, PLCC Room, SCADA Room, Offices, and Stores				
	Ground Floor	sq.m.	206.9	23,454	48,54,702
	First Floor	sq.m.	206.9	17,598	36,41,026
b)	33 KV GIS Building.	sq.m.	63.963	37,952	24,27,524
11.0	DG Set Outdoor Silent type.	LS	1	1,31,234	1,31,234
12.0	Store Shed	sq.m.	150	16,125	24,18,728
13.0	Transformer Oil Drainage System	LS	1	Included above	

GRAND TOTAL FOR ERECTION ECW2

4,29,15,463

NOTE:

- 1 The above quantities are TENTATIVE which shall be finalised during detailed engineering to complete the Scope of Work and successful commissioning of the Sub Station.
- 2 The Payment shall be made on Unit Rates for the quantities actually measured at Site and as approved Bill of Material.
- 3 Size of 33 KV XLPE Cable alongwith Terminations shall be finalised during detailed engineering and the payment thereof shall be made on the Unit Rates specified above for the same.

[Signature]
DGM(Contracts)

DGM(Contracts)

EDW/13

[Signature]
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

ANNEXURE - MC

ANNUAL MAINTENANCE CHARGES

Sl. No.	DESCRIPTION	UNIT	QTY.	TOTAL CHARGES (Rs.)
1	2	3	4	5
1	Annual Maintenance charges of Sub-Station for the First Year	LS		1,19,74,232

DGM(Contracts)

DGM(Contracts)

MC1

027



Dehoff

By: General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

SECTION -III




Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



HP-POWER TRANSMISSION CORPORATION LIMITED

(A State Government Undertaking)

BAROWALIAS HOUSE, KHALINI, SHIMLA - 171002

(Telefax: 0177 - 2626284)

REFERENCE: HPPTCL / DGMC / L & T - ERECTION / 2010 - ~~5099~~ 5106 DATED: 23-12-10

TO,

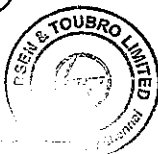
✓ M/S LARSEN & TOUBRO LIMITED,
ENGINEERING CONSTRUCTION & CONTRACTS DIVISION,
MOUNT POONAMALLEE ROAD, MANAPAKKAM,
P. B. No. 979, CHENNAI - 600089
FAX No.: 044 - 22493317; 044 - 22526345

SUBJECT: LETTER OF AWARD (LOA) FOR CIVIL WORKS AND ERECTION OF EQUIPMENT / MATERIALS FOR CONSTRUCTION OF 220 / 33 KV PALCHAN GIS SUBSTATION AGAINST TENDER DOCUMENT No.: DGMC / PALCHAN SUBSTATION / 2 / 2009 (SECOND CONTRACT)

REFERENCE: This has reference to the following: -

- 1) This office Tender Document No.: DGMC / PALCHAN SUBSTATION / 2 / 2009
- 2) Your Offer No.: LTCD / EI&C / HPPTCL - PALCHAN / NJ / BID / 01 dated 18.12.2009
- 3) Your Price Letter No.: LTCD / EI&C / HPPTCL - PALCHAN / NJ / BID / 04 dated 18.12.2009
- 4) Your Letter No.: LTCD / EIC / HPPTCL / NJ / PALCHAN / 1603 dated 16th March, 2010
- 5) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID04 dated 14th April, 2010
- 6) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID05 dated 12th July, 2010
- 7) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ dated 29th July, 2010
- 8) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID06 dated 17th August, 2010
- 9) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID07 dated 30th August, 2010
- 10) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / KRJ / 2109 dated 21st September, 2010
- 11) This Office Letter of Intent (LOI) No.: HPPTCL / DGMC / L & T - SUPPLY / 2010-4414 / 17 dated: 19.10.2010

Deelapett



029

[Signature]
By: General Manager (Contracts)
HP- Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

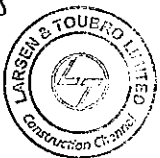
X-12) Your Letter No.: LTCD / EI&C / KRJ / PALCHAN / 02 dated 22nd October, 2010

Sir,

I have been directed to place Letter of Award (LOA) on you for Civil Works and Erection of Equipment / Material (also referred to as 'Second Contract') required for Construction of 220 / 33 kV GIS Sub Station at Palchan in Kullu District of Himachal Pradesh amounting to Rs. 5,16,15,947.00 (Rupees Five Crore Sixteen Lac Fifteen Thousand Nine Hundred Forty Seven) only. The Scope of Work under this Contract shall also include all such Items, Equipment, and Materials, which are not specifically mentioned in the Bidding Documents and / or the Bid Proposal but are necessary for successful completion of the Scope of Work under the Contract unless otherwise specifically excluded in the Bidding Documents and / or this Letter of Award.

This 'Second Contract' is being awarded on you as per the Bid Proposal submitted and the Terms and Conditions of the Tender Document No.: DGMC / PALCHAN SUBSTATION / 2 / 2009 accepted by you. This Contract includes performance of all other activities including Inland Transportation, Insurance, Delivery on F. O. R. Destination Site(s) basis, Loading, Unloading, Handling, Storage (including watch and ward), Erection including associated Civil Works, Testing and Commissioning of all Equipment and Materials, including the Equipment and Material supplied under the 'First Contract', including Civil Works, Training etc for complete execution of Construction of 220 / 33 kV GIS Sub Station at Palchan in Kullu ON single source responsibility. Supply, Erection and Commissioning of all Equipment / Materials of all such Items, which are not specifically mentioned but are incidental and necessary for successful completion and commissioning of 220 / 33 kV GIS Sub Station at Palchan in Kullu District of Himachal Pradesh, is also covered in the Scope of this Contract.

1. The detailed Civil Works and Erection of Equipment / Material alongwith their tentative quantities and Unit Rates under the subject LOA are given in Annexure 2 to this Letter of Award.
2. The Scope of Work under this Contract shall also include all such Items, Equipment, Materials, AND Civil Works, which are not specifically mentioned in the Bidding Documents and / or the Bid Proposal but are necessary for successful completion of the Scope of Work under the Contract, unless otherwise specifically excluded in the Bidding Documents and / or this Letter of Intent.
3. The Work under this LOA shall be performed by you strictly in line with the Bidding Documents except as agreed vide correspondence under reference and as specifically amended / modified in this LOA and mentioned herein below and in Annexure 2 to this LOA.
4. It is expressly understood by you that any breach under the 'First Contract' shall automatically be deemed as breach of this Contract and any such breach or occurrence giving us a right to terminate the 'First Contract' and / or recover damages under that Contract shall give us right to terminate this Contract and / or recover damages under this Contract as well. However, such breach or occurrence in the 'First Contract' shall not automatically relieve you of any of your obligations under this Contract. It is expressly understood and agreed by you that the Equipment / Materials supplied under this 'First Contract', when erected, tested, and commissioned shall give satisfactory performance in accordance with the Bidding Document.
5. It will be your responsibility to take delivery, unload, and store the Equipment / Materials to be supplied by you under 'First Contract' and execute an Indemnity Bond. You shall execute Indemnity



030

By: General Manager (Contracts)
Power Transmission Corps. Ltd.
Barowalia House, Khalini, Shimla-2

Bond in favour of HPPTCL against loss, damage and any risks involved for the full value of the Equipment / Materials. This Indemnity Bond shall be furnished before commencement of the Supplies at Site and shall be valid till the testing and commissioning and handing over of the complete Construction of 220 KV GIS Palchan Sub Station as per Bidding Documents.

6. All the responsibilities, guarantees, warranties for the successful performance of the Project and all the obligations as per the provisions of this Contract shall also be applicable to the 'First Contract'.
7. The Maintenance of the Sub Station for the first year shall be carried out by your Firm for which Annual Charges amounting to Rs. 1,19,74,232.00 (Rupees One Crore Nineteen Lac Seventy Four Thousand Two Hundred Thirty Two) only shall be paid at the end of the Maintenance Period.
8. **CONTRACT PRICE:**
- 8.1 The Contract Price for the complete Scope of Work under this LOA is as per the following break up:

Sr. No.	PRICE COMPONENT	VALUE in Rupees
1	Civil Works and Erection of Equipment / Material as per Annexure 2	5,16,15,947
2	Annual Charges for Maintenance of Sub Station for the first year	1,19,74,232
	TOTAL CONTRACT PRICE	6,35,90,179

Rupees Six Crore Thirty Five Lac Ninety Thousand One Hundred Seventy Nine only

- 8.2 Further breakup of the Contract Price for the purpose of on account payment is given at Annexure 2 of this LOA.
- 8.3 Notwithstanding the breakup of the Contract Price, the Contract shall at all times be construed as a single source responsibility Contract and any breach in any part of the Contract shall be treated as breach of the entire Contract.
- 8.4 The Price of Items indicated at Annexure 2 for, which quantities are assessed by you and are on lump sum basis, shall remain constant irrespective of any increase or decrease in quantities of any Items, addition of any new item or deletion of any existing item for completion of Scope of Work as per Technical Specification unless there is any change of Scope of Work by the Purchaser / Owner.
In case, the actual requirement of quantity of such Items is more than the quantities identified in the LOA / Contract Agreement / approved BOQ / Billing break up or some additional Items are required for the successful completion of the Scope of Work as per the Technical Specification, such additional Items / quantities shall be supplied by you without any additional cost to HPPTCL. Further, in case actual requirement of quantities for successful completion of Scope of Work is less than the quantities identified in the LOA / Contract Agreement / approved BOQ / Billing break up or some existing Items are not required, the lump sum price for these Items / Civil Works shall remain unchanged and no deduction shall be made from the lump sum price due to such reduction of quantities.



031

[Signature]
 Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalla House, Khalini, Shimla-2

In case quantities of these Items supplied at Site are in excess of that required for successful completion of Scope of Work as detailed in the Bidding Documents, such additional quantities shall be your property and you shall be allowed to take back the same from the Site for which no deduction from lump sum price shall be made. It shall, however, be your responsibility to pay all statutory taxes, duties, and levies to the concerned authorities for such surplus material, which would otherwise have been lawfully payable. You shall submit an indemnity bond to keep HPPTCL harmless from any such liability, before release of such material to you by HPPTCL.

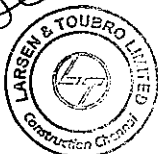
9. TAXES AND DUTIES:

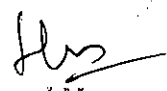
- 9.1 The Contract Price is inclusive of all taxes and duties such as Excise Duty, Sales Tax / VAT, Service Tax for all Materials required for Civil Works and Erection of Equipment / Materials under the Contract and no claim on this behalf will be entertained by HPPTCL. Further any such taxes and duties as aforesaid payable including statutory variation thereon will be to your account and no claim on this behalf will be entertained by HPPTCL.
- 9.2 The above Contract Price is inclusive of Service Tax and Surcharge / Cess etc on it as applicable and HPPTCL shall not entertain any claim whatsoever in this regard.
- 9.3 The above Contract price is inclusive of Sales Tax on Works Contract, Turnover Tax or any other similar taxes under the Sales Tax Act. HPPTCL shall not entertain any claim whatsoever for sales tax on Works Contract on the above Contract Price during the execution of the Contract.
- 9.4 HPPTCL shall be entitled to deduct Income Tax, Surcharge on Income Tax and other Corporate Taxes / other Taxes at source in accordance with the provisions of the Income Tax / other Laws as applicable from time to time. TDS so deducted shall be deposited with the relevant tax Authority and necessary TDS Certificate shall be issued to you by HPPTCL.

10. TERMS OF PAYMENT:

- 8.1 The Contractor shall submit an application for *Interim Payment* in quadruplicate to the Engineer at the end of each month in a Form approved by the Engineer. The application shall include the following items, as applicable, which shall be taken in to account in the sequence listed.
- a) The Estimated Contract Value in Indian Rupees of the Permanent Works executed up to the end of the month in question, obtained by applying the Base Unit Rates and Prices to the quantities measured by the Engineer pursuant to Clause 4.28 of Part - 4 of the Tendering Document.
- b) The Estimated Contract Value of the Permanent Works obtained as above executed up to the end of the previous month.
- c) The Estimated Contract Value at Base Unit Rates and Prices, expressed in Indian Rupees, of the Permanent Works for the month in question obtained by deducting b) from a).
- d) Any amount reflecting any changes in cost and legislation pursuant to Clause 3.37 of Part - 3 to the Tendering Document.
- e) Any amount to be deducted on account of the Advance Loan Repayment under the provisions set forth in Sub - Clause 5.21.4 of the Tendering Document and
- f) Any other sum to which the Contractor may be entitled under the Contract.

Deelaypart




Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

8.2 Within 30 days of receipt of the said application for Interim Payment, it shall be approved or amended such that, in the Engineer's opinion, the certificate reflects the amount due to the Contractor in accordance with the Contract. In cases where there is a difference of opinion as to the value of any item, the Engineer's decision shall prevail. When the Engineer has determined the amount due to the Contractor, he shall issue to the Purchaser and the Contractor a certificate hereinafter called 'Interim Payment Certificate' certifying the amount due to the Contractor and this payment shall be released either by the Engineer or by the Central Payment Cell of the Purchaser. The Engineers shall release 100 % Payment towards Erection within 30 days after the Verification / Measurement of Works. However, in case the Payment is delayed beyond 30 days due to one or the other reason no interest for the delayed period shall be admissible.

8.3 No Interim Payment shall be issued for a sum less than 2 percent of the Estimated Contract Price.

8.4 No Idling Charges arising on whatsoever account, shall be payable by the Purchaser to the Contractor.

8.5 If the Contractor has received any Over Payments by mistake or if any amounts are due to the HPPTCL due to any other reason, when it is not possible to recover such amounts under the Contract, the HPPTCL reserves the right to collect the same from any other amounts and / or Bank Guarantee given by the Company due to or with the HPPTCL.

8.6 When the Supplier does not at any time, fulfill his obligations in replacing / rectifying etc. of the Damaged / Defective Materials in part or whole promptly to the satisfaction of the Engineer, the Engineer reserves the right not to accept the Bills against subsequent dispatches made by the Supplier and only the Supplier will be responsible for any Demurrages, Wharflages or Damages occurring to consignment so dispatched. The Supplier shall invariably submit a guarantee on the Bill itself to the effect that if the Test Certificates, wherever necessary for the Materials or Goods, are not approved before payment become due, such Test Certificates will be furnished in due course, and if they are not accepted or not satisfactory, all payments received for the Materials or Goods shall be refunded in full by the Supplier.

11. QUANTITY VARIATION:

11.1 The quantity variation shall be applicable in line with the provision of Clause No.: 2.39 (Purchaser's Right to Vary Quantities at Time of Award), Section 2, ITB and Clause No.: 3.23 (Variation), Section 3, GCC of Volume 1 of the Bidding Documents.

11.2 Any variation in the quantity of the Items for which quantities have been assessed and indicated by you and the quantities subsequently arrived at while approving the Bill of Quantities / Billing break up of lump sum / lot / set of quantities as specified in Annexure 1 of this Letter of Award shall be to your account, unless there is change in the Scope of Work by us.

11.3 HPPTCL reserves the right to increase or decrease upto 20 % (Twenty percent) of the Contract Value, the quantity of different Items by way of suitable amendments to the Contract, without any change in Unit Price and / or other terms and conditions during the execution of the Contract. However, the quantities of the individual Item may vary up to any extent without any change in Unit Price or other Conditions.

Deviyank


033

HV
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

12. PRICE ADJUSTMENT:

All Price Components under this Letter of Award shall be FIRM during the entire execution of the Contract and no Price Variation whatsoever shall be applicable.

13. TIME SCHEDULE OF CONTRACT:

13.1 The basic consideration and the essence of the Contract is strict adherence to the Time Schedule of the Contract. You shall so organise your resources and perform your work as to complete successful testing and commissioning of the GIS Palchan Sub Station covered under the subject Contract within 8 (eight) months from the date of issue of this Contract and the same shall be applicable for all contractual purposes.

13.2 You shall develop and furnish a detailed Schedule in the form of a Bar Chart indicating relating to allied Civil Works and Erection of all the Equipment and Materials covered under this Contract within 15 days of this Letter of Award.

13.3 For the purpose of levy of Liquidated Damages for delay, the time for completion of work of construction, testing and successful commissioning of 220 / 33 kV GIS Sub Station at Palchan shall be reckoned as 8 months from the date of LOA.

14. STAGE PENALTY:

To ensure that you start the Work immediately after signing of the Contract, the following Minimum Progress of Work, in respect of Supply of Equipment against Supply Contract will have to be achieved by you in terms of Financial Values:-

PERIOD STARTING FROM SIGNING THE CONTRACT	FINANCIAL ACHIEVEMENT INCLUDING SUPPLY OF EQUIPMENT
Within 3 (Three) months	10 % of the Contract Value
Within 5 (Five) months	40 % of the Contract Value
Within 6 (Six) months	60 % of the Contract Value

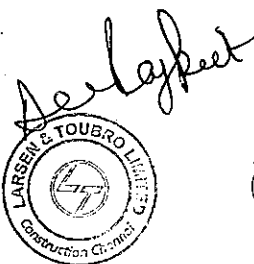
You shall ensure the completion of Supply for the above values, failing which the Stage Penalty @ ½ % per week or part thereof for the amount equal to shortfall in progress achieved will be levied for the period starting from the due date of achievement of above targets.

The Stage Penalty shall be calculated in number of days of shortfall.

The achievement of target will be the date on which the delivery of equipment and material at Site as indicated on the Bill / Invoice is completed by you.

However, the Total Amount of Stage Penalty plus Liquidated Damages leviable for non - completion of Sub Station in time will not exceed 15 % of the Contract Value of the Sub Station not commissioned in time in any case.

The Stage Penalty levied shall be reviewed on completion of the Work to the extent that where the Work as a whole is completed within the stipulated Completion Period or the Total Delay in Commissioning of the Substation is less than 2 (Two) Weeks, no Stage Penalty shall be chargeable and the Stage Penalty already charged for the delay in completion of Individual Stage, if any shall be refundable to you through the Bill payable on completion of the Work.



Dy. General Manager (Contracts)
N. A. Power Transmission Corpn. Ltd,
Baiowalia House, Khalini, Shimla-2

15. INCENTIVE:

As the Work is of urgent nature and its timely commissioning is of utmost importance to evacuate the power being generated by various IPPs, advanced commissioning of this 220 KV GIS Palchan Sub Station will be appreciated and an Incentive @ 0.25 % of the Contracted Amount per week counted backward from the Contracted Completion Date shall be paid to you. It is clarified that Part of Week shall not be counted for any incentive.

16. LIQUIDATED DAMAGES (LD) FOR DELAY:

16.1 If you fail to successfully complete the Commissioning of the Sub Station within the Time Schedule stipulated (8 months) under the Contract, you shall pay to HPPTCL as Liquidated Damages and not as a penalty, a sum of one half of one percent (0.5 %) of the Contract Price for each calendar week or part thereof of delay.

16.2 Equipment and Materials shall be deemed to have been delivered only when all its Components, Parts, and Spares are also delivered. If certain Components, Parts, or Spares are not delivered in time, the Equipment and Materials will be considered as delayed until such time the same are also delivered.

16.3 The Total Amount of Liquidated Damages for delay under the Contract shall be subject to a Maximum of 10 % of the Contract Price.

17. MOBILISATION ADVANCE:

On your request, HPPTCL will make Mobilisation Advance to you for the cost of mobilisation in respect of the Works in a lump sum equivalent to 10 % of the amount of Contract Price within 30 days in Indian Rupees as provided in the Contract. The interest @ 12 % per annum shall be charged on the Mobilisation Advance as per standard Terms and Conditions of the HPPTCL. The accrual of interest will start from the date of release of advance. Payment of the Mobilisation Advance will be due under separate certification by HPPTCL after fulfilment of following conditions:

- i) Execution of CONTRACT AGREEMENT.
- ii) Submission of the Performance Security.
- iii) Submission of a Bank Guarantee by a Scheduled / Nationalised Bank of an amount equal to the Advance Loan, such Bank Guarantee shall remain effective until the Advance Loan has been completely repaid by you out of current earnings under the Contract and certified accordingly by the Engineer.

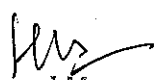
You will use the Mobilisation Advance exclusively for mobilisation expenditures, including the acquisition of Constructional Plant in connection with the Works. Should you misappropriate any portion of the Advance Loan, it shall become due and payable immediately, and no further loan will be made to you thereafter.

18. SIGNING OF CONTRACT:

You shall execute a Contract Agreement at the office HPPTCL, on the Terms and Conditions envisaged in the Tender Documents and this detailed Letter of Award, within 30 (Thirty) calendar days of the receipt of Notification of this LOA. It is a legitimate obligation of you to execute and to



035


Dy. General Manager (Contracts)
H.P. Power Transmission Corpn, Ltd.
Deviyolia House, Khalini, Shimla-2

stamp the Contract, in accordance with the Indian Stamp Act and to supply Six Copies of Contract Drawings, Technical Particulars as finally approved by HPPTCL and other Literature and Instruction Books regarding Handling, Use and Maintenance of Equipment / Material. The cost of all these and such other Items have been included in the Prices and you will not be entitled to any extra payment on these accounts. However, non - execution of the Contract Agreement by you shall not absolve you of the responsibility of the faithful execution of the Contract

19. PERFORMANCE SECURITY:

19.1 Within 30 (Thirty) days of the receipt of this LOA, you are required to furnish the Contract Performance Security, in the Performance Security Form provided in the Bidding Documents or any other Form acceptable to HPPTCL. The Performance Security amount shall be equal to 10 % of the Total Contract Price. It shall guarantee the faithful performance of the Contract in accordance with the Terms, and Conditions specified in Tender Documents. The Guarantee shall be valid up to 120 days after the end of Warranty Period.

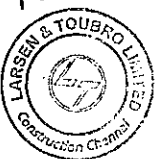
19.2 In the event of any change in the Contract Price, the Performance Security shall be adjusted only against specific advice from HPPTCL. The Performance Security shall be paid to HPPTCL on first demand without conditions or proof.

20. GUARANTEE:

You shall Warrant that the Equipment shall be New, Unused and in accordance with the Contract documents and free from defects in Material and Workmanship for a period of 18 months from the date of Taking Over by HPPTCL or 24 months from the date of commissioning, whichever is earlier. Your liability shall be limited to replacement of any defective part in the Equipment, under normal use and arising solely from faulty design, Material and / or Workmanship, provided always that such defective parts are repairable at Site, and are not in the mean time essential in the Commercial use of the Equipment. Such replacement / defective parts shall be returned to you unless otherwise arranged. HPPTCL shall normally carry out no repair or replacement when the Equipment is under your supervision.

If during the Period of Guarantee, any of the Materials, is found defective and / or fail in Test or Operation, such Materials shall be repaired or replaced by you free of cost to the HPPTCL irrespective of the reimbursements from the insurance company within reasonable time which shall in no circumstance be more than 15 days or such other reasonable time as the HPPTCL may deem proper to afford, failing which the cost of the failed Material will be deducted from the subsequent Bills / Bank Guarantee.

You shall bear all the expenses incurred in connection with the repair or replacement against such defective goods inclusive of all Freight (both inland overseas), Insurance, Customs, Levies, Forwarding and Clearing and Demurrage and Other Incidental Charges involved in delivering the said goods to HPPTCL specified destination. The decision whether correction of the defects should be by the repair or replacement shall be the sole discretion of HPPTCL.



Seeley

036

Seeley

Dr. General Manager (Contracts)
Power Transmission Corps, Ltd.
Barowalia House, Khalini, Shimla-2

21. **APPLICABLE LAW:**

The Contract shall be interpreted in accordance with the Laws of India and shall be subject to the jurisdiction of Shimla Court irrespective of the place of the Works, the place of performance or the place of payments under the Contract.

22. **FORCE MAJEURE:**

20.1 Force Majeure is herein defined as any cause, which is beyond your and HPPTCL's control as the case may be, which could not be foreseen or with a reasonable amount of diligence could not have foreseen and which substantially affects the Performance of the Contract, such as:

Natural Phenomena, including but not limited to Floods, Drought, Earthquakes and Epidemics, Acts of any Government, Domestic or Foreign, including but not limited to War, Declared or undeclared, Priorities, Guaranties, Embargoes

20.2 Provided either Party shall within 15 days from the occurrence of such a cause notify the other in writing of such cause.

20.3 You shall not be liable for Loss or Damage due to delay in Manufacture and Delivery resulting from any causes beyond your reasonable control including but not limited to compliance with the regulations, orders or instructions of any federal state or municipal, government or agency thereof, acts of god, acts of omission of the purchaser, acts of civil and military authority, fires, strikes, factory shutdowns or altercations, embargoes, war, riots.

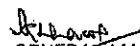
23. All other Terms and Conditions shall be as per Tender Document No.: DGMC / PALCHAN SUBSTATION / 02 / 2009.

Notwithstanding anything stated elsewhere in the Bidding Documents, this Letter of Award will constitute the formation of the Contract, which shall be effective from the date of this Letter of Award.

Please acknowledge receipt of the Letter of Award and take necessary action to commence the work immediately.

Enclosure: Annexure 2

Yours faithfully,


Dy. GENERAL MANAGER (CONTRACTS)

Copy for information and necessary action to: -

1. P. S. to Director (Planning & Contracts), HPPTCL, Barowalias House, Khalini, Shimla - 171002.
2. P. A. to Director (Projects), HPPTCL, Barowalias House, Khalini, Shimla - 171002.
3. Dy. General Manager (Projects), HPPTCL, Barowalias House, Khalini, Shimla - 171002.
4. Sr. Manager, HPPTCL, Sarabai, Bhunter, District Kullu - 175125 (H. P.)
5. Sr. Accounts Officer, HPPTCL, Sangla House, Khalini, Shimla - 171002.


Dy. GENERAL MANAGER (CONTRACTS)


Dy. General Manager (Contracts)
H.P. Power Transmission Corps. Ltd.
Barowalia House, Khalini, Shimla-2

037



ANNEXURE - 2

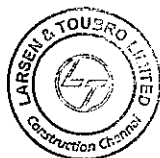
**PRICE SCHEDULE OF CIVIL WORKS AND ERECTION OF EQUIPMENT / MATERIAL
PRICE BREAK UP**

AWARD No.: HPPTCL / DGMC / L & T - ERECTION / 2010 - DATED:

Sr. No.	DESCRIPTION	UNIT	QTY.	ERECTION PRICE	TOTAL
1	2	3	4	5	6 = 4 x 5

A POWER TRANSFORMER <i>Single</i>					
1	25 / 31.5 MVA, 220 / 33 kV <u>Three Phase</u> Transformer including Bushing, Accessories and First filling of Oil	Nos.	<u>1</u>	<u>507,953</u>	507,953
<u>3</u>	<u>2, 3, 4 are extra in new</u> 250 kVA, 33 / 0.433 KV Three Phase Transformer including Bushing Accessories and First filling of Oil	Nos.	1	142,088	142,088
B 245 KV GIS EQUIPMENT					
1	245 KV, 1600 A, 50 kA SF6 Gas Insulated Transformer Bay Module each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformer Two Busbar Disconnectors with Grounding Switch Surge Arrestors, SF6 Gas Monitoring System for complete Bay, LCC, Three 1 - Phase SF6 <u>Ducts</u> - <u>Ducts</u> and SF6 / Oil Bushing to connect to 220 / 33 KV, <u>50 / 63 MVA</u> Transformer and Accessories with GIS etc to complete Transformer Bay Module	Nos.	1	544,991	544,991
2	245 KV 2000 A, 50 kA SF6 Gas Insulated Feeder Bay Module each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Line Disconnector with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF6 Gas Monitoring System for complete Bay, LCC, GIS Duct and Air / SF6 Bushing Termination Enclosure and Accessories with GIS etc to complete Feeder Bay Module	Nos.	1	544,991	544,991

Deelaput



Hu
Dy. General Manager (Contracts)
Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Erection 1

1	2	3	4	5	6 = 4 x 5
---	---	---	---	---	-----------

3	245 kV, 4000 A, 50 kA, 3 Single Phase (Isolated) Units, SF ₆ Gas Insulated Metal enclosed BUSBARS each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of Circuit Breaker Bay Module. Each Bus Bar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch	Nos.	2	481,190	962,380 ✓
4	245 kV, 4000 A, 50 kA SF ₆ Gas Insulated Bus Coupler Bay MODULE comprising of SF ₆ Gas Insulated Circuit Breaker, Current Transformers Two Disconnectors with Safety Grounding Switches SF ₆ Gas Monitoring System for complete Bay, LCC etc	Nos.	1	544,991	544,991 ✓
5	245 kV CVT with Junction Box	Nos.	3	9,114	27,342
6	198 kV Lightning Arrester with Counter and Leakage Meter	Nos.	3	5,468	16,404
C	36 kV, 2000 A, 40 kA for 3 sec., SF ₆ Gas Insulated Metal Enclosed Busbar each Unit, enclosed in Bus Enclosures running along the Length of the Switch gear to interconnect each of Circuit Breaker Bay Module. Each Busbar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch.				
1	36 kV, 1600 A SF ₆ Gas Insulated Feeder Bay Module each comprising of SF ₆ Gas Insulated Circuit Breaker, Current Transformers, Two Busbar Disconnectors with Grounding Switch, Line Disconnector with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF ₆ Gas Monitoring System for complete Bay, LCC, GIS <i>not included</i> Duct and Air / SF ₆ Bushing Termination Enclosure and Accessories with GIS etc to complete Feeder Bay Module	Nos.	3	54,686	164,058

Deelafest


MS
 Dy. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd. Erection 2
 Barowalia House, Khalini, Shimla-2

1	2	3	4	5	6 = 4 x 5
---	---	---	---	---	-----------

2 36 kV, 2000 A SF₆ Gas Insulated Bus Coupler Nos. 1 54,686 54,686

Bay Panel comprising of SF₆ Gas Insulated
Circuit Breaker, Current Transformer, Two Nos.
of Bus Bar Disconnectors with Earthing Switch
SF₆ Gas Monitoring System
for complete Bus Coupler Panel - line panel.

3 36 kV, 1600 A SF₆ Gas Insulated Power Transformer Panel each comprising of SF₆ Gas Nos. 1 54,686 54,686

Insulated Circuit Breaker, Current Transformer,
Two Nos. of Bus Bar Disconnectors with Earthing
Switch Surge Arrestor, SF₆ Gas Monitoring System
for complete Panel

4 36 kV, 630 A SF₆ Gas Insulated 250 kVA L. T. Transformer Panel comprising of SF₆ Gas Nos. 1 54,686 54,686

Insulated Circuit Breaker, Current Transformers
Two numbers of Busbar Disconnectors with Earthing
Switch, Surge Arrestor, SF₆ Gas Monitoring
System for complete L. T. Transformer Panel

not included.

D COMPLETE SUB STATION AUTOMATION SYSTEM including Hardware and Software for the Substation and Remote Control Station alongwith Associated Equipments 1 164,058 164,058

BAY CONTROL UNIT

1	220 kV Bays	Nos.	3	} included in Item at Sr. No.: D above
2	33 kV Bays	Nos.	6	

E1 220 kV CONTROL AND RELAY PANEL

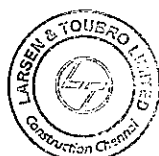
1 CIRCUIT BREAKER CONTROL PANEL

a	With Auto Reclose	Nos.	1	18,228	18,228
b	Without Auto Reclose	Nos.	2	18,228	36,456

2 Line Protection Panel (MAIN - I + MAIN - II) Nos. 1 18,228 18,228

3 Bus Bar Protection Panel 220 kV Double Busbar Protection Set 1 18,228 18,228

Deelaput



Hus
Gen. Manager (Contracts)
Power Transmission Corp. Ltd. Erection 3
Bareilly House, Khalini, Shimla-2

1	2	3	4	5	6 = 4 x 5
---	---	---	---	---	-----------

4	Transformer Protection Panel - H. V. SIDE	Nos.	1	18,228	18,228 ✓
E2	33 kV CONTROL AND RELAY PANEL				
1	CIRCUIT BREAKER CONTROL PANEL				
a	With Auto Reclose	Nos.	3	18,228	54,684
b	Without Auto Reclose	Nos.	3	18,228	54,684
2	Line Protection Panel	Nos.	3		
3	Transformer Protection Panel - L. V. SIDE	Nos.	1		
4	Transformer Protection Panel - Station Transformer	Nos.	1		included in Sr. No.: E2 - 1 above
5	Bus Coupler Protection Panel	Nos.	1		
6	DR Evaluation Unit	Nos.	1		
F	PLCC for 220 kV LINE FEEDER				
1	2000 A, 0.5 mH / 1.0 mH, 50 kA Line Traps	Nos.	2	14,582	29,164
2	Coupling Device (Phase to Phase)	Nos.	2	10,938	21,876
3	HF Cable	LS	1	9,114	9,114
4	Carrier Equipment (for Speech + Protection and for Speech + Data)	Nos.	3	10,938	32,814
5	Protection Coupler	Nos.	2	10,938	21,876
6	Print Testing Kit	Set	1	10,938	10,938
7	EPBAX (24 / 8) with Telephone Sets	Set	1	10,938	10,938
G	AIR CONDITIONER AND VENTILATION SYSTEM				
1	Split AC (Capacity - 2T)	Nos.	10	18,228	182,280
2	Ventillation System for 220 kV and 33 kV GIS Hall	LS	1	2,496,305	2,496,305
H	LT SWITCHBOARD				
1	415 V Main Switchboard	Nos.	1	154,944	154,944
2	415 V A. C. Distribution Board	Nos.	1	109,372	109,372
3	220 V, DCDB	Nos.	2	91,144	182,288
4	48 V, DCDB	Nos.	2	91,144	182,288

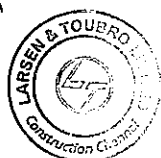
Redeveloped



[Signature]
Dy. General Manager (Contracts) Erection 4
I.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

1	2	3	4	5	6 = 4 x 5
I	BATTERIES				
1	220 V, 400 AH	Set	2	91,144	182,288
2	48 V, 400 AH	Set	2	54,686	109,372
J	BATTERY CHARGER SYSTEM				
1	220 V	Set	2	18,228	36,456
2	48 V	Set	2	18,228	36,456
K	DG SET ALONGWITH CONTROL PANEL (100 kVA, 440 V for 220 kV Sub Station)	Set	1	91,144	91,144
L	FIRE PREVENTION AND EXTINGUISHING SYSTEM				
1	Nitrogen Injection Fire Prevention and Extinguishing System for Transformer	Set	1	331,143	331,143
2	Fire Protection for GIS cum Control Room Building etc (Portable Type the Extinguishers System)	Lot	1	539,059	539,059
M	ILLUMINATION SYSTEM	LS	1	874,323	874,323
1	Control Room / GIS Building	LS	1	included in Sr. No.: M above	
2	Switchyard Lighting	LS	1		
3	Solar Light System for Street Light	LS	1		
N	Power Cables and Copper Conductor Armoured Control Cables alongwith Lugs, Glands and Straight Joints	LS	1	2,174,444	2,174,444 ✓
O	33 kV XLPE POWER CABLE AND ACCESSORIES				
1	XLPE POWER CABLE 3.5 c X 300 sq. mm	km	0.5	108,624	54,312
2	PVC POWER CABLE 3.5 c X 90 sq. mm	km	0.2	84,016	16,803
	3.5 c X 70 sq. mm	km	0.5	84,016	42,008
	3.5 c X 35 sq. mm	km	0.2	59,406	11,881

Deelip



Mr
 Dy. General Manager (Contracts)
 P.P. Power Transmission Corpn. Ltd.
 Barwala House, Khalini, Shimla-2

1	2	3	4	5	6 = 4 x 5
	4 c X 16 sq. mm	km	0.5	59,406	29,703
	4 c X 4 sq. mm	km	1	34,798	34,798
3	HR - FRLS CONTROL CABLE				
	2 c X 2.5 sq. mm	km	1	33,157	33,157
	4 c X 2.5 sq. mm	km	2	33,157	66,314
	7 c X 2.5 sq. mm	km	1	36,985	36,985
	10 c X 2.5 sq. mm	km	0.75	42,727	32,045
	12 c X 2.5 sq. mm	km	0.5	42,727	21,364
	16 c X 2.5 sq. mm	km	0.5	50,475	25,238
	19 c X 2.5 sq. mm	km	0.2	52,297	10,459
	2 c X 4 sq. mm	km	1	36,439	36,439
	4 c X 4 sq. mm	km	1	43,000	43,000
	7 c X 4 sq. mm	km	1	63,781	63,781
4	36 kV XLPE CABLE				
	a) 33 kV XLPE Cable for connecting Transformer to 33 kV GIS of size 1 x 630 sq.mm. (Three Cables with one Spare Cable in each Circuit)	km	1.00	189,531	189,531
	b) 33 kV Indoor Termination suitable for above Cable	Nos.	3	3,697	11,091
	c) 33 kV Outdoor Termination suitable for above Cable	Nos.	3	3,697	11,091
P	GROUNDING / EARTHING SYSTEM	LS	1	1,674,784	1,674,784
	a) 40 mm MS Rod for Earthmat	LS	1	} included in Item at Sr. No.: P above	
	b) GS / MS Flats	LS	1		
	c) Electrodes	LS	1		
	d) Lightning Mast / GS Shield Wire	LS	1		
Q	STEEL STRUCTURES FOR TOPWERS, BEAMS AND EQUIPMENT	LS	1	214,351	214,351
R	EOT CRANE				
	a 3.5 T for 220 kV GIS ROOM	Set	1	216,977	216,977
	b 2.5 T for 33 kV GIS ROOM	Set	1	162,690	162,690
	c Moveable Ladder of suitable Capacity for 220 kV and 33 kV GIS Room	Nos.	2	50,945	101,890



Dy. General Manager (Contracts)
 H.P. Power Transmission Corp. Ltd.
 Barowalia House, Khalini, Shimla-2

Erection 6

1	2	3	4	5	6 = 4 x 5
---	---	---	---	---	-----------

S	Insulator Strings / Disc Insulators, Hardware, Conductor, Bus Bar Material, Cable Trays, Clamps, Connectors, including Equipment Connectors, Pipes for Equipment & Lighting, all Accessories etc	LS	1	437,849 ✓	437,849
---	---	----	---	-----------	---------

S1	OLTE SYSTEM / FOTE	Lot	1	5,094,500	5,094,500 ←
----	--------------------	-----	---	-----------	-------------

T CIVIL WORKS as per Specification

1	Soil Investigation	LS	1	384,685	384,685
2	Excavation & Filling for Land Development	LS	1		0
3	Retaining Wall	LS	1	781,192	781,192
4	Tower and Equipment Foundation, Transformer Foundation, Fire Wall, Cable Trenches including all Types of Crossings and all Metallic Work including Steel Racks for Cable, Cable Supports MS Angle Edging and RCC Covers with Lifting Arrangements	LS	1	6,374,611	6,374,611
5	Buried Cable Trenches for Auxillary Power Arrangement	LS	1	400,885 ^L	400,885
6	Site Surfacing and Antiweed Treatment	LS	1	1,137,070	1,137,070
7	Cement Concrete Roads including all Types of Crossings				
a)	5.00 metres wide Road cum Rail Track*	LS	1	1,532,846	1,532,846
b)	3.5 metres wide	LS	1	757,640	757,640
8	Storm Water Drainage including Culverts	LS	1	693,434	693,434
9	Security Fencing along with Gates and Security Room	LS	1	1,073,015	1,073,015

Delaput



hms

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2
Erection /

1	2	3	4	5	6 = 4 x 5
---	---	---	---	---	-----------

10 Buildings

a) Control Room Building cum 220 kV GIS Room alongwith Battery Room, PLCC Room, SCADA Room, Offices and Stores LS 1 14,900,012 14,900,012

b) 33 kV GIS Building LS 1 2,554,205 2,554,205

11 DG Set Outdoor Silent Type LS 1 138,083 138,083

12 Store Shed LS 1 2,544,960 2,544,960

13 Transformer Oil Drainage System LS 1 included in
Sr. No.: S1 - 4 above

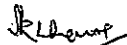
14 TOTAL 53,766,611

15 Discount offered @ 4 % 2,150,664

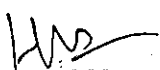
16 GRAND TOTAL FOR ERECTION PORTION 51,615,947

NOTE:

- The above Prices are FIRM and NO Price Variations shall be paid.
- Service Tax has been included in the above Prices and nothing extra shall be paid to the Contractor on this account.
- Above Quantities are Tentative and may change after detailed Engineering.
- Payment to the Contractor shall be made on actual quantity supplied.


Dy. GENERAL MANAGER




Dy. General Manager (Contracts)
N.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Erection 8



HP POWER TRANSMISSION CORPORATION LIMITED

(A State Government Undertaking)

BAROWALIAS HOUSE, KHALINI, SHIMLA - 171002

(Telefax: 0177 - 2626284)

KRT

REFERENCE: HPPTCL / DGMC / L & T - ERECTION / 2010 - 4410-13

DATED: 19/10/10

TO,

M/S LARSEN & TOUBRO LIMITED,
ENGINEERING CONSTRUCTION & CONTRACTS DIVISION,
MOUNT POONAMALLEE ROAD, MANAPAKKAM,
P. B. No. 979, CHENNAI - 600089
FAX No.: 044 - 22493317; 044 - 22520345

SUBJECT: LETTER OF INTENT (LOI) FOR CIVIL WORKS AND ERECTION OF EQUIPMENT / MATERIALS
FOR CONSTRUCTION OF 220 / 33 KV PALCHAN GIS SUBSTATION AGAINST TENDER
DOCUMENT No.: DGMC / PALCHAN SUBSTATION / 2 / 2009

REFERENCE: This has reference to the following: -

- 1) This office Tender Document No.: DGMC / PALCHAN SUBSTATION / 2 / 2009
- 2) Your Offer No.: LTCD / EI&C / HPPTCL - PALCHAN / NJ / BID / 01 dated 18.12.2009
- 3) Your Price Letter No.: LTCD / EI&C / HPPTCL - PALCHAN / NJ / BID / 04 dated 18.12.2009
- 4) Your Letter No.: LTCD / EIC / HPPTCL / NJ / PALCHAN / 1603 dated 16th March, 2010
- 5) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID04 dated 14th April, 2010
- 6) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID05 dated 12th July, 2010
- 7) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ dated 29th July, 2010
- 8) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID06 dated 17th August, 2010
- 9) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / NJ / BID07 dated 30th August, 2010
- 10) Your Letter No.: LTCD / EIC / HPPTCL / PALCHAN / KRJ / 2109 dated 21st September, 2010

Sir,

I have been directed to place Letter of Intent (LOI) on you for Civil Works and Erection of Equipment / Material (also referred to as 'Second Contract') required for Construction of 220 / 33 KV GIS Sub Station at Palchan in Kullu District of Himachal Pradesh amounting to Rs. 5,14,33,997.00 (Rupees Five



046

By: General Manager (Contracts)
HP Power Transmission Corp. Ltd.
Barowalia House, Khalini, Shimla-2

Crore Fourteen Lac Thirty Three Thousand Nine Hundred Ninety Seven) only. The Scope of Work covered under this Letter of Intent interalia includes the following: -

Design, Engineering, Loading, Unloading of Material, Transportation and Insurance, all Civil Works, Erection of Equipment / Material and Supply of all Equipment / Material and Testing etc required for the complete execution of Construction of 220 / 33 KV GIS Sub Station as set forth in the Bidding Document No.: DGMC / PALCHAN SUBSTATION / 02 / 2009.

1. The detailed Erection of Equipment and Material alongwith their tentative quantities to be erected and Unit Rates under the subject LOI are given in ANNEXURE - 2 to this Letter of Intent.
2. The Scope of Work under this Contract shall also include all such items, Equipment / Materials and Works which are not specifically mentioned in the Bidding Documents and / or the Bid Proposal but are necessary for successful completion of the Scope of Work under the Contract; unless otherwise specifically excluded in the Bidding Documents and / or this Letter of Intent.
3. The Completion period for Supply of Equipment / Material shall be eight months from the Date of Issue of Detailed Award.
4. All other Terms and Conditions shall be as per the Tender Document No.: DGMC / PALCHAN SUBSTATION / 02 / 2009.
5. The Maintenance of the Sub Station for the first year shall be carried out by your Firm for which Annual Charges amounting to Rs. 1,19,74,232.00 (Rupees One Crore Nineteen Lac Seventy Four Thousand Two Hundred Thirty Two) only shall be paid at the end of Maintenance Period.

Please convey your acceptance so that further detailed Award can be placed on your Firm.

D.A.: Annexure-2.

Yours faithfully,

[Signature]
Dy. GENERAL MANAGER (CONTRACTS)

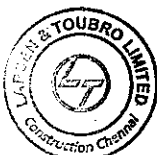
No.: HPPTCL / DGMC / L & T - ERECTION / 2010 -

DATED:

Copy for information and necessary action to: -

1. P. S. to Director (Planning & Contracts), HPPTCL, Barowallas House, Khalini, Shimla - 171002.
2. P. A. to Director (Projects), HPPTCL, Barowallas House, Khalini, Shimla - 171002.
3. Sr. Accounts Officer, HPPTCL, Sangla House, Khalini, Shimla - 171002.

[Signature]
Dy. GENERAL MANAGER (CONTRACTS)



[Signature]

047

[Signature]
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalla House, Khalini, Shimla-2



LARSEN & TOUBRO LIMITED

Engineering Construction & Contracts Division

Headquarters: Mount Poonamallee Road, Manapakkam P.B.No.979, Chennai - 600 089, INDIA Tel: 22526308/6318
Fax: +91-44-2248 3317 22526346

Website: www.larsen.com
www.larsentoubro.com

Ref: LTCD/EI&C/KRJ/PALCHAN/02
E-mail: krj@larsen.com

22nd October, 2010

To
M/s. HP Power Transmission Corporation Limited,
Barowalia House,
Khalini,
Shimla - 171 002.

3280
26/10/10

Kind Attn: Dy. General Manager (Contracts)

Dear Sir

Sub: Letter of Intent (LOI) for Civil works and Erection of Equipment / Materials for Construction of 220 / 33 kV Palchan GIS Substation against Tender document No. DGMC/ Palchan Substation / 2 /2009

Ref: Your Letter of Intent No. HPPTCL/DGMC/L&T-ERECTION/2010-4410-13 dated 19.10.2010

We acknowledge with thanks the receipt of "Letter of Intent" referred to above. As a token of our acknowledgement and confirmation, we herewith enclose the copy of "Letter of Intent" duly stamped and signed, as required by you subject to the following amendment

- 1) Erection of 33kV HT Cable interconnecting 33kV GIS and Transformer has to be included in our offer.
- 2) Erection of 1no LT Transformer

Since the job has to be completed within 8 months from the date of Detailed LOA, we request you to kindly arrange to provide the encumbrance free land along-with the Detailed LOA. We have also enclosed the preliminary Construction Schedule (L1) for your ready reference.

Thanking you, and assuring you of our best attention at all times.

Yours faithfully,
For LARSEN & TOUBRO LIMITED
ECC DIVISION

K. RAJARAM
General Manager & Head
Business Development & Contracts (EI&C)
Electrical Projects (Domestic)

Encl.: As above

Regd. Office: L&T House, Ballard Estate, P.O.Box 278, Mumbai - 400 001. Tel.:022- 2268 5656 Fax: +022-2268 5858



Devi Jayaram

048

HP
Dy. General Manager (Contracts)
HP Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



LARSEN & TOUBRO LIMITED

Engineering Construction & Contracts Division

Headquarters : Mount Poonamallee Road, Manapakkam, P.B.No.979, Chennai - 600 089, INDIA
Tel.: +91-44-22526000/8000 Fax : +91-44-2249 3317 / 044-22526345

Web : www.lntec.com
www.larsentoubro.com

Ref.: LTCD/EIC/KRJ/HPPTCL/PALCHAN-ERECTION/1402
E-mail: krj@lntec.com

14th February, 2011

To
M/s. HP Power Transmission Corporation Limited,
(A State Government Undertaking)
Barowalias House, Khalini,
Shimla - 171002
Fax: 0177-2626284

Kind Attn. Dy. General Manager (Contracts)

Dear Sir,

Sub: Letter of Award (LOA) for Civil Works and Erection of equipment / materials for
Construction of 220/33kV Palchan GIS Substation against Tender Document No. :
DGMC/PALCHAN SUBSTATION / 2 / 2009 (SECOND CONTRACT)

Ref: 1) Your reference LOA No. HPPTCL / DGMC / L&T - ERECTION / 2010-5099-5104 dated
23.12.2010

2) Your replies to our pre-bid queries dated 23.10.2009

3) Our price schedule-Erection Ref: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/0 dated
18.12.2009

We invite your attention to the "Replies to Pre-bid Queries" listed under reference 2
wherein you have clarified that "Cutting & Filling is in client's scope and FGL at the time of
award" under replies to civil queries and also "Contour plan is not required as it is a
developed area" under replies to electrical queries.

Also in our "Price Bid for erection" listed under reference 3, Sl.No T-2) we have commented
that "As per clarification client will provide levelled land to us, so we haven't quoted this
item".

The same is not referred in your LOI and somehow we missed to point the same in our
acknowledgement to LOI.



Aerlay

Regd. Office: L&T House, Ballard Estate, P.O.Box 278, Mumbai - 400 001. Tel.: 022- 55525656 Fax: +022-55525858



Dy. General Manager (Contracts)
HP Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Hence we kindly request you to incorporate the same in your scope and accordingly request you include in the contract document

A line of confirmation is highly solicited.

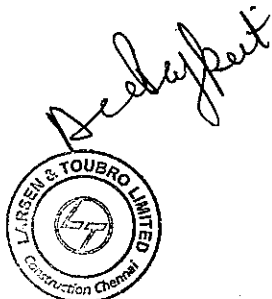
Assuring you of our best services at all times

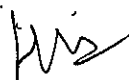
Yours faithfully,

For **LARSEN & TOUBRO LIMITED**
ECC DIVISION



K. RAJARAM
General Manager &
Head
Business Development & Contracts (EI&C)
Power Transmission & Distribution (Domestic)




Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



HP POWER TRANSMISSION CORPORATION LIMITED

(A State Government Undertaking)

BAROWALIAS HOUSE, KHALINI, SHIMLA-2

Ph:-0177-2626283, FAX:-2626284

NO: HPPTCL/L&T-ERECTION/2010-11-5952 Dated:-23/2/11

To

M/S. LARSON & TOUBRO LIMITED,
ENGINEERING CONSTRUCTION & CONTRACTS DIVISION,
MOUNT POONAMALLEE ROAD, MANAPAKKAM,
P.B. No. 979, CHENNAI - 600089.
Fax. No.: 044 - 22493317, 22526345.

Subject: Letter of Award (LOA) for Civil Works and Erection Of Equipment /
Material for Construction of 220 / 33 kv PALCHAN GIS Sub-Station
against Tender Document No.: DGMCL / PALCHAN SUBSTATION / 2 /
2009 (SECOND CONTRACT).

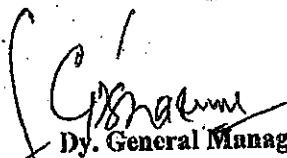
Reference: Your letter No.: LTCD / EIC / KRJ / HPPTCL / PALCHAN -SUPPLY
/1402 Dated: 14-02-2011.

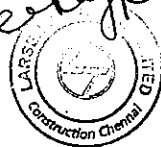
D/Sirs,

With reference to your above referred letter, it is intimated that the "Replies to Pre-bid
Queries" vide this office letter No.: HPPTCL / Palchan Sub Station / 2009 -1850-52 Dated:
27-10-2009 shall form part of Contract Agreement and may be attached with contract
agreement as encloser wherein it is already mentioned that "The Developed Levelled Site
shall be handed over to the Contractor after the Award. As such the quantity of cutting /
filling is not in the scope of Contractors Work".

In view of above no further action is required at this end please.

Yours faithfully,


Dy. General Manager (Contracts)




Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



H.P. Power Transmission Corporation Limited

(A State Govt. Undertaking)
Barowalias House, Khalini, Shimla-171002
(Telefax: 0177-2626284)

No.HPPTCL/L&T-ERECTION/2010-11-5857-56

Dated : 8/2/11

To

M/S LARSON & TOUBRO LIMITED,
ENGINEERING CONSTRUCTION & CONTRACT DIVISION,
MOUNT POONAMALLEE ROAD, MANAPAKKAM,
P.B.NO. 979, CHENNAI - 6000089.

FAX NO. 044-22493317, 22526345

Sub :-

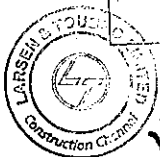
Letter of Award (LOA) for ^{Civil works + Erection} supply of Equipment / Material for
Construction of 220/33 kV PALCHAN GIS Sub-Station against Tender
Document No. DGMC/ PALCHAN SUB-STATION/2/2009 (SECOND
CONTRACT).

Sir,

Following amendments in Award No. HPPTCL/L&T-ERECTION/2010-5099-5104 Dated 23.12.2010 are hereby made :-

AMENDMENTS.

Ref./ Clau- -se No.	Existing	Amended
13	TIME SCHEDULE OF CONTRACT. 13.1 The basic consideration and the essence of the Contract is strict adherence to the Time Schedule of the Contract. You shall so organise your resources and perform your work as to complete successful testing and commissioning of the GIS Palchan Sub-Station covered under the subject Contract within 8 (eight) months from the date of issue of this Contract and the same shall be applicable for all contractual purposes. 13.2 You shall develop and furnish a detailed Schedule in the form of a Bar Chart indicating relating to Engineering, Procurement, Manufacturing and Ex-works delivery for all the equipment and Materials covered under this Contract within 15 days of the Letter of Award.	TIME SCHEDULE OF CONTRACT. 13.1 The basic consideration and the essence of the Contract is strict adherence to the Time Schedule of the Contract. You shall so organise your resources and perform your work as to complete successful testing and commissioning of the GIS Palchan Sub-Station covered under the subject Contract within 8 (eight) months from the date of receipt of this Contract by the Contractor and the same shall be applicable for all contractual purposes. 13.2 You shall develop and furnish a detailed Schedule in the form of a Bar Chart indicating relating to Engineering, Procurement, Manufacturing and Ex-works delivery for all the equipment and Materials covered under this Contract within 15 days of the receipt of Letter of Award by the Contractor.



Deviappan

052

PM
By: General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

	13.3 For the purpose of levy of Liquidated Damages for delay, the time for completion of work of construction, testing and successful commissioning of 220/ 33 kV GIS Sub-Station at Palchan shall be reckoned as 8 months from the date of LOA.	13.3 For the purpose of levy of Liquidated Damages for delay, the time for completion of work of construction, testing and successful commissioning of 220/ 33 kV GIS Sub-Station at Palchan shall be reckoned as 8 months from the date ^{of} receipt of LOA by the Contractor.
--	---	---

Yours faithfully,

[Signature] 8.2.11
o/c Dy. General Manager (Contracts),

Copy forwarded to the following for information please :

1. P.S. to Director (P&C), HPPTCL, Shimla-171002.
2. P.A. to Director (Projects), HPPTCL, Shimla-171002.
3. The Dy. General Manager (Projects), HPPTCL, Shimla-171002.
4. The Sr. Manager, HPPTCL, Sarabai Bhunter, Distt. Kullu (HP).
5. Sr. Accounts Officer, HPPTCL, Shimla-2.

[Signature] 8.2.11
o/c Dy. General Manager (Contracts),



[Handwritten Signature]
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



L&T Construction

Power Transmission & Distribution

Ref.: LTCD/EIC/KRJ/HPPTCL/PHOJAL-ERECTION/1403
E-mail: krj@lntecc.com

18th March, 2013

To

M/s. HP Power Transmission Corporation Limited,
(A State Government Undertaking)
Barowallas House, Khalini,
Shimla – 171002
Fax: 0177-2620227

Kind Attn. Dy. General Manager (Contracts)

Dear Sir,

Sub: Letter of Award (LOA) No.: HPPTCL/DGMC/L&T-ERECTION/2010-5099-5104 dated 23.12.2010 (Second Contract) for Civil works and Erection of equipments / materials for construction of 220/33kV GIS substation at Phojal (earlier Palchan) – Amendment Thereon

Ref: Your reference LOA No. HPPTCL / DGMC / L&T – ERECTION / 2013-6862-68 dated 08-03-2013

We thank you for releasing the above referred amended "Letter of Award" for construction of 220/33kV GIS substation at Phojal in place of Palchan. Please find enclosed " Notification of Award" pertaining to Civil Works and Erection works, duly stamped and signed on each page, as requested by you, as a token of our acceptance. Power of Attorney of the signatory is attached herewith.

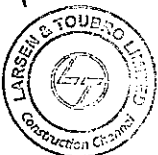
However, we request you to issue an amendment to the "Letter of Award" by incorporating changes to following clauses.

Stage Penalty:

As per tender document GCC Clause no. 3.12.6 and earlier LOA Clause No. 12 states that, Stage-wise penalties would be levied if defined percentage of progress is not achieved in time. These stage wise penalties are not applicable in the context of revised scope, location of the Project and enhanced time line for completion as notified through the amended LOA.

..../....

As per sheet



Larsen & Toubro Limited, Construction, Power Transmission & Distribution
Mount Poonamallee Road, Manapakkam, P. B. No. 979, Chennai - 600 089, INDIA
Tel: +91 44 2270 4000 / 5000 Fax: +91 44 2270 5482 www.Lntecc.com

(L&T Construction is a business brand of Larsen & Toubro Limited)



Registered Office:
L&T House, N. M. Marg
Ballard Estate
Mumbai -400 001, INDIA

W.S.
Mr. General Manager (Contracts)
HP Power Transmission Corpn. Ltd.
Barowalla House, Khalini, Shimla-2

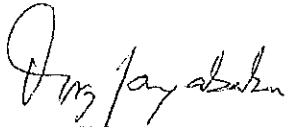
-: 2 :-

In view of these contractual changes to scope and time, we request you to delete the said clause (earlier LOA Clause No. 12 for stage penalty). We confirm that we will complete the entire Project as per Project duration of this LOA.

Thanking you once again, and assuring you of our best attention at all times,

Yours faithfully,

For LARSEN & TOUBRO LIMITED



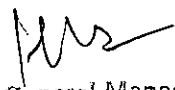
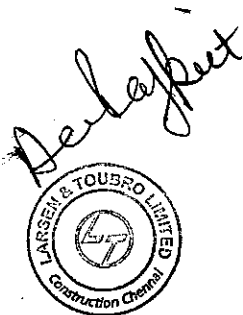
M.V.VIJAYABABU

Head - Contracts

Substation Business Unit

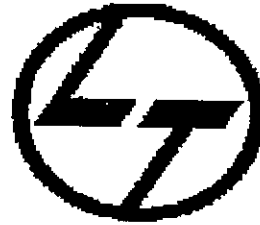
Power Transmission & Distribution

Encl.: As above



Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

055



CONTRACT AGREEMENT

FOR

220/33KV GIS SUBSTATION AT PHOJAL

BETWEEN

HP POWER TRANSMISSION CORPORATION LIMITED

AND

LARSEN & TOUBRO LIMITED

VOLUME – 2 (BOOK- 4 OF 5)

INDEX

Volume – 1A:	Supply contract
Volume – 1B:	Erection contract
Volume – 1C:	CORRESPONDENCE AND CONDITIONS OF CONTRACT
Volume – 2:	Proposal Submitted By The Bidder Page 001 to 56

(Present Volume)

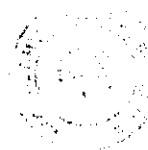
Volume – 3:	Technical Specifications
-------------	--------------------------

A. Chakraborty



[Signature]

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2





LARSEN & TOUBRO LIMITED

Engineering Construction & Contracts Division

Headquarters : Mount Poonamallee Road, Manapakkam, P.B.No.979, Chennai - 600 089, INDIA
Tel.: +91-44-22526000/8000 Fax : +91-44-2249 3317 / 044-22526345

Web : www.Intecc.com
www.larsentoubro.com

Ref: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/02
E-mail: krj@Intecc.com

08th December, 2009

To
Dy. General Manager
M/s: Himachal Pradesh Power Transmission Corporation Limited
Barowalias House,
Khalini, Shimla (H.P)
Pin Code - 171 002.

EARNEST MONEY DEPOSIT

Dear Sir,

Subject: Design, Engineering, Manufacturing, Testing of Equipment, Erection, Commissioning along with other allied Works such as Earthmat & Civil works on Turn Key Basis for 220/33kV Substation at Palchan, District Kulhu-H.P. (GIS)
Specification No.: DGMC/PALCHAN SUBSTATION/2/2009

Ref: Our Offer Letter No.: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/01 dated 18.12.2009

In connection with the above, we are submitting herewith a Demand Draft for Rs.2,00,000/- (Rupees Two Lakhs Only) Drawn on Axis Bank in favour of Managing Director HP Power Transmission Corporation Limited, Khalini, Shimla-171002. Bearing No. 15400 dated 08.12.09 and a Bank Guarantee for Rs. 18,00,000/- (Rupees Eighteen Lakhs Only) bearing No. 2009380IBGB0345 dated 07.12.2009 drawn on Industrial Development Bank of India Ltd., 37, Greaves Road, Chennai-600 006, valid up to 15.06.2011, towards Earnest Money Deposit, in Original & Three copies.

Thanking you and assuring you of our best services at all times.

Yours faithfully,

For LARSEN & TOUBRO LIMITED
ECC DIVISION

(K.Rajaram)
Head Business Development & Contracts
EI&C Sector



Encl.: a/a



W2
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Regd. Office: L&T House, Ballard Estate, P.O.Box 278, Mumbai - 400 001. Tel.:022- 55525656 Fax: +022-55525858



No. : 232352

Branch: -NO. 37, P.M.TOWER GREAMS ROAD, CHENNAI, TN CHENNAI (CORPORATE BANKING)

To
HIMACHAL PRADESH POWER TRANSMISSION
CORPORATION LIMITED, BAROWALIAS HOUSE
KHALINI
SHIMLA
HIMACHAL PRADESH 171002

Dear Sir/Madam,

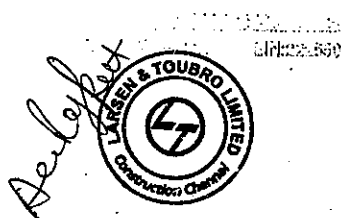
Bank Guarantee No: 2009380IBGB0345
Amount (Rs.) 1800000.00
Guarantee Cover From 07-12-2009 To 15-06-2011
Last date for Lodgement of Claim 15-06-2011
This deed of guarantee executed by IDBI Bank Ltd., a company constituted under the Companies Act 1956 and deemed to be a banking company under the Banking Regulation Act. 1949, having its Registered Office and Head Office at IDBI Tower, WTC Complex, Cuffe parade, Mumbai 400005, and among other places a branch at NO. 37, P.M.TOWER GREAMS ROAD, CHENNAI, TN CHENNAI (CORPORATE BANKING) 6000 (Hereinafter referred to as 'the Bank') in favour of HIMACHAL PRADESH POWER TRANSMISSION, CORPORATION LIMITED, BAROWALIAS HOUSE, KHALINI, SHIMLA, HIMACHAL PRADESH 171002 (hereinafter referred to as 'the Beneficiary' for an amount not exceeding Rs.1800000.00 (Rs. Eighteen Lakh only) at the request of M/S LARSEN & TOUBRO LTD (Hereinafter referred to as 'the Contractor(s)') This Guarantee is issued subject to the condition that the liability of the bank under this Guarantee is limited to maximum of Rs.1800000.00 (Rs. Eighteen Lakh only) and the Guarantee shall remain in full force up to 15-06-2011 (expiry date) and can not be invoked otherwise than by a written demand under this Guarantee served on the Bank on or before the 15-06-2011 (last claim date) The beneficiary is advised to seek a confirmation of the issuance of this Guarantee from the controlling office/Head Office by enclosing a copy of the same.

This Guarantee consists of THREE pages including this page.

Authorized Signatory

Authorized Signatory

contd....



1 का पृष्ठ सं.	3
बी जी सं / BG No.	200938018480345
जारी करने की तारीख / Issues Date:	07.12.2009
आईडीबीआई बैंक लि., चेन्नई - 6.	
IDBI BANK LTD., Chennai - 6.	

002

By General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



कमिशनर तमिलनाडु TAMILNADU
 2009
 S 312230
 2009

S 312230
 8.12.2009

V. HEMACHALAM
 STAMP VENDOR
 L. O. No: A-6/46183/81
 42, Vathiyar Kanda Pillai St,
 CHOLAI, CHENNAI-600 361
 Phone: 6323108

BANK GUARANTEE NO: 2009380IBGB0345
 DATED: 07-12-2009

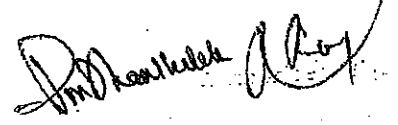
Himachal Pradesh Power Transmission Corporation Limited
 Barowallas House
 Khalini
 Shimla (H P) 171 002

Whereas M/s. Larsen & Toubro Limited, ECC Division, P.O.Box No.279, Mount Poonamallee Road, Manapakkam, Chennai - 600 089, Having its registered office at L&T House, Ballard Estate, P.O. Box 278, Mumbai - 400001, INDIA (Herein after called "the Bidder") has submitted its Bid dated 08.12.2009, for the Supply / Execution of 220/33kV GIS Substation at Palchan, District Kullu-H.P., Hereinafter called the "Bid":

KNOW ALL MEN by these presents that WE of IDBI Bank Ltd, P M Towers, 37 Greaves Road, Chennai 600 006 having our registered office at IDBI Tower, WTC Complex, Cuffe Parade, Mumbai 400005 (hereinafter called "the Bank") are bound unto Himachal Pradesh Power Transmission Corporation Limited, Barowallas House, Khalini, Shimla-171002, India (Hereinafter called "the Purchaser") in the sum of INR 18,00,000 (Rupees Eighteen Lakhs Only) for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the seal of the said bank this 7th day of December 2009

2 का पट सं. 3
 बी जी सं / BG No. 2009 3-10 18180345
 जारी करने की तारीख / Issues Date: 07-12-2009
 आईडीबीआई बैंक लि., चेन्नई - 6.
 IDBI BANK LTD., Chennai - 6.

Devi

003

By. General Manager (Contracts)
 H.P. Power Transmission Corpn. Ltd.
 Barowalla House, Khalini, Shimla-2

THE CONDITIONS OF THIS OBLIGATION ARE:

1. If the Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the Acceptance of its Bid by the Purchaser during the period of Bid validity:
 - a. Fails or refuses to execute the Contract Form, if required; Or
 - b. Fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to 15.06.2011 (One and Half (1 1/2) Years from the Date of Opening of Bid), and any demand in respect thereof should reach the Bank not later than, the above date. If any further extension of this guarantee is required, the same shall be extended to such required period (not exceeding one year) on receiving instructions from M/s. Larsen & Toubro Limited, ECC Division on whose behalf this guarantee is issued.

Notwithstanding anything contained herein:

1. Our liability under this bank guarantee shall not exceed Rs 18,00,000/- (Rupees Eighteen Lakhs Only)
2. The bank guarantee shall be valid till 15th June 2011 and unless a demand is made on the bank in writing on or before 15th June 2011 all your rights under the guarantee will be forfeited and we shall be relieved and discharged from all liabilities thereunder.

Place: Chennai
Date: 07-12-2009

का पत्र सं. ३
बी.जी. सं. / BG No. 2009 3401/8480343-
जारी करने की तारीख / Issues Date: 07-12-2009
आईडीबीआई बैंक लि., चेन्नई - 6.
IDBI BANK LTD., Chennai - 6.

For IDBI BANK LTD.

[Signature]
Authorized Signatory

आईडीबीआई बैंक लि.
IDBI BANK LTD.

पी एम टॉवर / P.M. TOWER
37, ग्रीम्स रोड, / 37, GREAMS ROAD
चेन्नई - 600 006. / CHENNAI - 600 006.
Ph: 044 - 2829 1873 - 74, 65510123 - 24
Fax: 044 - 2829 2377 / 2823 5370

REGIONAL CHAIRMAN
Regional Manager, SH:212550

R. Ramesh
Regional Head - South (Trade Finance)

[Signature]

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

004





Deity

HW
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

VALID FOR SIX MONTHS FROM THE DATE OF ISSUE

AXIS BANK LTD.
ON DEMAND PAY MANAGING DIRECTOR, HPPOTRANSMISSION
BRANCH PAVAMPUR, CHENNAI - 600 024 DATE 08-12-2009

CORPORATION LIMITED, KHALINI, SHIMLA-171002 OR ORDER

RUPEES Two Lakh only

OT	DD	Sr. No.	15400
TT			
OL			

Rs. #####2,00,000.00

FOR VALUE RECEIVED

SK AUTHORIZED SIGNATORY
SK AUTHORIZED SIGNATORY 9257

074012100105 SHIMLA (HP) (BZK)
DRAWEE BANK AND BRANCH
IFS CODE - UTIB0000074

15400 6002110051 15

FORM - I
TENDER FORM

FROM

Larsen & Toubro Limited
ECC Division, EI&C Sector, E&GP OC
P.O. Box 979, Mount Poonamallee Road,
Manapakkam, Chennai - 600 089.

TO

Dy. General Manager

M/s. Himachal Pradesh Power Transmission Corporation Limited
Barowalias House,
Khalini, Shimla (H.P.) -
Pin 171 002.

OFFER NO: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/01 Dated: 08.12.2009

Subject: SUBMISSION OF TENDER AGAINST NOTICE INVITING TENDER NO.:
DGMC/PALCHAN SUB STATION/2/2009 DATED 2/2009 OF HPPTCL

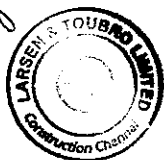
Dear Sir,

With reference to your above mentioned Notice Inviting Tender, I / We hereby offer to Supply genuine Goods and Materials (Quantity and Rates of the Goods and Material are described in the Attached Terms and Conditions) and shall Execute the Work truly and faithfully within the time specified and set forth in the Attached Terms and Conditions. The Goods and Materials to be supplied will be of high quality and answerable in every respect with this Tender. I / We shall be responsible for all complaints as regards the quality of Material and in case of dispute; the decision of the HPPTCL will be final & binding on me / us.

4.3.19 A crossed Bank Draft No 15400 for the prescribed amount of (INR.2,00,000/-) (Rupees Two Lakhs Only) Drawn in favour of Managing Director, HP Power Transmission Corporation Limited, Barowalias House, Khalini, Shimla - 171002, and Bank Guarantee No 2009380IBGB0345 dated 07-12-2009 is enclosed as Earnest Money as desired /fully understand that in the event of my / our Tender being accepted, this Earnest Money shall be retained by you as Security Deposit payable by me / us for the faithful & satisfactory execution of the Contract.

OR

1. As I am / We are a registered approved Supplier of the HPPTCL and have already made a Permanent Earnest Money Deposit vide HPPTCL's registration No. allotted to me / us (Copy enclosed), I am / We are not required to furnish any Earnest Money with this Order.



Dy. General Manager (Contracts)
H.P. Power Transmission Corpn, Ltd.
Barowalia House, Khalini, Shimla-2

- 2 We shall have no claim to the refund of the Earnest Money prescribed against this Tender in the event of our non compliance of the Order provided such order is placed with in the period of validity of our Tender Offer.

I further understand that my Earnest Money will stand forfeited even if I withdraw my Tender at any stage during the currency of the period of validity.

3. Our Tender shall remain valid for a period of 180 days from the last date of opening of Price Bid Part - II of the Tenders against the N.I.T No. DGMC/PALCHAN SUB STATION/2/2009
4. Our Tender along with the Terms & Conditions with the relevant Columns and Annexure duly filled in under my / our attestation and with each page of the Tender papers (including the Enclosed Terms & Conditions signed by me / us, in the capacity of sole owner / general or special attorney, in proof of which Power Of Attorney is attached) is submitted for your favourable consideration.
5. We have read the enclosed Terms & Conditions carefully and have signed the same in token of their absolute & unqualified acceptance. My / our Tender constitutes a Firm offer under the Indian Contract Act, 1872 and is open to an acceptance in whole or in parts. My / our offer, if accepted on the Attached Terms and Conditions will constitute a legally binding Contract and shall operate as a Contract as defined in the Indian Contract Act, 1872 and the Indian Sale of Goods Act 1930.

Yours faithfully,

PLACE: Chennai
DATE: 08.12.2009

Larsen & Toubro Limited
ECC Division, El&C Sector, E&GP OC
P.O.Box 979, Mount Poonamallee Road, Manapakkam
Chennai - 600 089.


(K. Rajaram)

Head-Business Developments & Contracts
AUTHORISED ATTORNEY of Larsen & Toubro Limited
ECC Division, El&C Sector E&GP OC

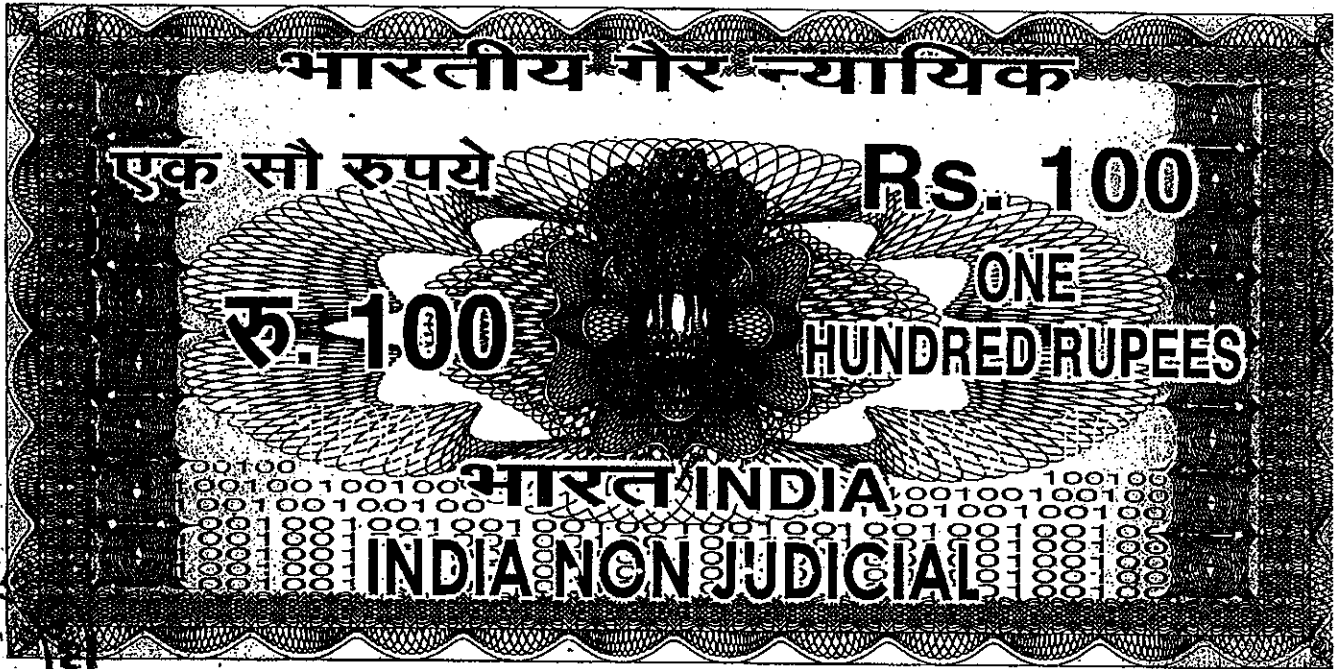


See by post



007


Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



தமிழ்நாடு தமில்நாடு TAMILNADU

K.A.S 301070

கே. ஜி. உஷா

முத்திரைத் தாளம் விநியோகம்

5975/ஆ.4/91

முத்தையா டிபென்டென்சன்-60000
தமிழ்நாடு

FORM - VIII
LETTER OF UNDERTAKING

Ref: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/03

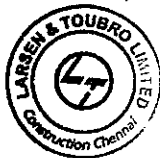
08th December, 2009

To:
Dy. GENERAL MANAGER (CONTRACTS),
HPPTCL, BAROWALIAS HOUSE,
KHALINI, SHIMLA 171002

Dear Sir,

We have read and examined the following Bid Documents relating to the Design, Engineering, Manufacturing, Testing of Equipment, Erection, Commissioning along with other allied Works such as Earthmat & Civil works on Turn Key Basis for 220/33kV Substation at Palchan, District Kullu-H.P. (GIS) against Specification No.: DGMC/PALCHAN SUBSTATION/2/2009 including Addendas.

- Notice Inviting Tender
- Conditions of Contract, for Supply cum Erection containing Section "instructions to Bidder", "General Conditions of Contract", "Erection Conditions of Contract", "Special Conditions of Contract" and "Bid Schedules and Forms".
- Technical Specifications
- Drawing No: HPPTCL/PALCHAN-01



Page 01 of 02

008

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

...2...

We hereby submit our Bid and undertake our Bid valid for a period of 6 months from the dated of Opening of Price Bid. We further undertake, that during said period we shall not vary / alter or revoke our Bid.

This undertaking is in consideration of HPPTCL agreeing to open our Bid and consider and evaluate the same for the purpose of Award of Works in Terms of provisions of Clause entitled AWARD OF CONTRACT Section - 2 (ITB) Condition of Contract in the Bid Documents.

4.3.22 Should this Bid be accepted, we also agree to abide by and fulfill all the Terms and Conditions of provisions of above mentioned Bid Documents.

Witness:

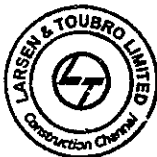


(P.Sridharan)
ECC Division, EI&C Sector, E&GP OC
P.O.Box 979, Mount Poonamallee
Road, Manapakkam
Chennai – 600 089.

For Larsen & Toubro Limited
ECC Division

(K.Rajaram)
Head-Business Development & Contracts
AUTHORISED ATTORNEY of
Larsen & Toubro Limited ECC Division,
EI&C Sector, E&GP OC

P.O.Box 979, Mount Poonamallee Road,
Manapakkam, Chennai – 600 089.
Tel.No.: 044-22526000 / 8000
Fax No.: 22493317 / 22526345



Page 02 of 02

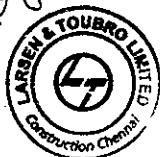
009

By. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTH MAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

CHECK LIST

Deviyapur



Hm
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**



**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF EQUIPMENT, ERECTION,
COMMISSIONING ALONG WITH OTHER ALLIED WORKS SUCH AS EARTH MAT &
CIVIL WORKS ON TURN KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

Check List

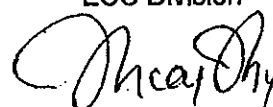
S.No.	Description	Yes/No
1	Power of Attorney and other relevant documents	Yes
2	Letter of Authorisation	Not Applicable
3	Documents defining the constitution of the Company and copy of Industrial License	Yes
4	Tender Form	Yes
5	Price Schedules	Yes
6	Bid EMD	Yes
7	Qualifying requirements of Bidder	
i)	Brief Write Up on Technical and manufacturing capability	Yes
ii)	Performance particulars for last 3 years	Yes
iii)	Purchaser's certificate in support satisfactory performance	Yes
iv)	Audited Financial Statements for previous 3 years	Yes
v)	Income Tax Clearance Certificate	Yes
vii)	Joint Undertaking by Associate	Not Applicable
vii)	Litigation History for last 3 years	Yes
viii)	Testing Facilities list enclosed	Yes
8	Deviation Statement for Commercial Terms	Nil
9	Deviation Statement for Technical Particulars	Yes
10	Guaranteed Technical Particulars	Yes
11	Drawings enclosed	Yes
12	Quality Assurance Plan	Yes
13	Commercial Confirmations	
a)	State Whether Bid EMD enclosed	Yes
b)	State Whether full quantity is quoted	Yes
c)	Price whether Variable / FIRM	Yes
d)	Are you prepared to furnish Performance Security B. G. 10 %, if Order is placed	Yes

Date 08.12.2009

Place: Chennai

For Larsen & Toubro Limited

ECC Division



(K. Rajaram)

Head-Business Development & Contracts
EI&C Sector

**LARSEN & TOUBRO**

It's all about ImagIneering

011

Dy. General Manager (Contracts)
L.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Bid Schedule

Deed of Purchase

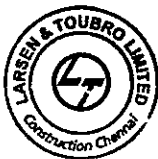


[Signature]
Dy. General Manager (Contracts),
H.P. Power Transmission Corpn. Ltd.,
Barowalia House, Khalini, Shimla-2

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTHMAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE -A - COMMERCIAL DEVIATION

Deelapkar



Hu

Dy. General Manager (Contracts)
H.P. Power Transmission Corps. Ltd.
Barowalia House, Khalini, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**





We have carefully gone through the Tender document and the contract have satisfied ourselves and hereby confirm that our offer strictly conforms to the requirements of the commercial specification of the contract except for the deviations, which are given below:-

S.No.	Volume	Section	Claus No.	Page No.	Statement of Deviation / Variation
NIL					

For Larsen & Toubro Limited
ECC Division



ECC Division
(K. Rajaram)

Head-Business Development & Contracts
EI&C Sector

LARSEN & TOUBRO

It's all about imagining

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTH MAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE -B1 SCHEDULE OF FINANCIAL RESOURCES OF THE BIDDER

Deelapant



[Signature]
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**





Dechayent

[illegible]

For Larsen & Toubro Limited
ECC Division



McCaffrey
ECC Division

Head-Business Development & Contracts
El&C Sector

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



LARSEN & TOUBRO

It's all about imagining

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTH MAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE -B2 BANK CERTIFICATE

See layout



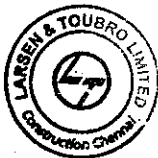
**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**



Handwritten signature
**Dy. General Manager (Contracts)
H.P. Power Transmission Corpn, Ltd.
Barowalia House, Khalini, Shimla-2**

017

Bank certificate



Seelye

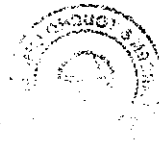
Please Refer Sl.No. 12 of Qualification Document Enclosed Separately

For Larsen & Toubro Limited
ECC Division

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



ECC Division
(K.Rajaram)
Business Development & C
El&C Sector



L7 **LARSEN & TOUBRO**
It's all about Imagination

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTH MAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE -C SCHEDULE OF CONTRACTORS / VENDORS

See page 2



[Signature]
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn, Ltd.
Barowalia House, Khaljni, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**





S.No.	Elements of Work	Approximate Value	Name and Address of Sub-Contractor	Statement of Similar Works Previously Executed
1	2	3	4	5
	REFER SUPPLY SCHEDULE	REFER SUPPLY SCHEDULE	REFER ANNEXURE-A FOR DETAILS	WILL BE PROVIDED ON AWARD OF CONTRACT

Dy. General Manager (Contracts)
H.P. Power Transmission Corp., Ltd.
Barowalia House, Khalini, Shimla-2



(K.Rajaram)
Head-Business Development & Contracts
EI&C Sector

DESIGN, ENGINEERING, MANUFACTURING, TESTING OF EQUIPMENT, ERECTION, COMMISSIONING
ALONG WITH OTHER ALLIED WORKS SUCH AS EARTH MAT & CIVIL WORKS ON TURN KEY BASIS FOR
220/33KV SUBSTATION AT PALCHAN, DISTRICT KULLU-H.P. (GIS)

(VENDORS LIST)

Bidder's Name & Address

Larsen & Toubro Limited,
ECC Division, EI&C Sector,
Mount Poonamallee Road,
Manapakkam, CHENNAI - 600 089.

Sl.	Item Description	Source of Supply	
		Name	Nationality
1	220kV GIS	AREVA	Indian
2	33kV GIS	ABB	Indian
		AREVA	Indian
		SIEMENS	Indian
3	250KVA, 33/0.433kV Transformer	CREL	Indian
		Indotech Transformers Ltd	Indian
		Southern Power	Indian
		Rima Transformers	Indian
		Kirloskar	Indian
		Kanohar Electrical Ltd	Indian
		Gujarat Transformer	Indian
		P.S Electricals	Indian
		Current Electricals Ltd	Indian
		Technical Associate Ltd	Indian
		Kotsons Pvt Ltd	Indian
		EMCO Ltd	Indian
		Ashok	Indian
		Tesla Transformers	Indian
4	Surge Arrestor	Oblum Electrical Industries	Indian
		LAMCO	Indian
		Crompton Greaves Ltd	Indian
5	Capacitor Voltage Transformer	Areva Ltd	Indian
		BHEL	Indian
		Crompton Greaves Ltd	Indian
		ABB Ltd	Indian



Deelgheer

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn.
Barowalia House, Khalini, Shimla



021

Sl.	Item Description	Source of Supply	
		Name	Nationality
6	Sub station Automation System	ABB Ltd	Indian
		Areva Ltd	Indian
		Siemens	Indian
		NR	China
7	220/33kV Relay Panels	ABB Ltd	Indian
		Siemens	Indian
		Areva Ltd	Indian
		NR	China
8	Line Trap	Areva Ltd	Indian
		BPL Ltd	Indian
9	PLCC Equipment	BPL Ltd	Indian
		ABB	Indian
		Puncom Ltd	Indian
		Areva Ltd	Indian
10	LT Switchgear	Unilec	Indian
		Pyrotech	Indian
		Control Devices	Indian
		Shibsa Instruments (India)	Indian
		Sarvana Switchgear	Indian
		Jakson Engineers Ltd	Indian
		Larsen & Toubro Limited	Indian
		Milestone Switchgear (P) Ltd	Indian
		Amararaja Power System (P)	Indian
		Adlec Electro Controls System	Indian
		BOSE Corporation	Indian
		Tricolite Electrical Industries	Indian
		Positronics	Indian
		KIK Engineering	Indian
11	220V & 48V VRLA Batteries	KMG ATOZ	Indian
		C&S Electric	Indian
		HBL Nife Power System Ltd	Indian
		Exide Industries Ltd	Indian
12	220V & 48V Battery Charger	Kirloskar Battery Pvt Ltd	Indian
		Amararaja Power System (P)	Indian
		HBL Nife Power System Ltd	Indian
		Caldyne Automatic Ltd	Indian
		Statcon Power Controls Ltd	Indian
		Amararaja Power System (P)	Indian
		Chhabi Electrical (P) Ltd	Indian
		Universal Industrial Product	Indian
		Masstech Controls Pvt Ltd	Indian
		Dubas	Indian



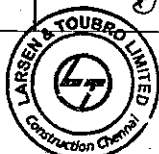
Deviyapuri

By, General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd
Barowalia House, Khajini, Shimla-2



022

Sl.	Item Description	Source of Supply	
		Name	Nationality
13	DG Sets	Jakson Ltd	Indian
		TIL	Indian
		Greaves Ltd	Indian
		GYMMCO Ltd	Indian
		Jeevan Diesels	Indian
		BVS Engineering (P) Ltd	Indian
14	2TR Split Air Conditioning System	Blue Star Ltd	Indian
		Voltas Ltd	Indian
		Carrier Aircon Ltd	Indian
		Amtrex Hitachi Appliances Ltd	Indian
		Samsung	Indian
		LG India	Indian
15	Ventilation System	Vision Controls	Indian
		Tracfujico	Indian
		ETA Engineering	Indian
16	Fire Fighting System	Techno Fire	Indian
		Mehta Fire	Indian
		Sruthi Fire	Indian
		Agnice	Indian
		Cherrytech	Indian
		BCFSL	Indian
		CTR	Indian
17	Lighting Fibxures	Philips India Ltd	Indian
		CGL	Indian
		Bajaj Electrical Ltd	Indian
		Wipro Ltd	Indian
		Thorn	Indian
		GE Lighting	Indian
18	Power & Control cable	SURYA ROSHNI	
		Polycab Cables Ltd	Indian
		Gemscab Ltd	Indian
		KEI Industries Ltd	Indian
		Krishna Electrical Industries	Indian
		Paramount Communication	Indian
		NICCO Corporation Ltd	Indian
		Ravin Cables Ltd	Indian
		Suyog Electrical Ltd	Indian
		Prew	Indian
		Teracom	Indian
		Universal Cables Ltd	Indian
		Bhansali Cables	Indian
		Manoj Cables	Indian
		Prime Cables	Indian



Dee Jay Patel

023



PLS
Jy. General Manager (Contracts)
P. Power Transmission Corpn, L
Barowalia House, Khalini, Shimla.

Sl.	Item Description	Source of Supply	
		Name	Nationality
19	Earthing material	Reputed Make	Indian
20	Steel Structure	Reputed make	Indian
21	Bus Post Insulator	Sarvana Insulators Ltd	Indian
		WS Industries India Ltd	Indian
		Modern Insulators Ltd	Indian
		Insulators & Electrical Co	Indian
		BHEL Ltd (Ceramic Business	Indian
		BIRLA NGK Insulators Pvt Ltd	Indian
22	EOT Crane	Reva Cranes & Hoist	Indian
		Anupam Industries Ltd	Indian
		Eddy Cranes Engineers Ltd	Indian
		Unique Industrial Handlers	Indian
		Indef Hercules Hoist Ltd	Indian
		Avon Cranes Pvt Ltd	Indian
		Dresser Flow Control	Indian
		Techno	Indian
		Armsel	Indian
		GRIP Engineers	Indian



Deviyaput

Hm
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTHMAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE -G SCHEDULE OF TECHNICAL PERSONNEL OF THE BIDDER

Deelapant



Hm
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**



Perkayanya

[illegible]

For Larsen & Toubro Limited
ECC Division

Lee Division



(K.Rajaram)
Head-Business Development & Contracts
EI&C Sector

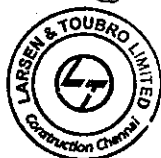
L7 LARSEN & TOUBRO

It's all about imagining

By: General Manager (Contracts)
H.P. Power Transmission Corp., Ltd.
Barewell House, Kharadi, Mumbai-2

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTH MAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE OF COMMENTS ON TECHNICAL DEVIATIONS




Dy. General Manager (Contracts)
H.P. Power Transmission Corp. Ltd.
Barowalia House, Khajji, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**





Dehaffert

Please refer enclosed comments attached

[illegible]

For Larsen & Toubro Limited
ECC Division

(K. Rajaram)

Head-Business Development & Contracts
El&C Sector

L7
LARSEN & TOUBRO
It's all about Imagination.

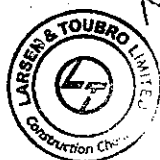
It's all about Imaging.

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

028

220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

SL. NO	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
GENERAL			
1.	Annexure-A SF6 Insulated metal enclosed switchgear GIS	Construction of 33kV and 220kV GIS is different but the technical specification for 33kV and 220kV is common, So please note that for 33kV GIS relevant clause only prevail.	
220kV GIS			
2.	SLD drawing no. HPPTCL/PALCHAN-01	Disconnecter for transformer feeder bay transformer side not shown in the SLD But as per industry practice same is required and we have considered in our offer.	
3.	SF6 GIS 4.05 p8	We wish to bring to your notice that a bay with any compartment with reduced pressure cannot be kept energized keeping in view of safety of operating personal.	
4.	SF6 GIS 10.7.3 p) p25	The lightning impulse withstand voltage of the proposed GIS is 1050 kVp to earth and across open contacts of Circuit Breaker. The Power frequency withstand is 460 kV to earth and across open CB. The above is as per the IEC requirements.	
5.	SF6 GIS 11.1 p27	Our offered Disconnector and earthing switches are designed with 5NC & 5NO spare contacts available further contact requirement shall be multiplied.	
6.	SF6 GIS 11.2.9 p29	The offered auxiliary switches are not adjustable as it is common practice on modern GIS.	
7.	SF6 GIS 11.2.17 p29	The offered disconnectors and earthing switches have one mechanical position indicator for the three phases.	
8.	SF6 GIS 14.1.4.1 g) p36	As per IEC standard power frequency withstand voltage is 3kV.	
9.	SF6 GIS Special requirement s of GIS 11. p56	Our offered equipment complies with the mechanical endurance of 10000 operations except for the fast acting earthing switch which has a mechanical endurance of 2000 operations. However we recommend that maintenance shall be carried after 5000 circuit breaker's operations.	
33kV GIS			
10.	Annexure-A SF6 Insulated metal enclosed switchgear GIS	- Since SF6/air bushing is not possible in 33kV GIS, we have considered all 33kV feeders as cable feeders only. - The cables required for 33kV line feeders from 33kV GIS to 33kV line take off gantry quantity is considered as under BPS 4(a). Hence separate cable quantity has not been considered for 33kV cable feeder.	



220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL

COMMENTS LIST

Date

08.12.09

SL. NO	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
11.	Annexure-A SF6 Insulated metal enclosed switchgear GIS	- As mentioned in BPS, LCC for 33kV GIS is not envisaged and the same is not considered in our BoQ. - The LV chamber which is part of GIS can be used as LCC.	
12.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 3.40	Gas enclosure shall be of stainless steel.	
13.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.03	NA for 33kV GIS	
14.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.04	NA for 33kV GIS	
15.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.05	There is separate gas compartment for CB and Bus bar compartment. Hence each compartment is independent of other. No gas barrier insulators is be provided	
16.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.08	NA for GIS. In GIS Breaker is of fixed type hence sliding type contacts are not possible.	
17.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.14	Flanges are not required and hence not provided.	
18.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.22	Our panels are EMI Protected as HV parts are inside the gas compartment.	
19.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.23	NA for 33kV GIS	
20.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.24	GIS Enclosure is made of Stainless Steel. Front Door is made of CRC Sheet.	
21.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.28	NA for 33kV GIS	

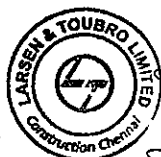


Derby



220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

SL.N O	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
22.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.29	NA for 33kV GIS	
23.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.32	No heater is required for HV part and hence not provided. However for LV part Heater with thermostat shall be provided. No fuses shall be provided	
24.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.34	Separate gas compartment are connected via gas tight Bushing. Adjacent feeders are connected via Plug in Busbar system which does not require gas work.	
25.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.35	Monitoring via temperature-compensated pressure sensors. Density sensors are having one alarm stage. Switching is made in the vacuum of circuit breaker only and all dielectric values are kept also at atmospheric pressure.	
26.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 4.40	With our design all drive mechanism are accessible from front or rear of the panel so no inter bay width is required. All drives are located in LV compartment.	
27.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 5.00	Our switchgear has Plug-in Technology. Each feeder is connected to its adjacent feeder using Plug-in Busbar. Hence Expansion joints/Bellows not required	
28.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 6.00	Viewing windows shall be provided for Bus bar compartment, CB compartment shall not have viewing window.	
29.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 8.00	Our panels are equipped with pressure diaphragms, having a response pressure of >200 kPa, whereby the rated pressure is 130 kPa. We are providing Stainless Steel Enclosures. Overpressure test is done as Routine Test at approx 1.7 times the rated Overpressure. Pressure testing at 5 times the design pressure is therefore not possible.	
30.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 9.00	We are providing main earthing bar which will run along the complete switchyard. Size of earthing bar is 40 x10 sqmm.	
31.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.1	In case of back to back capacitor bank / capacitor feeder requirement, we shall providing CB which is type tested for C2 duty. Outgoing feeder we shall providing CB with C1 duty.	
32.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.3	Variation of trip Coil Voltage is 85-110%. Test Duties according to IEC-62271	



220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

SL.N O	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
33.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.4.5	Interruption takes place inside the vacuum interrupter. SF6 gas is used only to provide insulation and maintain clearance. Hence SF6 gases is not affected and no by products are formed. So no absorbing product is required.	
34.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.5.1a	Both manual and motorized operation is possible. The Cabinet shall have IP4X protection	
35.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.5.1c	Our CB designed as per IEC having normal and auto reclosing duty.	
36.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.5.2b	NA for 33 kV GIS	
37.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.5.2g	NA for 33 kV GIS	
38.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.5.4	NA	
39.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.6a	Drawings showing contact in Open and closed position can be provided	
40.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 10.7.2	Our rated filling pressure is 130KPa. According to IEC 62271-200 Clause: 7.103 routine pressure Test is not applicable, however a routine test is done at 50kPa overpressure. The other routine test shall be performed at our INABB works	
41.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 11.1	Disconnecter is of 3 pole type, group operated.	
42.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 11.2.1	Disconnecter is of 3 pole type, group operated.	
43.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 11.2.14	Safety ground switch is not provided as earthing is done through vacuum circuit breaker in conjunction with three position switch	



Deelapet



220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

SL.N O	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
44.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 11.2.15	NA for 33kV GIS	
45.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 11.2.19	Visual inspection window shall be provided in bus bar compartment only to view the position of disconnector switch. Viewing window shall not be provided for metering panel. No separate rating plate for disconnector switch is provided	
46.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 11.2.20	Padlock will be provided for CB, not for disconnector. However mechanical interlock shall be provided between disconnector and CB	
47.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 12	No separate Safety ground switch is provided	
48.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 13	NA for 33kV GIS	
49.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14	In our design CT terminals are brought from the back to front of LVC where there are terminated, hence no marshalling box is required hence not offered	
50.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14.1.2	VTs shall be cast resin Metal Enclosed Type and plug-in type	
51.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14.1.2a	Both Line VTs and Bus VTs are of plug-in type and are mounted in air However Sockets are gas insulated.	
52.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14.1.2 F(b)	Both Line VTs and Bus VTs are of plug-in type and are mounted in air However Sockets are gas insulated.	
53.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14.1.2 F(c)	Fuses are not provided. We will provide MCBs for protection of PTs against over current and short circuit on secondary side	
54.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14.1.2 F(e)	Maximum Burden that can be offered is 15VA at CL 0.2.	
55.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 14.1.2 F(f)	NO marshalling box is provided.	



220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

SL.N O	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
56.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 15	Outdoor bushing not applicable for 33kV GIS	
57.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 16	Surge arrester shall be mounted inside the 33kV GIS panel in cable compartment. SA shall be of Class 1. SA offered are not SF6 filled.	
58.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 18	Our panel is tested for 0.5g. type test for the same shall be submitted.	
59.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 20	SF6 used is as per IEC. However no type test can be provided.	
60.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause c	There are no gas bottles provided for 33KV GIS. We use vacuum type CB which is of fixed type and sealed inside gas tank	
61.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause e	Switching operation takes place inside the vacuum CB hence SF6 gas is not exposed to arcing by products.	
62.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause f	Drying agents are provided. Filters for arc-by products are not required, as all switching operations are made in vacuum CB only and are therefore not offered.	
63.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 21	SF6 gas monitoring devices and alarm circuit -Monitoring via temperature-compensated pressure sensors. Density sensors are having one alarm stage. Switching is made in the vacuum of circuit breaker only and all dielectric values are kept also at atmospheric pressure,	
64.	Annexure-A SF6 Insulated metal enclosed switchgear GIS clause 21	We use plug-in technology for cable termination. Cable Plugs shall be provided for cable termination	
65.	Annexure-A SF6 Insulated metal enclosed switchgear GIS Drawing No HPPTCL/PALVHAN-01	Plug-in type bus-PT are being provided on bus-coupler panel. No separate panels are being offered for bus VT.	
66.	Annexure-A SF6 Insulated metal enclosed switchgear GIS HPPTCL/PALVHAN-01	As shown in SLD line side disconnector with grounding switch and high speed fault making grounding switch is not applicable for 33kV GIS	
67.	Annexure-A SF6 Insulated metal enclosed switchgear GIS	Each gas compartment has its own pressure sensor independent of the other gas tank.	
68.	SLD drawing no. HPPTCL/PALCHAN-01 and BPS	As per industry practice we suggest that transformer shall be provided with cable termination box to connect the cable from transformer to 33kV GIS. And We have considered only outdoor cable termination in our offer as mentioned in the BPS. And we have not considered cable box for the transformer connection to the 33kV side.	

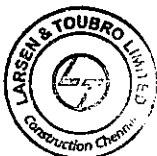


Deepest



220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

SL.N O	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
OPGW system			
69.	General	- OPGW system included in our scope as per client clarifications dated 27/10/09 - OPGW system has been considered for 220kV Line bays (i.e 1 no. line bay). - The length of the 220kv line is assumed as 3km. - OPGW 33kV system is not envisaged and the same is not considered.	
CRP& SAS			
70.	Doc No-Volume - II; SECTION - 5A & 5B CRP & SCADA (Clause No-5.A.19 Page no-33/90)	We have considered Auto-Reclose function as built in BCU.	
71.	Doc No-Volume - II; SECTION - 5A & 5B CRP & SCADA (Clause No-5.A.28.1/ Page no-42 of 90)	We have considered centralized Duplicate busbar protection scheme for 220kV Busbar.	
72.	Doc No-Volume - II; SECTION - 4D SWG PANEL 36kV : 33kV Indoor Switchgear Panel (Clause No- 5.6(ii)/Page no-13 of 20) Doc No-Volume - II; SECTION - 5 C SAS : SAS : (Clause No- 14.0(ii)/Page no-39 to 43)	Redundancy algorithms are currently not defined in IEC 61850. Communication architectures available as on date using two ports are not entirely transparent and Vendor specific. It doesn't support Interoperability. such recommends devices with single communication port attached to a switch to form a single fault tolerant ring. We have offered Numerical Relay/BCU with one front RJ45 port for PC communication port & one rear FO port on IEC 61850.	
73.	Doc No-Volume - II; SECTION - 5 C SAS : SAS : (Clause No- 1.2/Page no-3 to 43)	We propose SAS with single fault Tolerant Ethernet ring as accepted by major utilities. It also offers an Improved system recovery time in the event of failure of one fiber.	
74.	SAS 3.3.2	All the parameters like Voltage, Current, Powerfactor, Frequency, MW, MWH, MVARH, MVAR available through BCU in SAS system, hence we have not included Transducers	
75.	SAS 3.3.2 BPS D	We have considered only 3 bays for 220kV and 6 bays for 33kV for part of SAS offer.	



Deelap



035

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khallini, Shimla-5

220/33KV SUBSTATION AT PALCHAN IN KULLU DISTRICT, HPPTCL	
COMMENTS LIST	
Date	08.12.09

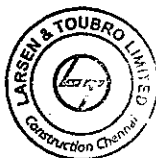
SL.N O.	SPEC / BID CLAUSE NO.	COMMENTS ON TECHNICAL SPECIFICATION	REMARKS
76.	BPS PLCC F	PLCC is considered for only link between Palchan and AD hydro switchyard. PLCC for the other end is not considered.	
77.	33kv control and protection panel BPS E2	For 33kV feeder BCU has been considered which shall be provided with control and protection function, hence no separate protection and control panel has been provided.	
78	Amendment/ Replies to PBQ	Our offer for OPGW System consists of only the below mentioned items. Any additional requirements will have its price implications 1) 1no. FOTE equipment at each end 2) 1 set of mandatory spares 3) 1 no. Fibre Optic Distribution panel at each end. 4) 1 no. Laptop 5) 1 no. Desktop 6) 1 no. Network Management Software	
79	Mandatory Spares	As per the BPS, the quantity is mentioned as Lump Sum & the breakup is not available in the technical Specification also. Hence we haven't considered any spares in our offer.	
80	Operation & maintenance for 1year as per ECC clause 4.30.1	We have considered only man power for doing O&M works. Any equipment/ material/spare required for doing O&M will be supplied by HPPTCL as free issue to us.	



Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**DESIGN, ENGINEERING, MANUFACTURING, TESTING OF
EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER
ALLIED WORKS SUCH AS EARTHMAT & CIVIL WORKS ON TURN
KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN,
DISTRICT KULLU-H.P. (GIS)**

SCHEDULE OF LITIGATION HISTORY



Deedhert

Wm

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

**BIDDER:
LARSEN & TOUBRO LIMITED
ECC DIVISION, EI&C SECTOR,
CHENNAI, INDIA.**

037



DESIGN, ENGINEERING, MANUFACTURING, TESTING OF EQUIPMENT, ERECTION,
COMMISSIONING ALONG WITH OTHER ALLIED WORKS SUCH AS EARTHMAT & CIVIL WORKS ON
TURN KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN, DISTRICT KULLU-H.P. (GIS)

Litigation History

Name of the Bidder		M/s. Larsen & Toubro Limited, ECC Division	
Year	Award FOR or AGAINST Applicant	Name of client, cause of litigation and matter in dispute	Disputed amount
		NIL	

Date 08.12.2009
Place: Chennai

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

For Larsen & Toubro Limited
ECC Division

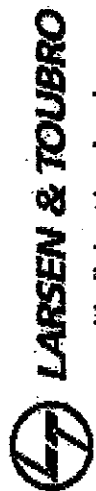


(Signature)
(K.Rajaram)

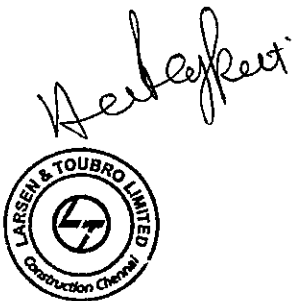
Head-Business Development & Contracts
EI&C Sector



(Signature)



Price Schedule




Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



LARSEN & TOUBRO LIMITED

Engineering Construction & Contracts Division

Headquarters : Mount Poonamallee Road, Manapakkam, P.B.No.979, Chennai - 600 089, INDIA
Tel.: +91-44-22526000/8000 Fax : +91-44-2249 3317 / 044-22526345

Web : www.lntec.com
www.larsentoubro.com

Ref: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/07
E-mail: krj@lntec.com

08th December, 2009

To
Dy. General Manager
M/s. Himachal Pradesh Power Transmission Corporation Limited
Barowalia House
Khalini, Shimla (H.P.)
Pin Code - 171 002

DISCOUNT LETTER

Dear Sir,

Subject: Design, Engineering, Manufacturing, Testing of Equipment, Erection, Commissioning along with other allied Works such as Earthmat & Civil works on Turn Key Basis for 220/33kV Substation at Palchan, District Kullu H.P. (GIS)
Specification No. DGM/PALCHAN SUBSTATION/2/2009

Ref: 1. Our Offer Letter No. LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/01 dated 18.12.2009
2. Our Price Letter No. LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/04 dated 18.12.2009

With reference to the above, we are pleased to offer discount of 4 % (four per cent only) on our quoted discounted prices of the respective supply and erection schedules.

We hereby confirm that this discount letter shall form part and parcel of our price offers vide letter under reference (Sl.No.ii) respectively.

We trust you will find our offer in line with your requirements and look forward to the pleasure of associating with you in this project.

Thanking you and assuring you of our best services at all times.

Yours faithfully,
For LARSEN & TOUBRO LIMITED
ECC DIVISION

(Signature)
(K.Rajaram)
Head Business Development & Contracts
EI&C Sector



(Signature)
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

Regd. Office: L&T House, Ballard Estate, P.O.Box 278, Mumbai - 400 001. Tel.:022- 55525656 Fax: +022-55525858



(Signature)



LARSEN & TOUBRO LIMITED

Engineering Construction & Contracts Division

Headquarters : Mount Poonamallee Road, Manapakkam, P.B.No.979, Chennai - 600 089, INDIA
Tel.: +91-44-22526000/8000 Fax : +91-44-2249 3317 / 044-22526345

Web : www.lntecc.com
www.larsentoubro.com

Ref: LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/04
E-mail: krj@lntecc.com

08th December, 2009

To

Dy. General Manager

M/s. Himachal Pradesh Power Transmission Corporation Limited

Barowalia House,

Khalini, Shimla (H.P)

Pin Code - 171 002.

PRICE BID

Dear Sir,

Subject: Design, Engineering, Manufacturing, Testing of Equipment, Erection, Commissioning along with other allied Works such as Earthmat & Civil works on Turn Key Basis for 220/33kV Substation at Palchan, District Kullu-H.P. (GIS)
Specification No.: DGMC/PALCHAN SUBSTATION/2/2009

Ref: Our Offer Letter No. LTCD/EI&C/HPPTCL-PALCHAN/NJ/BID/01 dated 18.12.2009

In connection with the above, enclosed please find our **PRICE BID** in Original with Three copies.

We trust you will find our capabilities and offer in line with your requirement and look forward to the pleasure of associating ourselves with you in this prestigious project.

Thanking you and assuring you of our best services at all times.

Yours faithfully,

For LARSEN & TOUBRO LIMITED
ECC DIVISION

K. Rajaram
(K. Rajaram)

Head Business Development & Contracts
EI&C Sector



Encl.: a/a

Deepesthi

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn, Ltd.
Barowalia House, Khalini, Shimla-2

HIMACHAL PRADESH POWER TRANSMISSION CORPORATION LIMITED, BAROWALLA HOUSE, KHALINI, SHIMLA

(Price Break UP)
Price Schedule Supply



TENDER SPECIFICATION No.: DGMC / PALCHAN SUB STATION /2/2009

NAME OF WORK: CONSTRUCTION OF 220/33KV SUB STATION AT PALCHAN IN KULLU DISTRICT

Bidder's Name and address
M/s. Larsen & Toubro Limited,
ECC Division, E&C Sector, E&GP OC
Mount Poonamallee Road,
Manipalakkam, P.O.Box 979,
Chennai - 600089

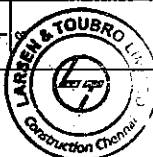
Devi Jayaraj

PRICES IN INR														
Sr. No.	Description of Material	Unit	Quantity		Ex-Works Price	Excise Duty & Cess	Sales Tax / VAT	Unit Freight	Insurance	FOR	Total FOR Destination Cost			
			Present	Future							Present (13 = 4 x 12)	Future (14 = 5 x 12)	Total (15 = 13 + 14)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NOT IN OUR SCOPE (TO BE SUPPLIED BY HP POWER TRANSMISSION CORPORATION LIMITED (OWNER))														
A	POWER TRANSFORMER	Nos.												
1	25 / 31.5 MVA, 220 / 33 kV Three Phase Transformer including Bushing, Accessories and First Filling of Oil	Nos.												
2	Oil Storage Tank	Nos.												
3	Oil Sampling Bottle	Nos.												
4	Micro Gas Analyzer / On-line DGA / PPM Meter	Nos.												
5	250 KVA; 33 / 0.433 kV Three Phase Transformer including Bushing, Accessories and First Filling of Oil	Nos.	2		2	3,85,790	INCLUDED	5,114	6,480	3,97,384	7,94,768			7,94,768
B	245 KV/ 1600 A, 60 KA SF6 Gas Insulated TRANSFORMER BAY MODULE each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Surge Arresters (196 W), SF6 Gas Monitoring System for complete Bay, LCC, Three 1 - Phase SF6 Ducts and SF6 / Oil Bushing to connect to 220 / 33 kV, 25 / 31.5 MVA Transformer and Accessories with GIS etc to complete Transformer Bay Module	Nos.	1	1	2	4,07,37,899	INCLUDED	28,40,909	6,84,263	4,42,63,071	4,42,63,071	4,42,63,071		8,85,26,142
2	245 KV, 2000 A, 50 GAS F6 Gas Insulated FEEDER BAY MODULE each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnector with Grounding Switch, Line Disconnector with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF6 Gas Monitoring System for complete Bay, LCC, GIS Duct and Air / SF6 Bushing Termination Enclosure and Accessories with GIS etc to complete Feeder Bay Module.	Nos.	1	1	2	3,88,08,181	INCLUDED	28,40,909	6,51,850	4,23,00,940	4,23,00,940	4,23,00,940		8,46,01,880



Dy. General Manager (Contracts) -
H.P. Power Transmission Corpn. Ltd. (44)
Barowalla House, Khalini, Shimla-2

Sr. No.	Description of Material	Unit	Quantity		Ex-Works Price	Exchg Duty & Cess	Sales Tax/ VAT	Unit Freight	Insurance	FOR	Total FOR Destination Cost			
			Present	Future							Present (13 = 4 x 12)	Future (14 = 5 x 12)	Total (15 = 13 + 14)	
1	245KV, 4000 A, 50 KA, 3 Single Phase (isolated) Units SF6 Gas Insulated, Metal Enclosed BUS BARS each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of Circuit Breaker Bay Module Each Bus Bar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch.	Nos.	4	5	6	7	8	9	10	11	12	13	14	15
			2	2	4				28,40,909		28,40,909	56,81,818	56,81,818	1,13,63,636
4	245 KV, 4000 A, 50 KA SF6 Gas Insulated BUS COUPLER BAY MODULE comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Disconnectors with Safety Grounding Switches SF6 Gas Monitoring System for complete Bay, LCC etc.	Nos.	1		1	2,21,95,614	INCLUDED		28,40,909	3,72,814	2,54,09,337	2,54,09,337		2,54,09,337
5	245 KV-CVT with Junction Box.	Nos.	3	3	6	4,05,079	INCLUDED		14,205	6,804	12,78,264	12,78,264		25,56,528
6	198 KV Lightning Arrester with Counter and Leakage Meter	Nos.	3	3	6	81,016	INCLUDED		710	1,361	83,087	2,49,261	2,49,261	4,98,522
C	36 KV, 2000 A, 40 KA for 3 sec., SF6 Gas Insulated, Metal Enclosed BUS BARS each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of Circuit Breaker Bay Module. Each Bus Bar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch													
1	36 KV 1600A SF6 Gas Insulated FEEDER BAY MODULE each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Line Disconnector with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF6 Gas Monitoring System for complete Bay, LCC, GIS-Duct-end-Air-SF6-Bushing-Termination-Enclosure and Accessories with GIS etc-to complete Feeder/Bay Module	Nos.	3	4	7	37,56,824	INCLUDED		14,205	63,136	38,36,165	1,15,08,495	1,53,44,860	2,68,53,155
2	36KV 2000 A SF6 Gas Insulated BUS COUPLER BAY comprising of SF6 Gas Insulated Circuit Breaker Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, SF6 Gas Monitoring System for complete Line Panel	Nos.	1		1	32,09,563	INCLUDED		14,205	53,910	32,77,678	32,77,678		32,77,678
3	36 KV, 1600 A SF6 Gas Insulated POWER TRANSFORMER PANEL each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, Surge Arrester (30 KV), SF6 Gas Monitoring System for complete Power Transformer Panel	Nos.	1	1	2	32,43,770	INCLUDED		14,205	54,485	33,12,460	33,12,460	33,12,460	66,24,920



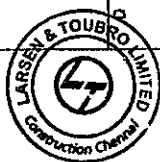
Devi Prasad

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khallni, Shimla-2

043



Sr. No.	Description of Material	Unit	Quantity		Ex-Works Price	Excise Duty & Cess	Sales Tax / VAT	Unit Freight	Insurance	FOR	Total FOR Destination Cost		
			Present	Future							Present (13 = 4 x 12)	Future (14 = 5 x 12)	Total (15 = 13 + 14)
1	36 KV, 630 A SF6 GAS INSULATED 250 KVA, L. T. TRANSFORMER PANEL-each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, SF6 Gas Monitoring System for complete Power Transformer Panel	Nos.	4	5	27,88,332	INCLUDED	INCLUDED	14,205	46,835	28,49,372	13	14	28,49,372
4	SUBSTATION AUTOMATION SYSTEM Complete Sub Station Automation System Including Hardware and Software for the Sub Station and Remote Control Station alongwith Associated Equipments as per Technical Specification	Lot	1	1	93,61,825	INCLUDED		82,727	1,57,248	96,01,800			96,01,800
BAY CONTROL UNITS													
1	220KV Bays	Nos.	3	2									
2	33KV Bays	Nos.	6	5									
220 KV CONTROL AND RELAY PANEL													
E1	Circuit Breaker Control Panel	Nos.	1	1	5,40,105	INCLUDED		4,773	9,072	5,53,950	5,53,950		5,53,950
a)	With Auto Reclose	Nos.	2	2	5,14,386	INCLUDED		4,545	8,840	5,27,571	10,55,142		21,10,284
b)	Line Protection Panel (Main I + Main II)	Nos.	1	1	12,85,965	INCLUDED		11,364	21,600	13,18,929	13,18,929		26,37,858
3	Bus bar Protection Panel	Set	1	1	24,94,772	INCLUDED		22,045	41,904	25,58,721	25,58,721		51,17,442
4	220 KV/Double Bus Bar Protection Transformer Protection Panel - H. V. Side	Nos.	1	1	8,07,586	INCLUDED		7,136	13,565	8,28,287	8,28,287		16,56,574
E2	33 KV CONTROL AND RELAY PANEL	Nos.											
1	Circuit Breaker Control Panel	Nos.	3	4	4,88,667	INCLUDED		4,318	8,208	5,01,193	15,03,579	5,01,193	35,08,361
a)	With Auto Reclose	Nos.	3	1	4,88,667	INCLUDED		4,318	8,208	5,01,193	15,03,579	5,01,193	20,04,772
b)	With out Auto Reclose	Nos.	3	1	4,88,667	INCLUDED		4,318	8,208	5,01,193	15,03,579	5,01,193	20,04,772
2	Line Protection Panel	Nos.	3	4									
3	Transformer Protection Panel - L. V. Side	Nos.	1	1									
PLCC for 220 KV LINE FEEDER													
1	2000 A, 0.5 mH / 10 mH, 50 KA Line Traps	Nos.	2	2	4,52,650	INCLUDED		6,000	7,603	4,66,253	9,32,526		18,65,052
2	Coupling Device (Phase to Phase)	Nos.	2	2	75,615	INCLUDED		1,002	1,270	77,887	1,55,774		3,11,548
3	HF Cable	LS	1	1	12,602	INCLUDED		167	212	12,881	12,981		25,962
4	Carrier Equipment (for Speech + Protection and for Speech + Data)	Nos.	3	3	3,21,491	INCLUDED		4,261	5,400	3,31,152	9,93,456		19,86,912
5	Protection Coupler	Nos.	2	2	1,37,367	INCLUDED		1,821	2,307	1,41,495	2,82,990		5,65,980
6	Print Testing Kit	Set	1	1	1,09,307	INCLUDED		1,449	1,836	1,12,592	1,12,592		1,12,592
7	EPBAX (24 / 8) with Telephone Sets	Set	1	1	2,82,295	INCLUDED		3,742	4,742	2,80,779	2,80,779		2,80,779
F.1	FOTE Equipment	Set	1	1	98,37,532	INCLUDED		1,30,398	1,65,240	1,01,33,270	1,01,33,270		1,01,33,270
AIR CONDITIONER AND VENTILATION SYSTEM													
1	Split AC (Capacity - 2T)	Nos.	10	10	30,863	INCLUDED		409	518	31,780	3,17,900		3,17,900
2	Ventilation System for 220KV & 33KV GIS Hall	LS	1	1	20,95,752	INCLUDED		30,068	38,102	21,63,922	21,63,922		21,63,922
H	LT SWITCHBOARD	Nos.	1	1	32,14,913	INCLUDED		42,614	54,000	33,11,527	33,11,527		33,11,527
1	415V Main Switchboard	Nos.	1	1	14,80,345	INCLUDED		19,822	24,865	15,24,832	15,24,832		15,24,832
2	415V A/G Distribution Board	Nos.	1	1	5,76,485	INCLUDED		7,641	9,883	5,83,809	5,83,809		5,83,809
3	220V DCDB	Nos.	2	2							11,87,618		11,87,618



Deelapet

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



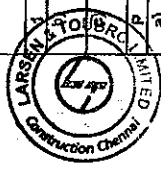
Sr. No.	Description of Material	Unit	Quantity		Total	Ex-Works Price	Excise Duty & Cess	Sales Tax / VAT	Freight	Insurance	FOR	Total FOR Destination Cost		
			Present	Future								Present (13 + 4 x 12)	Future (14 + 5 x 12)	Total (15 + 13 + 14)
1	48V DC DB BATTERIES	Nos	4	5	6	7	8	9	10	11	12	13	14	15
2	220V, 400 AH	Set	2		2	3,67,709	INCLUDED		4,874	5,176	3,78,759	7,57,518		7,57,518
3	48V, 400 AH	Set	2		2	6,82,015	INCLUDED		8,775	11,120	6,81,910	13,63,820		13,63,820
4	Bidder shall estimate and indicate the AH Capacities of the Batteries to meet the Functional Requirement	Set	2		2	1,44,440	INCLUDED		1,915	2,428	1,46,781	2,97,562		2,97,562
J	BATTERY CHARGER SYSTEM	Set	2		2									
1	220V	Set	2		2	4,97,668	INCLUDED		6,597	8,359	5,12,624	10,25,248		10,25,248
2	48V	Set	2		2	3,70,358	INCLUDED		4,909	6,221	3,81,488	7,62,976		7,62,976
K	DG SET ALONGWITH CONTROL PANEL (100 KVA, 440 V for 220 KV Sub Station)	Set	1		1	19,28,948	INCLUDED		25,568	32,400	19,86,916	19,86,916		19,86,916
L	FIRE PREVENTION AND EXTINGUISHING SYSTEM	Set												
1	Nitrogen Injection Fire Prevention & Extinguishing System for Transformer	Set	1		1				8,438	10,692	6,55,683	6,55,683		13,11,368
2	Fire Protection for GIS cum Control Room Building, etc. (Portable type the Extinguishers System)	Lot	1		1	7,02,704	INCLUDED		10,082	12,776	7,25,562	7,25,562		14,51,124
M	ILLUMINATION SYSTEM	Lot	1		1	38,97,188	INCLUDED		51,657	65,460	40,14,303	40,14,303		80,28,606
1	Control Room / GIS Building	LS	1		1									
2	Switchyard Lighting	LS	1		1									
3	Solar Light System for Street Light	LS	1		1									
N	Power Cables and Copper Conductor Armoured Control Cables alongwith: Lugs, Glands and Straight Joints	LS	1		1	27,70,729	INCLUDED		36,726	48,539	28,53,994	28,53,994		57,07,988
O	33KV XLPE POWER CABLE AND ACCESSORIES													
1	XLPE POWER CABLE 3.5x x 300 Sq.mm	km	0.5		0.5	6,33,981	INCLUDED		8,403	10,619	6,53,093	3,26,517		3,26,517
2	PVC POWER CABLE 3.5x x 90 Sq. mm	km	0.2		0.2	3,13,081	INCLUDED		4,150	5,259	3,22,490	64,498		64,498
3	3.5x x 70 Sq. mm	km	0.5		0.5	2,53,978	INCLUDED		3,856	4,268	2,61,610	1,30,805		1,30,805
4	3.5x x 35 Sq. mm	km	0.2		0.2	1,48,729	INCLUDED		1,945	2,465	1,51,139	30,228		30,228
5	4x x 16 Sq. mm	km	0.5		0.5	1,01,334	INCLUDED		1,343	1,702	1,04,379	52,190		52,190
6	4x x 4 Sq. mm	km	1		1	50,163	INCLUDED		665	842	51,660	51,660		51,660
7	HR FRLS CONTROL CABLE 2x x 2.5 Sq.mm	km	1		1	48,899	INCLUDED		622	798	48,309	48,309		48,309
8	4x x 2.5 Sq. mm	km	2		2	80,000	INCLUDED		1,080	1,344	82,404	1,64,808		1,64,808
9	7x x 2.5 Sq. mm	km	1		1	1,35,058	INCLUDED		1,764	2,235	1,37,058	1,37,058		1,37,058
10	10x x 2.5 Sq. mm	km	0.75		0.75	1,86,401	INCLUDED		2,471	3,131	1,92,003	1,44,002		1,44,002
11	12x x 2.5 Sq. mm	km	0.5		0.5	2,21,507	INCLUDED		2,936	3,721	2,28,184	1,14,082		1,14,082
12	16x x 2.5 Sq. mm	km	0.5		0.5	2,82,338	INCLUDED		3,875	4,910	3,01,123	1,50,562		1,50,562
13	19x x 2.5 Sq. mm	km	0.2		0.2	3,43,738	INCLUDED		4,566	5,774	3,54,068	70,814		70,814
14	20x x 4 Sq. mm	km	1		1	63,182	INCLUDED		838	1,061	65,091	65,091		65,091
15	4x x 4 Sq. mm	km	1		1	1,15,647	INCLUDED		1,633	1,942	1,19,122	1,19,122		1,19,122
16	7x x 4 Sq. mm	km	1		1	2,06,179	INCLUDED		2,738	3,463	2,12,375	2,12,375		2,12,375
17	33 KV XLPE CABLE for connecting Transformer to 33 KV GIS of size 1 x 630 sq. mm. (Three Cables with one Spare Cable in each Circuit)	km	1		1	9,32,917	INCLUDED		12,613	15,983	9,61,513	9,61,513		9,61,513



Dy. General Manager (Contracts) -
H.P. Power Transmission Corpn. Ltd. CAS
Barowalia House, Khallni, Shimla-2

Sr. No.	Description of Material	Unit	Quantity		Ex-Works Price	Excise Duty & Cess	Sales Tax / VAT	Unit Freight	Insurance	FOR	Total FOR Destination Cost		
			Present	Future							Present (13 = 4 x 12)	Future (14 = 5 x 12)	Total (15 = 13 + 14)
2	33kV Indoor Termination Suitable for above Cable	Nos	4	5	7	8	9	10	11	12	13	14	15
	33kV Outdoor Termination Suitable for above Cable	Nos	3	3	5,015	INCLUDED		66	84	5,165	15,495	15,495	30,990
	GROUNDING / EARTHING SYSTEM	Lot	1	1	21,49,499	INCLUDED		75,977	36,104	22,61,570	22,61,570	-	22,61,570
a)	40 mm MS Rod for Earthing	LS	1	1									
b)	GIS / MS Flats	LS	1	1									
c)	Electrodes	LS	1	1									
d)	Bidder to estimate and fill the quantities as per his own requirement	LS	1	1									
e)	Lightning Mast / GS Shield Wire (*)	LS	1	1									
f)	(*) Bidder to Estimate and Design	LS	1	1									
Q	STEEL STRUCTURES FOR TOWERS, BEAMS	LS	1	2	15,45,592	INCLUDED		68,289	25,961	16,39,842	16,39,842	-	32,79,684
R	EOT CRANE	Set	1	1									
a.	3.5T for 220KV GIS ROOM	Set	1	1	6,90,553	INCLUDED		9,153	11,599	7,11,305	7,11,305	-	7,11,305
b.	2.5T for 33KV GIS ROOM	Set	1	1	4,63,529	INCLUDED		6,144	7,788	4,77,459	4,77,459	-	4,77,459
c.	Movable Ladder of suitable Capacity for 220 KV 33KV GIS Room	Nos	2	2	1,28,597	INCLUDED		1,705	2,160	1,32,462	2,64,924	-	2,64,924
S	Insulator Strings / Disc Insulators, Hardware, Conductor, Bus Bar Material, Cable Trays, Clamps, Connectors, including Equipment Connectors, Pipes for Equipment & Lighting, all Accessories etc	LS	1	1	12,96,736	INCLUDED		17,188	21,781	13,35,705	13,35,705	-	26,71,410
T	MANDATORY SPARES												
	Project Scope of Technical Specification												
a)	220/33KV Transformer	LS	1	1									
b)	245 KV Circuit Breaker	LS	1	1									
c)	220 KV Current Transformer	LS	1	1									
d)	245KV CVT	LS	1	1									
e)	245KV Potential Transformer	LS	1	1									
f)	198KV Surge Arrester	LS	1	1									
g)	245KV Isolators & Earth Switch	LS	1	1									
h)	36KV Circuit Breaker	LS	1	1									
i)	36KV Current Transformer	LS	1	1									
j)	36KV Potential Transformer	LS	1	1									
k)	36KV Isolators & Earth Switch	LS	1	1									
l)	30KV Surge Arrester	LS	1	1									
m)	Lightning System	LS	1	1									
n)	Battery	LS	1	1									
o)	Battery Charger	LS	1	1									
p)	Relay & Protection Panels	LS	1	1									
q)	Sub Station Automation	LS	1	1									
r)	LT Switchgear	LS	1	1									
s)	DG Set	LS	1	1									
t)	Optic Fibre Cable	LS	1	1									
U	TESTING AND MAINTENANCE EQUIPMENT												
1	Moggar 5 KV (Motorized)	No	1	1	70,096	INCLUDED		1,006	1,274	72,376	72,376	-	72,376

SINCE THE LIST IS NOT AVAILABLE IN THE TECHNICAL SPECIFICATION WE HAVEN'T QUOTED FOR THIS ITEM



Deelghari

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khallini, Shimla-2

046



Sr. No.	Description of Material	Unit	Quantity		Ex-Works Price	Excise Duty & Cess	Sales Tax / VAT	Unit Freight	Insurance	FOR	Total FOR Destination Cost			
			Present	Future							Present (13 = 4 x 12)	Future (14 = 5 x 12)	Total (15 = 13 + 14)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Meggar 1 KV (Motorized)	Nos	1	1	1	7,128	INCLUDED		102	130	7,360	7,360	-	7,360
2	Digital Multimeter	Nos	2	2	2	10,099	INCLUDED		145	184	10,428	20,856	-	20,856
3	Signal Generator	Nos	1	1	1	32,14,913	INCLUDED		42,614	54,000	33,11,527	33,11,527	-	33,11,527
4	Micro - ohm Meter	Nos	1	1	1	3,78,994	INCLUDED		5,438	6,890	3,91,322	3,91,322	-	3,91,322
5	D - Spanner Set (Insulated)	Nos	2	2	2	583	INCLUDED		10	12	705	1,410	-	1,410
6	Ring - Spanner Set (Insulated)	Nos	2	2	2	713	INCLUDED		10	13	736	1,472	-	1,472
7	Torque Wrench Set	Nos	2	2	2	11,881	INCLUDED		170	216	12,287	24,534	-	24,534
8	Insulating Gloves	Set	5	5	5	1,485	INCLUDED		21	27	1,533	7,665	-	7,665
9	Helmet	Set	5	5	5	535	INCLUDED		8	10	553	2,765	-	2,765
10	Spliced Ladders 5 metre	Set	1	1	1	42,770	INCLUDED		614	778	44,162	44,162	-	44,162
11	Spliced Ladders 10 metres	Set	1	1	1	76,036	INCLUDED		1,091	1,392	78,509	78,509	-	78,509
12	Polyamide Braided White Nylon Rope - 12 mm	Set	2	2	2	2,19,793	INCLUDED		3,153	3,966	2,26,942	4,53,894	-	4,53,894
13	Polyamide Braided White Nylon Rope - 14 mm	m	100	100	100	3,564	INCLUDED		51	65	3,680	3,680	-	3,680
14	Polyamide Braided White Nylon Rope - 20 mm	m	100	100	100	4,752	INCLUDED		68	86	4,906	4,906	-	4,906
15	Gas Evacuating and Refilling Device	Set	1	1	1	33,97,875	INCLUDED		128	162	9,201	9,201	-	9,201
16	Gas Leakara Monitor	Set	1	1	1	71,284	INCLUDED		48,750	61,776	35,08,401	35,08,401	-	35,08,401
17	Dew Point Meter	Nos	2	2	2	4,15,824	INCLUDED		1,023	1,298	73,603	1,47,206	-	1,47,206
18	Relay Test Kit	Nos	1	1	1	26,13,750	INCLUDED		5,966	7,560	4,29,350	4,29,350	-	4,29,350
19	Synchronizing Trolley	Set	1	1	1	1,47,886	INCLUDED		37,500	47,520	26,98,770	26,98,770	-	26,98,770
20	Time Synchronization Equipment	Set	1	1	1				1,960	2,484	1,52,330	1,52,330	-	1,52,330
21		Lot	1	1	1									
22														
INCLUDED IN SUBSTATION AUTOMATION SYSTEM														

Note : As per Clause No. 5.7.2 of Section No. 5 (SCC) Volume No.-I, the Bidder has to quote for Recommended / Optional Spares. But we don't envisage any Recommended Spares

Date : 09/12/2009
Place : Chennai

For LARSEN & TOUBRO LIMITED

ECC DIVISION

(Signature)

(K. RAJARAM)

Head - Business Development & Contracts

El&C Sector



(Signature)
Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. L
Barowalia House, Khalini, Shimla-



HIMACHAL PRADESH POWER TRANSMISSION CORPORATION LIMITED, BAROWALIAS HOUSE, KHALINI, SHIMLA

(Price Break UP)
Price Schedule Erection
TENDER SPECIFICATION No.: DGMC / PALCHAN SUB STATION /2/2009

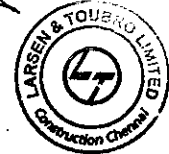
NAME OF WORK : CONSTRUCTION OF 220/33KV SUB STATION AT PALCHAN IN KULLU DISTRICT

Bidder's Name and address
M/s. Larsen & Toubro Limited,
ECC Division, E&C Sector , E&GP OC
Mount Pooramallee Road,
Manapakkam, P.O.Box 979,
Chennai - 600089

Sr. No.	Description of Material	Unit	Quantity			Erection Price		
			Present	Future	Total	Unit	Total Present	Total Future
1	2	3	4	5	6	7	8=7X4	9=7X5
A	POWER TRANSFORMER							10=8+9
1	25 / 31.5 MVA, 220 / 33 kV Three Phase Transformer including Bushing, Accessories and First Filling of Oil	Nos.	1	1	2	5,07,953	5,07,953	10,15,906
2	Oil Storage Tank	Nos.	1		1	91,144	91,144	91,144
3	Oil Sampling Bottle	Nos.	4		4	18,228	72,912	72,912
4	Micro Gas Analyzer / On-line DGA / PPM Meter	Nos.	1	1	2	1,72,934	1,72,934	3,45,868
5	250 kVA; 33 / 0.433 kV Three Phase Transformer including Bushing, Accessories and First Filling of Oil	Nos.	2		2	1,42,088	2,84,176	2,84,176
B	245 KVGIS EQUIPMENT							


Dy. General Manager (Contracts)
H.P. Power Transmission Corpn., Ltd.
Barowalia House, Khalini, Shimla-2

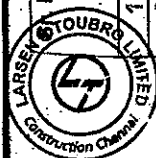
048



Sr. No.	Description of Material	Unit	Quantity		Erection Price		Total		
			Present	Future	Total Present	Total Future			
1	245 KV, 1600 A, 50 kA SF6 Gas Insulated TRANSFORMER BAY MODULE each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Surge Arresters (196 W), SF6 Gas Monitoring System for complete Bay, LCC, Three 1 - Phase SF6 Ducts and SF6 / Oil Bushing to connect to 220 / 33 kV, 25 / 31.5 MVA Transformer and Accessories with GIS etc to complete Transformer Bay Module	Nos.	4	5	6	7	8=7X4	9=7X5	10=8+9
2	245 KV, 2000 A, 50 GAS F6 Gas Insulated FEEDER BAY MODULE each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnector with Grounding Switch, Line Disconnector with Safety Grounding Switch, High, Speed Fault Making Grounding Switch, SF6 Gas Monitoring System for complete Bay, LCC, GIS Duct and Air / SF6 Bushing Termination Enclosure and Accessories with GIS etc to complete Feeder Bay Module.	Nos.	1	1	2	5,44,991	5,44,991	5,44,991	10,89,982
3	245KV, 4000 A, 50 kA, 3 Single Phase (Isolated) Units SF6 Gas Insulated, Metal Enclosed BUS BARS each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of Circuit Breaker Bay Module Each Bus Bar Set shaft be complete with Voltage Transformer complete with Safety Grounding Switch	Nos.	2	2	4	4,81,190	9,62,380	9,62,380	19,24,760
4	245 KV, 4000 A, 50 kA SF6 Gas Insulated BUS COUPLER BAY MODULE comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Disconnectors with Safety Grounding Switches SF6 Gas Monitoring System for complete Bay, LCC etc.	Nos.	1		1	5,44,991	5,44,991		5,44,991
5	245 KV-CVT with Junction Box	Nos.	3	3	6	9,114	27,342	27,342	54,684

Page 2 of 8





No.	Description of Material	Unit	Quantity		Unit	Erection Price		Total
			Present	Future		Total Present	Total Future	
1	2	3	4	5	6	7	8=7X4	9=7X5
6	198 kV Lightning Arrester with Counter and Leakage Meter	Nos.	3	3	6	5,468	16,404	10=8+9 32,808
C	36 kV, 2000 A, 40 kA for 3 sec., SF6 Gas Insulated, Metal Enclosed BUS BARS each Unit, enclosed in Bus Enclosures running along the Length of the Switchgear to interconnect each of Circuit Breaker Bay Module. Each Bus Bar Set shall be complete with Voltage Transformer complete with Safety Grounding Switch							
1	36 kV 1600A SF6 Gas Insulated FEEDER BAY MODULE each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two Bus Bar Disconnectors with Grounding Switch, Line Disconnector with Safety Grounding Switch, High Speed Fault Making Grounding Switch, SF6 Gas Monitoring System for complete Bay, LCC, GIS-Duct, and Air-SF6-Bushing Termination-Enclosure and Accessories with GIS etc-to complete Feeder/Bay Module	Nos.	3	4	7	54,686	1,64,058	2,18,744
2	36KV 2000 A SF6 Gas Insulated BUS COUPLER BAY comprising of SF6 Gas Insulated Circuit Breaker Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, SF6 Gas Monitoring System for complete Line Panel	Nos.	1		1	54,686	54,686	54,686
3	36 kV, 1600 A SF6 Gas Insulated POWER TRANSFORMER PANEL each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, Surge Arrester (30 kV), SF6 Gas Monitoring System for complete Power Transformer Panel	Nos.	1	1	2	54,686	54,686	1,09,372

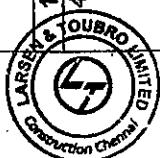


Deedgpet

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalla House, Khalini, Shimla-2

050

Sr. No.	Description of Material	Unit	Quantity		Unit	Erection Price		
			Present	Future		Total Present	Total Future	Total
1	2	3	4	5	7	8=7X4	9=7X5	10=8+9
4	36 KV, 630 A SF6 Gas Insulated 250 kVA, L. T. TRANSFORMER PANEL-each comprising of SF6 Gas Insulated Circuit Breaker, Current Transformers, Two numbers of Bus Bar Disconnectors with Earthing Switch, SF6 Gas Monitoring System for complete Power Transformer Panel	Nos.	1		54,686	54,686		54,686
D	SUBSTATION AUTOMATION SYSTEM Complete Sub Station Automation System including Hardware and Software for the Sub Station and Remote Control Station alongwith Associated Equipments as per Technical Specification	Lot	1		1,64,058	1,64,058		1,64,058
	BAY CONTROL UNITS							
1	220kV Bays	Nos.	3	2				
2	33kV Bays	Nos.	6	5				
E1	220 KV CONTROL AND RELAY PANEL							
1	Circuit Breaker Control Panel	Nos.	1		18,228	18,228		18,228
a)	With Auto Reclose	Nos.	2	2	18,228	36,456	36,456	72,912
b)	With out Auto Reclose	Nos.	1	1	18,228	18,228	18,228	36,456
2	Line Protection Panel (Main I + Main II)	Set	1	1	18,228	18,228	18,228	36,456
3	Bus bar Protection Panel	Nos.	1	1	18,228	18,228	18,228	36,456
4	220 kV(Double Bus Bar Protection)	Nos.	1	1	18,228	18,228	18,228	36,456
E2	33 KV CONTROL AND RELAY PANEL							
1	Circuit Breaker Control Panel	Nos.	3	4	18,228	54,684	72,912	1,27,596
a)	With Auto Reclose	Nos.	3	1	18,228	54,684	18,228	72,912
b)	With out Auto Reclose	Nos.	3	4	18,228	54,684	18,228	72,912
2	Line Protection Panel	Nos.	1	1				
3	Transformer Protection Panel - L. V. Side	Nos.	1	1				
F	PLCC for 220 KV LINE FEEDER							
1	2000 A, 0.5 mH /1.0 mH, 50 kA Line Traps	Nos.	2	2	14,582	29,164	29,164	58,328
2	Coupling Device (Phase to Phase)	Nos.	2	2	10,938	21,876	21,876	43,752
3	HF Cable	Ls	1	1	9,114	9,114	9,114	18,228



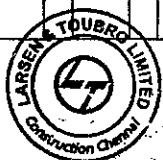
Deviyapet

Dy. General Manager (Contracts)
H.P. Power Transmission Corpn., Ltd.
Barowalia House, Khallni, Shimla-2

051



Sr. No.	Description of Material	Unit	Quantity		Total	Unit	Erection Price		Total
			Present	Future			Total Present	Total Future	
1	2	3	4	5	6	7	8=7X4	9=7X5	10=8+9
4	Carrier Equipment (for Speech + Protection and for Speech + Data)	Nos	3	3	6	10,938	32,814	32,814	65,628
5	Protection Coupler	Nos	2	2	4	10,938	21,876	21,876	43,752
6	Print Testing Kit	Set	1	1	1	10,938	10,938	-	10,938
7	EPBAX (24 / 8) with Telephone Sets	Set	1	1	1	10,938	10,938	-	10,938
F.1	FOTE Equipment	Set	1	1	1	50,94,500	50,94,500	-	50,94,500
G	AIR CONDITIONER AND VENTILATION SYSTEM								
1	Split AC (Capacity - 2T)	Nos	10		10	18,228	1,82,280	-	1,82,280
2	Ventilation System for 220kV & 33kV GIS Hall	LS	1		1	24,96,305	24,96,305	-	24,96,305
H	LT SWITCHBOARD								
1	415V Main Switchboard	Nos	1		1	1,54,944	1,54,944	-	1,54,944
2	415V A C Distribution Board	Nos	1		1	1,09,372	1,09,372	-	1,09,372
3	220V DCDB	Nos	2		2	91,144	1,82,288	-	1,82,288
4	48V, DC DB	Nos	2		2	91,144	1,82,288	-	1,82,288
I.	BATTERIES								
1	220V, 400 AH	Set	2		2	91,144	1,82,288	-	1,82,288
2	48V, 400 AH	Set	2		2	54,686	1,09,372	-	1,09,372
	Bidder shall estimate and indicate the AH Capacities of the Batteries to meet the Functional Requirement								
J	BATTERY CHARGER SYSTEM								
1	220V	Set	2		2	18,228	36,456	-	36,456
2	48V	Set	2		2	18,228	36,456	-	36,456
K	DG SET ALONGWITH CONTROL PANEL (100 KVA, 440 V for 220 kV Sub Station)	Set	1		1	91,144	91,144	-	91,144
L	FIRE PREVENTION AND EXTINGUISHING SYSTEM								
1	Nitrogen Injection Fire Prevention & Extinguishing System for Transformer	Set	1	1	2	3,31,143	3,31,143	3,31,143	6,62,286
2	Fire Protection for GIS cum Control Room Building, etc. (Portable type the Extinguishers System)	Lot	1	1	2	5,39,059	5,39,059	5,39,059	10,78,118



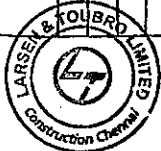
Deepest

By. General Manager (Contracts)
H.P. Power Transmission Corpn, Ltd.
Barowalia House, Khalini, Shimla-2

052



Sr. No.	Description of Material	Unit	Quantity:		Total	Erection Price		
			Present	Future		Unit	Total Present	Total Future
1	2	3	4	5	6	7	8=7X4	9=7X5
M	ILLUMINATION SYSTEM	Lot	1	1	2	8,74,323	8,74,323	10=8+9
1	Control Room / GIS Building	LS	1	1	2	8,74,323	8,74,323	17,48,646
2	Switchyard Lighting	LS	1	1	2	INCLUDED ABOVE		
3	Solar Light System for Street Light	LS	1	1	2			
N	Power Cables and Copper Conductor Armoured Control Cables alongwith:Lugs, Glands and Straight Joints	LS	1	1	2	21,74,444	21,74,444	43,48,888
0	33KV XLPE POWER CABLE AND ACCESSORIES							
1	XLPE POWER CABLE							
	3.5c x 300 Sq.mm	km	0.5		0.5	1,08,624	54,312	54,312
2	PVC POWER CABLE							
	3.5 c x 90 Sq. mm	km	0.2		0.2	84,016	16,803	16,803
	3.5 c x 70 Sq. mm	km	0.5		0.5	84,016	42,008	42,008
	3.5 c x 35 Sq. mm	km	0.2		0.2	59,406	11,881	11,881
	4 c x 16 Sq. mm	km	0.5		0.5	59,406	29,703	29,703
	4 c x 4 Sq. mm	km	1		1	34,798	34,798	34,798
3	HR FRLS CONTROL CABLE							
	2c x 2.5 Sq. mm	km	1		1	33,157	33,157	33,157
	4 c x 2.5 sq. mm	km	2		2	33,157	66,314	66,314
	7 c x 2.5 sq. mm	km	1		1	36,985	36,985	36,985
	10c x 2.5sq. mm	km	0.75		0.75	42,727	32,045	32,045
	12c x 2.5sq. mm	km	0.5		0.5	42,727	21,364	21,364
	16c x 2.5sq. mm	km	0.5		0.5	50,475	25,238	25,238
	19c x 2.5sq. mm	km	0.2		0.2	52,297	10,459	10,459
	2c x 4sq. mm	km	1		1	36,439	36,439	36,439
	4c x 4 sq. mm	km	1		1	43,000	43,000	43,000
	7c x 4sq. mm	km	1		1	63,781	63,781	63,781
4	36 KV XLPE CABLE							
a)	33 KV XLPE Cable for connecting Transformer to 33 KV GIS of size 1 x 630 sq. mm. (Three Cables with one Spare Cable in each Circuit)	km	1		1	1,89,531	1,89,531	1,89,531
b)	33KV Indoor Termination Suitable for above Cable	Nos	3	3	6	3,697	11,091	22,182



Devi

Dy. General Manager (Contract) 653
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2



Sr. No.	Description of Material	Unit	Quantity			Erection Price			Total
			Present	Future	Total	Unit	Total Present	Total Future	
1	2	3	4	5	6	7	8=7X4	9=7X5	10=8+9
4	Tower & Equipment Foundation, Transformer Foundation, Fire Wall Cable Trenches including all Types of Crossings and all Metallic Work including Steel Racks for Cable, Cable Supports MS Angle Edging and RCC Covers with Lifting Arrangements	LS	1		1	63,74,611	63,74,611	-	63,74,611
5	Buried Cable Trenches for Auxiliary Power Arrangement	LS	1		1	4,00,885	4,00,885	-	4,00,885
6	Site Surfacing and Antiweed Treatment	LS	1		1	11,37,070	11,37,070	-	11,37,070
7	Cement Concrete Roads including all Types of Crossings	LS	1		1	15,32,846	15,32,846	-	15,32,846
a)	5.00 metres wide Road cum Rail Track	LS	1		1	7,57,640	7,57,640	-	7,57,640
b)	3.5 Metres wide	LS	1		1	6,93,434	6,93,434	-	6,93,434
8	Rail for laying of Rail Track shall be arranged / Supplied by the bidder at his own cost	LS	1		1	10,73,015	10,73,015	-	10,73,015
9	Storm Water Drainage including Culverts	LS	1		1	-	-	-	-
10	Security Fencing along with Gates and Security Room	LS	1		1	1,49,00,012	1,49,00,012	-	1,49,00,012
a)	Buildings	LS	1		1	-	-	-	-
	Control Room Building cum 220KV GIS Room alongwith Battery Room, PLC Room, SCADA Room, Offices and Stores	LS	1		1	25,54,205	25,54,205	-	25,54,205
b)	33k GIS Building	LS	1		1	1,38,083	1,38,083	-	1,38,083
11	D.G. Set Outdoor Silent Type	LS	1		1	25,44,960	25,44,960	-	25,44,960
12	Store Shed	LS	1		1	-	-	-	-
13	Transformer Oil Drainage System	LS	1		1	-	-	-	-

Date : 09/12/2009
Place : Chennai

FOR LARSEN & TOUBRO LIMITED
ECC DIVISION
Head - Business Development & Contracts
ECC Sector



Py. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khallini, Shimla-2

055

DESIGN, ENGINEERING, MANUFACTURING, TESTING OF EQUIPMENT, ERECTION, COMMISSIONING ALONG WITH OTHER ALLIED WORKS SUCH AS
EARTH/MAT & CIVIL WORKS ON TURN KEY BASIS FOR 220/33KV SUBSTATION AT PALCHAN, DISTRICT KULLU-H.P. (GIS)

SCHEDULE OF MAINTENANCE OF SUBSTATION

S.No.	Name of Substation	Maintenance Charges/Month	Total Charges for One Year	Remarks
1	220/33 kV GIS Substation at Palchan, Kullu	9,97,853	1,19,74,232	We have considered only Man power. Any Equipment / Material / Spares required during O&M will be supplied by HPPTCL as a free issue to us.

Note :

- Months mentioned in desired completion period shall be reckoned from the date of notification of award.
- For the purpose of maintenance charge, period exceeding 15 days in a month shall be reckoned as one full month and that less than 15 days shall be ignored.
- The period of completion as indicated against each line is tentative and subject to change.

Date 08.12.2009
Place: Chennai

For Larsen & Toubro Limited
ECC Division

(K.Rajaram)

Head-Business Development & Contracts
E&C Sector



(Signature)



Dy. General Manager (Contracts)
H.P. Power Transmission Corpn. Ltd.
Barowalia House, Khalini, Shimla-2

056



LARSEN & TOUBRO

It's all about Imagination