

Tender Document

**Dismantling of existing 11 KV & 6.6 KV OCB panels with
Erection, Testing & commissioning of new VCB panels at
BHEL, HEEP, Haridwar**

***No.:03/ WEX/ESX/VCB panels/ETC/12-13
Dated: 23.04.2013***

**BHARAT HEAVY ELECTRICALS LIMITED,
HEEP, RANIPUR, HARIDWAR-249403**

**BHARAT HEAVY ELECTRICALS LIMITED,
HEEP, RANIPUR, HARIDWAR**

NIT No.: No.: 03 / WEX/ESX/VCB panels/ETC/12-13, Dated: 23.04.2013

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**BHARTAT HEAVY ELECTRICALS LIMITED,
HEEP, RANIPUR, HARDWAR-249403 (UA)**

OFFICE OF Manager (WEX-ESX),

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TENDER NOTICE

Open Tender in Sealed envelope is invited for **“Dismantling of existing 11 KV & 6.6 KV OCB panels with Erection, Testing & commissioning of new VCB Panels at BHEL, HEEP, Haridwar”** in two part bids through registered post/ courier/ by hand for the under-mentioned work to **“The tender box kept in the Tender Room of Purchase Department at the 4th floor of the Main Administrative Building of BHEL, HEEP, Haridwar”**.

Last date of receipt of sealed Tender in all respect: 14.05.2013 up to 1.45 PM

Date of opening of Tender

: 14.05.2013 at 2.00 PM

Place of opening of Tender

: Tender shall be submitted by the vendors in the tender box kept in the Tender Room of Purchase Department at the 4th floor of the Main Administrative Building of BHEL, HEEP Haridwar and will be opened on the same day at 2.00 PM in the presence of interested parties available at the time of opening of the tender.

| NIT No. & Date | Name of work | Estimated Cost of work (Rs) | Earnest Money (Rs) | Period of Contract | Tender Cost (Rs) |
|---|---|-----------------------------|---------------------|--------------------|--------------------|
| NIT No.: No.:03/ WEX/ESX/VCB panels/ETC/12-13, Dated: 23.04.2013 | <i>Dismantling of existing 11 KV & 6.6 KV OCB panels with Erection, Testing & Commissioning of new VCB Panels at BHEL, HEEP, Haridwar.</i> <i>(The new VCB panels, Bus Trunking panel, Bus-coupler & panel wiring diagram shall be provided by BHEL)</i> | <i>Rs. 61.77 Lacs</i> | <i>Rs. 1.50 Lac</i> | <i>02 years</i> | <i>Rs. 1000.00</i> |

Engineer (WEX-ESX)

Signature of the Contractor

NIT No.: No.: 03/ WEX/ESX/VCB panels/ETC/12-13, Dated: 23.04.2013

Name of Work: - *Dismantling of existing 11 KV & 6.6 KV OCB panels with Erection, Testing & commissioning of new VCB Panels at BHEL, HEPP, Haridwar.*

INSTRUCTIONS :-

- 1.** Tender shall be submitted in two parts i.e. (i) Techno-Commercial Bid and (ii) Price Bid. Both these bids shall be sealed in separate envelopes one super scribing the Techno-commercials Bid with NIT No., name of work, date of opening & name of contractor and the other super scribing the Price bid with NIT No., name of work, date of opening & name of contractor. Both these envelopes shall be sealed in another envelope super scribed with NIT No., name of work, date of opening & name of contractor and addressed to **"The Tender Cell of Purchase Department at the 4th floor of the Main Administrative Building of BHEL, HEPP, Haridwar - 249403"**.
- 2.** **Tender cost of Rs. 1000/= shall be submitted** in the form of Bank Draft of any Scheduled Bank in favour of Accounts Officer (Finance), HEPP, BHEL, Ranipur, Haridwar and should be kept in Bid envelop. The tender cost may also be deposited in the form of Cash at BHEL Cash Counter & receipt of the same to be kept in Techno-Commercial Bid envelope.
- 3.** **Earnest Money for Rs. 150000/= shall be submitted** in the form of Bank Draft of any Scheduled Bank in favour of Accounts Officer (Finance), HEPP, BHEL, Ranipur, Haridwar payable at Haridwar and shall be placed in the Techno-Commercial Bid envelope.
- 4.** The contractor shall sign each page of tender document set along with their seal.
- 5.** The rates must be quoted in figures as well as in words separately for both parts i.e. supply of materials and Erection, Testing & commissioning portion.
- 6.** Tenders, which are not received in the above manner, shall not be considered.

Engineer (WEX-ESX)

Signature of the Contractor

NIT No.: No.: 03/ WEX/ESX/VCB /panels/ETC/12-13, Dated: 23.04.2013
Priced Bid

Name of Work: *Dismantling of existing 11 KV & 6.6 KV OCB panels with
Erection, Testing & commissioning of new VCB Panels at
BHEL, HEPP, Haridwar*

| Sl. No. | Description of Work | Unit | Quantity (X) | Unit Rate (Y) | Amount in Rs. (X*Y) |
|-----------|--|------|--------------|---------------|---------------------|
| A. | Work at CDS | | | | |
| 1. | Removal of existing 11 KV & 6.6 KV OCB panels including cable dismantling works, shifting including transportation etc (Detailed scope of work at page no.7-8) | No. | 47 | | |
| 2. | Erection, Testing & Commissioning of new 6.6 KV & 11KV VCB panels including civil & welding work and fixing of end termination kits, complete in all respect. (Detailed scope of work at page no.7-8) | No. | 42 | | |
| 3. | Supply of heat shrinkable end termination kits suitable for 11 KV/6.6 KV(E) as per exiting cables for newly installed VCB panels at CDS including nuts, bolts, washers , spring washers earthing material including electrode & G.I. Strip, related hard ware for completion of the job. (Detailed scope of supply at Annexure-2) | Set | 01 | | |
| 4. | CST @2% against form-C on sl. no.3 | | | | |
| 5. | Service Tax @ 12.36% on (sl. nos.1+2) | | | | |
| 6. | Total price of A i.e. (sl.nos.1+2+3+4+5) | | | | |
| B. | Work at DS-1 (sub-station) | | | | |
| 7. | Removal of existing 11 KV OCB panels including cable dismantling works, shifting including transportation etc . (Detailed scope of work at page no.8-9) | No. | 25 | | |
| 8. | Erection, Testing & Commissioning of new 11 KV VCB panels including civil, welding work & required logistics and fixing of end termination kits, complete in all respect. (Detailed scope of work at page no.8-9) | No. | 29 | | |
| 9. | Supply of heat shrinkable end termination kits suitable for 11 KV (E) as per exiting cables for newly installed VCB panels at DS-1 includes nuts, bolts, washers, spring washers earthing material including electrode & G.I. Strip, related hard ware for completion of the job. (Detailed scope of supply at Annexure-2) | Set | 01 | | |
| 10. | CST @2% against form-C on sl. no.9 | | | | |
| 11. | Service Tax @ 12.36% on (sl. nos.7+8) | | | | |
| 12. | Total price of B i.e. (sl.nos.7+8+9+10+11) | | | | |

| | | | | | |
|-----------|---|-----|----|--|--|
| C. | Work at DS-2 | | | | |
| 13. | Removal of existing OCB panels including cable dismantling works, shifting including transportation etc (Detailed scope of work at page no.9) | No. | 23 | | |
| 14. | Erection, Testing & Commissioning of new 11 KV VCB panels including civil, welding works & required logistics and fixing of end termination kits, complete in all respect. (Detailed scope of work at page no.9) | No. | 26 | | |
| 15. | Supply of heat shrinkable end termination kits suitable for 11 KV(E) cables as per exiting cables for newly installed VCB panels at D S-2 including nuts, bolts, washers , spring washers earthing material including electrode & G. I. strip, related hardware for completion of the job. (Detailed scope of supply at Annexure-2) | Set | 01 | | |
| 16. | CST @2% against form-C on sl. no.15 | | | | |
| 17. | Service Tax @ 12.36% on (sl. nos.13+14) | | | | |
| 18. | Total price of C i.e. (sl.nos. 13+14+15+16+17) | | | | |
| D. | Work at 132 KV sub-station | | | | |
| 19. | Removal of existing OCB panels including cable dismantling works , shifting including transportation etc (Detailed scope of work at page no.10-12) | No. | 18 | | |
| 20. | Erection, Testing & Commissioning of new 6.6 KV & 11 KV VCB panels including civil, welding works & required logistics and fixing of end termination kits, complete in all respect. (Detailed scope of work at page no.10-12) | No. | 18 | | |
| 21. | Supply of adopter panel for inter connection of ABB make train of switchgears/VCBs marked as NEW TUM BUS and 01 No. BHEL make VCB panel with the help of this supplied adopter panel.(complete in all respect) | No. | 01 | | |
| 22. | Supply of heat shrinkable end termination kits suitable for 11 KV/6.6 KV(E) as per exiting cables for newly installed VCB panels at 132 KV sub- station including nuts, bolts, washers , spring washers earthing material including electrode & G. I. strip, related hardware for completion of the job. (Detailed scope of supply at Annexure-2) | Set | 01 | | |
| 23. | CST @2% against form-C on sl. no. 21&22 | | | | |
| 24. | Service Tax @ 12.36% on (sl. nos.19+20) | | | | |
| 25. | Total price of D i.e. (sl.nos. 19+20+21+22+23+24) | | | | |
| | Grand Total (Sl. nos. 6+12+18+25) | | | | |

SIGNATURE OF CONTRACTOR

Engineer (WEX-ESX)

SCOPE OF WORK *(DETAILED)*

A. Scope of Work for 11KV & 6.6KV Panels at CDS (47 Panels):

A-1. Work for 11KV PANELS at CDS (35 existing Panels):

Existing system consists of 33 No OCB Panels and 02 No Bus coupler Panels totalling to 35 Nos (*Refer enclosed SLD No.WEX/ESX/VCB/04*). These panels are to be replaced with 32 No new VCB Panels, 01 No Bus Trunking Panel and 01 No Bus Coupler Panel totalling to 34 Nos. (As per enclosed drawing No. 2 521 00 5 1862, 03 Pages). This work is to be done section wise (*Left or Right from Bus Coupler*) subject to availability of shut down / as per instruction of Engineer In-charge.

The detailed scope & sequence of work is as follows:

1. Cable Dismantling Work of Existing OCB Panels :-

- (i) Unplugging of PILCA /XLPE HT Cable from existing OCB panels.
- (ii) Slitting of Cable joint boxes form neck of the cable (*if required*).

2. Removal of Existing OCB Panels :-

- (i) Dismantling of existing 11 KV OCB Panels one by one.
- (ii) Dismantling of base frame of existing 11 KV Panels, if any.
- (iii) Closing of existing cable entry hole in the floor with cement concrete.
- (iv) Opening of Cable loops in the cable gallery in basement.
- (v) Transportation of the old 11 KV Panels to HEEP, plant store as per instruction of Engineer In-charge.

3. Erection, Testing & commissioning of new VCB Panels :-

- (i) Making new hole with the help of concrete cutter machine for cable entry as per No. of cables & position of new panels.
- (ii) Transportation of new 11 KV Panels from plant store to CDS i.e. working site, unpacking there & erection of the same as per lay out.
- (iii) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable gallery in the basement as per instruction of Engineer In-charge.
- (iv) Supply and termination of HT 11 KV (E) End termination kits as per existing cables for newly Installed VCB panels at CDS.
- (v) Testing & commissioning of newly installed 11KV VCB Panels as per system requirement.

(The new VCB panels, Bus Trunking panel, Bus-coupler & panel wiring diagram shall be provided by BHEL).

A-2. Work for 6.6 KV PANELS at CDS (12 existing Panels):

The existing 6.6 KV System consists of 11 No OCB Panels and 01 No Bus coupler totalling to 12 Nos (Refer enclosed SLD No.WEX/ESX/VCB/05). These OCBs are to be replaced with 08 No new VCB panels including Bus-Trunking & Bus-Coupler (As per enclosed drawing No. 2 521 00 5 1867, 01 page). This work is to be done section wise (*Left or Right from Bus Coupler*) subject to availability of shut down / as per instruction of Engineer In-charge.

Detailed scope and sequence of work is as follows---

1. Cable Dismantling Work of OCB Panels -

- (i) Unplugging of PILCA HT Cable from existing OCB.
- (ii) Slitting of Cable joint boxes form neck of the cable (*if required*).

2. Removal of Existing Panels:-

- (i) Dismantling of existing 6.6 KV OCB and Bus Trunking Panels one by one.
- (ii) Dismantling of base frame of existing 6.6 KV Panels, if any.
- (iii) Closing of existing cable entry hole in the floor with cement concrete.
- (iv) Opening of Cable loops in the cable gallery in basement.
- (v) Transportation of the old 6.6 KV Panels to HEEP, plant as per instruction of Engineer In-charge.

3. Scope for Erection, Testing & commissioning of 6.6 KV new VCB Panels:-

- (i) Making new hole with the help of concrete cutter machine for cable entry as per no. of cables & position of new panels.
- (ii) Transportation of new 6.6 KV Panels from Plant store to CDS i.e. working site & unpacking there.
- (iii) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable gallery in the basement as per instruction of Engineer in-charge.
- (iv) Supply and termination of heat shrinkable 6.6 KV (E), end termination kits as per existing cables for newly Installed VCB panels at CDS.
- (v) Testing & commissioning of newly installed 6.6 KV, VCB panels as per system requirement.

(The new 6.6 KV VCB panels, Bus Trunking panel, Bus coupler & panel wiring diagram shall be provided by BHEL)

B. Work for 11KV PANELS at DS-1 (25 Panels):

Existing system consists of 24 nos. OCB panels and 01 no. Bus coupler panel totalling to 25 Nos (*Refer enclosed SLD No.WEX/ESX/VCB/06*). These panels are to be replaced with 27 no. new VCB panels, 01 No Bus Trunking panel and 01 No Bus coupler panel totalling to 29 Nos (As per enclosed drawing No. 2 521 00 5 1863, 03 pages). This work is to be done section wise (*Left or Right from Bus coupler*) subject to availability of shut down / as per instruction of Engineer In-charge.

The detailed scope & sequence of work is as follows:

1. Cable Dismantling Work of Existing OCB Panels :-

- (i) Unplugging of PILCA /XLPE HT Cable from existing OCB panels.
- (ii) Slitting of cable joint boxes form neck of the cable (*if required*).

2. Removal of Existing OCB Panels :-

- (i) Dismantling of existing 11KV OCB panels one by one.
- (ii) Dismantling of base frame of existing 11KV panels, if any.
- (iii) Opening of cable loops in the cable trench.
- (iv) Transportation of the old 11KV panels to HEEP, plant store as per instruction of Engineer In-charge.

3. Erection, Testing & commissioning of new VCB Panels :-

- (i) Transportation of new 11 KV panels from plant store to DS-1 i.e. working site, unpacking there & erection of the same as per lay out.
- (ii) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable gallery in the basement as per instruction of Engineer In-charge.
- (iii) Supply and termination of HT 11 KV (E) end termination kits as per existing cables for newly Installed VCB panels at DS-1.
- (iv) Testing & commissioning of newly installed 11KV VCB Panels as per system requirement.

(The new VCB panels, Bus Trunking panel, Bus-coupler panel & wiring diagram shall be provided by BHEL).

C. Work for 11KV PANELS at DS-2 (23 existing panels):-

Existing system consists of 19 Nos. OCB panels, 03 VCB panels and 01 No. Bus coupler panel totalling to 23 Nos. (Refer enclosed SLD No.WEX/ESX/VCB/07). These panels are to be replaced with 23 No new VCB panels, 01 No Bus Trunking panel and 01 No Bus coupler panel totalling to 26 Nos. (As per enclosed drawing No. 2 521 00 5 1864, 02 pages). This work is to be done section wise (***left or right from Bus coupler***) subject to availability of shut down/as per instruction of Engineer In-charge.

The detailed scope & sequence of work is as follows:

1. Cable Dismantling Work of Existing OCB Panels: –

- (i) Unplugging of PILCA /XLPE HT cable from existing OCB panels.
- (ii) Slitting of cable joint boxes form neck of the cable (***if required***).

2. Removal of Existing OCB Panels:-

- (i) Dismantling of existing 11KV OCB / VCB panels one by one.
- (ii) Dismantling of base frame of existing 11KV panels, if any.
- (iii) Opening of cable loops in the cable trench.
- (iv) Transportation of the old 11KV panels to HEEP, plant store as per instruction of Engineer In-charge.

4. Erection, Testing & commissioning of new VCB Panels:-

- (v) Transportation of new 11 KV panels from plant store to DS-2 i.e. working site, unpacking there & erection of the same as per lay out.
- (vi) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable trench as per instruction of Engineer In-charge.
- (vii) Supply and termination of HT 11 KV (E) end termination kits as per existing cables for newly Installed VCB panels at DS-2.
- (viii) Testing & commissioning of newly installed 11KV VCB panels as per system requirement.
- (ix) Existing VCB panels (***ABB Make***) used for supply of 2 MW furnaces is to be coupled with new train of switch gears.

(The new VCB panels, Bus Trunking panel, Bus-coupler & panel wiring diagram shall be provided by BHEL).

D. Work for 11 KV & 6.6 KV Panels at 132 KV Sub-station (18 panels).:

D-1. Work for 11KV PANELS Right hand side from Bus coupler (Incoming No.2 Bus): (As per SLD NO: WEX/ESX/VCB/02)

Existing system consists of 05 No OCB panels and 01 No Bus coupler panel totalling to 6 Nos. These OCBs are to be replaced with 04 No new VCB panels and 01 No Bus coupler panel totalling to 05 Nos. The detailed scope & sequence of work is as follows:

Cable Dismantling Work of Existing OCB Panels - (Incoming -2, SPARE, CDS-2 SPARE, CFFP-2, Bus Coupler) : – (Refer SLD No. WEX/ESX/VCB/01)

- (i) Unplugging of PILCA / XLPE HT cable from existing OCB panels.
- (ii) Slitting of cable joint boxes form neck of the cable *(if required)*.

Removal of Existing OCB Panels- (Incoming -2, SPARE, CDS-2, SPARE, CFFP-2, Bus Coupler) :- (Refer SLD No. WEX/ESX/VCB/01)

- (i) Dismantling of existing 11 KV OCB panels one by one.
- (ii) Dismantling of base frame of existing 11 KV panels, if any.
- (iii) Closing of existing cable entry hole in the floor with cement concrete.
- (iv) Opening of cable loops in the cable gallery in basement.
- (v) Shifting of the old 11 KV Panels to ground floor from first floor.
- (vi) Transportation of the old 11 KV panels to HEEP, plant as per instruction of Engineer In-charge.

1. Erection, Testing & commissioning of new VCB panels:(Incomer-2 CDS-2, SPARE, SEC-4, 5, Bus Coupler (as per SLD No: WEX/ESX/VCB/02 enclosed):-

- (i) Making new hole with the help of concrete cutter machine for cable entry as per No. of cables & position of new panels.
- (ii) Transportation of new 11 KV panels from HEEP, plant to 132 KV Sub-Station i.e. working site & unpacking there.
- (iii) Shifting of these panels from ground floor to first floor at 132 KV sub-station & erection of the same as per lay out.
- (iv) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable gallery in the basement as per instruction of Engineer In-charge.
- (v) Supply and termination of HT 11 KV (E) end termination kits as per existing cables for newly installed VCB panels at 132 KV sub-station.
- (vi) Testing & commissioning of newly installed 11 KV VCB panels as per system requirement *(The new VCB panels & panel wiring diagram shall be provided by BHEL)*.

D-3. Work for installation, Testing & commissioning of 01 no. new VCB Panel (Feeder of Sector-1 & 2):

This BHEL make VCB panel is to be coupled with existing 11 KV ABB make train of VCB panels named as “NEW TUM BUS” as per SLD no: WEX/ESX/VCB/02 with the help of **Adopter Panel to be supplied by vendor** then existing cable is to be connected to new VCB panel as per instruction of engineer In-charge. (Cable shall be provided by BHEL). The size & design of Adopter panel and its Bus bars & inter connecting Bus-bar's ratings should match with that of our 1250 amps rated VCB panels of at both ends *(Supply of this Adopter panel is in the scope of vendor)*.

Note: Vendor may visit the site for assessment of actual site requirement.

D-4. Work for 11 KV PANELS left hand side of Bus coupler:

Existing system consist of 09 No OCB Panels. These OCBs are to be replaced with 07 No VCB panels & 01 No Bus Trunking panel totalling to 08 Nos. as per SLD No: WEX/ESX/VCB/02 enclosed).

The detailed scope of work is as follows:

1. **Cable Dismantling Work of Existing OCB Panels- (SPARE, LIDO, SEC – 4 &5, Ancillary, CFFP-1, SEC-1& 2, CDS -1, Station Transformer, Incoming -1):**
 - (i) Unplugging of PILCA /XLPE HT cable from existing OCB panels.
 - (ii) Slitting of cable joint boxes form neck of the cable (*if required*).
2. **Removal of Existing OCB Panels - (SPARE, LIDO, SEC – 4 &5 Ancillary, CFFP-1, SEC-1& 2, CDS -1, Station Transformer, Incoming -1):**
 - (i) Dismantling of existing 11KV OCB panels one by one.
 - (ii) Dismantling of base frame of existing 11KV panels, if any.
 - (iii) Closing of existing cable entry hole in the floor with cement concrete.
 - (iv) Opening of cable loops in the cable gallery in basement.
 - (v) Shifting of the old 11KV panels on ground floor form first floor.
 - (vi) Transportation of the old 11KV panels to HEEP, plant as per instruction of Engineer In-charge.
3. **Erection, Testing & commissioning of new VCB Panels (feeder No.01 Of 11 KV incoming No.01 Bus, LIDO, Ancillary, CFFP-1, CDS-1, Station transformer, Incoming -1& Bus Trunking Panel (as per SLD NO:WEX/ESX/VCB/02 enclosed):**
 - (i) New hole with the help of concrete cutter machine for cable entry as per No. of cables & position of new panels.
 - (ii) Transportation of new 11KV panels from HEEP, plant to 132KV Sub-Station i.e. working site & unpacking there.
 - (iii) Shifting of these panels from ground floor to first floor at 132 KV sub-station & erection of the same as per lay out.
 - (iv) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable gallery in the basement as per instruction of Engineer In-charge.
 - (v) Supply and termination of heat shrinkable, 11 KV (E) termination kits as per existing cables for newly installed VCB panels at 132 KV sub-station, wherever required.
 - (vi) Testing & commissioning of newly installed 11KV, VCB panels as per system requirement.
(*The new VCB panels and 01 No Bus Trunking panel & panel wiring diagram shall be provided by BHEL*)

D-5. Inter connections of feeder No 01 of 11 KV incomer 01 Bus with outgoing feeder No 02 of New TUM-BUS, at 132 KV Sub-station ;

Inter connections of feeder No 01 of 11 KV incomer 01 Bus with outgoing feeder No 02 of New TUM Bus (*as per SLD no: WEX/ESX/VCB/02 enclosed*) with the help of 3x (3x 400 SQMM) aluminium XLPE armoured cable. (Cable shall be provided by BHEL), however supply and termination of heat shrinkable 11 KV (E) end termination kits as per cable Size

for this activity shall be in the scope of party. Shifting of cable from HEEP, plant to 132 KV sub-station is in the scope of party.

D-6. Work for 6.6 KV PANELS Right hand side of Russian MOCBs:

The existing 6.6 KV system consists of 03 No OCB panels coupled with train of Russian MOCBs. These OCBs are to be replaced with new 03 Nos.VCB panels & to be coupled with existing Russian 6.6 KV train of MOCB panels with the help of 01 no. Adopter panel totalling to 04 panels. *(This Adopter panel shall be provided by BHEL).*

Detailed scope and sequence of work is as follows:

1. **Cable Dismantling Work of Existing OCB Panels - (Compressor House, Forge Press, Heavy Forge Press)(As per SLD NO: WEX/ESX/VCB/03A enclosed)**
 - (i) Unplugging of PILCA HT cable from existing OCB.
 - (ii) Slitting of cable joint boxes form neck of the cable *(if required)*.
2. **Removal of Existing Panels - (Bus adopter ,Compressor House Forge Press, Heavy Forge Press)**
 - (i) Dismantling of existing 6.6 KV OCB panels one by one.
 - (ii) Dismantling of base frame of existing 6.6 KV panels, if any.
 - (iii) Closing of existing cable entry hole in the floor with cement concrete.
 - (iv) Opening of cable loops in the cable gallery in basement.
 - (v) Shifting of the old 6.6 KV panels on ground floor form first floor.
 - (vi) Transportation of the old 6.6 KV panels to HEEP, plant as per instruction of Engineer In-charge.
3. **Scope for Erection, Testing & commissioning of 6.6 KV new VCB Panels – (Adopter Panel , Compressor House, Forge Press & Heavy Forge Press)(As per SLD NO: WEX/ESX/VCB/03B enclosed)**
 - (i) Making new hole with the help of concrete cutter machine for cable entry as per No. of cables & position of new panels.
 - (ii) Transportation of new 6.6 KV panels from HEEP, plant to 132 KV Sub-Station i.e. working site & unpacking there.
 - (iii) Connections of the existing cables to the respective new VCB panels with proper dressing of the same in cable gallery in the basement as per instruction of Engineer In-charge.
 - (iv) Supply and termination of heat shrinkable, 6.6 KV (E) end termination kits as per existing cables for newly installed VCB panels at 132 KV sub-station.
 - (v) Testing & commissioning of newly installed 6.6 KV, VCB panels as per system requirement.

(The new 6.6 KV VCB panels and 01 No Adopter panel for inter connection of 6.6 KV VCB panels with Russian MOCBs & panel wiring diagram shall be provided by BHEL) (As per SLD NO: WEX/ESX/VCB/03B enclosed)

E. General:

1. Party shall arrange expert & qualified manpower, tools and tackles, lifting equipments like cranes, transportation facility etc. for this work.
2. All civil works shall be executed by party including all related materials and labour.

3. All welding works shall be executed by party including all material, welding machines, welding rods, welders etc.
4. All fasteners like nuts, bolts, washers, spring washers etc. required for the job shall be supplied by party.
5. Vendors may visit the site prior to submission of offer to assessment of work.
6. Any activity not explicitly mentioned in the scope, but found required for completion of this job shall be executed by party including all materials and labour.
7. Any interlocking in the panels, if required shall be in the scope of party during commissioning as per instruction of Engineer In-charge based on electrical schemes available with us.
8. Electricity & water shall be provided free of cost during this work.
9. Supply & making of 04 Nos. treated earth pits with GI strip of size- 50x6 mm (***Approx. length- 200 meter***) at 132 KV S/S including other related materials & labours shall be in the scope of party.
10. Any waste material generated during this work shall be shifted to the respective scrap yard by party on day to day basis as per instruction of Engineer In-charge.
11. Working site has to be kept clean on daily basis by party.
12. This work is to be done section wise (***left or right from Bus coupler***) subject to availability of shutdown & as per instruction of Engineer In-charge.
13. This work shall be executed sub-station wise (***CDS, DS-1, DS-2 & 132 KV***) in phased manner subject to availability of shut down or as per instruction of Engineer In-charge.
14. No lodging & boarding facility shall be provided by BHEL to the party.
15. The work is to be done on SOS basis (***day night***) within the available shut down period in phased manner.
16. The total scope of work is scattered over the period of 24 months depending on the availability of shut down of plant, as the existing OCB's are in function and connected with power supply system of HEEP, plant.
17. *The winner of this bid have to get registered under ESIC and EPF Regional office at Uttarakhand. (This is required for issue of labour gate passes by CISF during work period).*

F. Acceptance:

Acceptance shall be given after erection, testing & commissioning of the power supply system and 01 month observation of the same after charging of new installed panels sub-station wise (***CDS, DS-1, DS-2 & 132 KV S/S***).

G. Guarantee:

Party shall stand guarantee for one year for all material supplied and all services rendered from the date of commissioning of VCB panels sub-station wise.

H. Makes of Component:

Party shall ensure either of the make of components to be supplied by them:-

Heat shrinkable HT cable termination / jointing kits: 3M / Denson / KEI / Raychem.

Note: Sizes of cables for cable jointing kits are given at Annexure- 2.

I. Safety:

Party shall ensure all relevant safety practices and statutory requirements applicable at the site at their own cost and liability as per safety code of practice/factory act/as per instruction of Engineer In-charge.

J. Eligibility Criteria:

Party have to submit following documents to qualify for the tender.

1. The bidder should have executed minimum one job of renovation, modernisation, up gradation and retrofitting on 6.6 KV / 11 KV or above on switchgears in any State Government Departments, PSUs & Public Limited Organizations.
(*Copy of orders and performance certificate is to be submitted as a proof with offer.*)
2. Party shall submit certificate that experienced cable jointer shall be available at site all the time during execution of work.
3. The bidder should have executed either of the following similar jobs (as mentioned at J-1) in the last 3 years. Copies of Purchase Order/Work Order and the performance certificate to be provide by the bidder.
 - (a) Three similar completed works costing not less than the amount equal to Rs. 25.00 Lakhs.
 - OR
 - (b) Two similar completed works costing not less than the amount equal to Rs. 30.00 Lakhs.
 - OR
 - (c) One similar completed work costing not less than the amount equal to Rs. 50.00 Lakhs.
4. The bidder should hold the valid electrical contractor A-class license as on the date of bidding (copy of licence to be submitted with the offer as a proof).

FINANCIAL QUALIFICATION:

1. The bidder should have a minimum average annual turnover of Rs.18.60 Lakhs during the last 3 financial years i.e.2009-10, 2010-2011, 2011-12. Bidder has to submit the audited financial balance sheets as a proof duly approved by the Chartered accountant.
2. The solvency certificate of minimum Rs. 5.00 Lakhs should also be provided by bidder from the scheduled bank issued not later than 03 months prior to bidding.

K. Payment Terms:

1. No advance payment shall be made.
2. Part payment shall be made after completion of following milestones:
 - 2.1 80 % of material cost with 100 % taxes & duties shall be payable after acceptance of total material at BHEL Hardwar by concerned department.
 - 2.2 Balance 20 % material cost 100 % of security deposit amount shall be made after commissioning. Successful running of system for one month subject to submission of PBG in BHEL's standard format;

- 2.3 ETC charges shall be payable on pro-rata basis (maximum 08 nos. of bills of total work of 114 nos. VCB panels) subject to acceptance of the work done.

L. Payment shall be made through e-payment after submission of following documents:

- (1) Submission of E-payment form by party duly filled & verified by respective bank branch as per BHEL norms (form shall be provided by BHEL.)
- (2) Excise duty & CST/VAT, packing and forwarding, freight & insurance shall be paid on material cost and service tax shall be paid on installation, retrofitting, testing & commissioning charges at actual.

M. Late delivery clause:

- (1) LD @ 0.5 % per week subject to a maximum of 5% of the order value shall be applicable for delay in deliveries.
- (2) LD @ 2% per week subject to a maximum of 10 % of the commissioning charges shall be applicable for delay beyond scheduled commissioning period for reasons attributed to the vendor.

N. Security Deposit (SD):

- (1) Successful vendor shall deposit security. The rate of security deposit shall be as below:
- (2) For work up to Rs. 10 lakhs = 10 % of work order value.
- (3) Above Rs. 10 lakhs up to Rs. 50 Lakhs = Rs. 1 Lakh + 7.5 % amount exceeding Rs. 10 Lakhs.
- (4) Above Rs. 50 Lakhs = Rs. 4 Lakhs + 5 % amount exceeding Rs. 50 Lakhs.
- (5) The security deposit shall be submitted in the following form before start of work:
- (6) Pay order, demand draft in favour of of BHEL, Hardwar.
- (7) Local cheques of scheduled banks subject to realization.
- (8) Bank guarantee from scheduled banks/public financial institute as defined in the companies act. The bank guarantee format should have the approval of BHEL.
- (9) Security deposit shall not carry any interest.
- (10) EMD of successful vendor is adjustable against the security deposit.
- (11) 100 % of security deposit amount shall be refunded to the vendor after post commissioning and observation for one month after successful charging. SD shall be released after the confirmation of Performance Bank Guarantee (PBG) by the concerned bank.

O. Performance Bank Guarantee (PBG):

- (a) Vendor shall be required to submit a performance bank guarantee (PBG) for 10 % of total work order value which shall be valid for a period of two years from the date of commissioning.
- (b) The PBG shall be submitted on a non-judicial stamp paper as per rules issued by any one of the Scheduled Bank.

P. Documents to be submitted by Vendor with Tender:

Interested vendors shall furnish the following along with tender:

- a) Company Profile along with the certificate of registration.
- b) List of current/recent clients/references (related with aforesaid requirement).
- c) A-Class contractor's license valid as on date of submission of tender.
- d) Complete postal address of the company along with names, telephone nos. and e-mail IDs of contact persons for further queries.
- e) Copy of PAN No. based service tax registration.
- f) Signed copy of Price Bid.

Q. Contract period for completion of work:

- a) **Delivery:** Delivery of End termination Kits, Adapter Panels, Earthing Material, end termination kits, GI perforated tray, GI earth strip etc shall be 02 months from the date of award letter of work.
- b) **Execution, testing & commissioning:**
The total scope of work is scattered over the period of 24 months depending on the availability of shut down of plant. The ETC of VCB Panels shall be carried out sub-station wise in the phased manner i.e. (CDS, DS-1, DS-2 & 132 KV S/S.). The existing OCB's are in operation and connected with power supply system of HEEP, plant.