

BIDDING DOCUMENT

FOR

CONSTRUCTION OF DEDICATED FEEDER

POWER SUPPLY TO

KHANDADHAR ECO-TOURISM

&

SARAFGARH ECO-TOURISM

SUNDARGARH DISTRICT

UNDER

DISTRICT RURAL DEVELOPMENT AGENCY

SUNDARGARH, ODISHA STATE

DISTRICT RURAL DEVELOPMENT AGENCY, SUNDARGARH
AT/PO/DISTRICT-SUNDARGARH, PIN-770001
ODISHA, INDIA
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ଢିଲ୍ଲା ଗ୍ରାମ୍ୟ ଉନ୍ନୟନ ସଂସ୍ଥା : ସୁନ୍ଦରଗଡ଼

DISTRICT RURAL DEVELOPMENT AGENCY, SUNDARGARH



District Rural Development Agency,
Sundargarh - 770001

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NOTICE INVITING TENDERS FOR CONSTRUCTION OF DEDICATED FEEDER POWER SUPPLY TO KHANDADHAR ECO-TOURISM & SARAFGARH ECO-TOURISM WITHIN SUNDARGARH DISTRICT.

No. 190 /DRDA

Dated the 22nd January, 2020

Bid Identification No. Off Line /DRDA-SNG-02/RE/2019-2020

1	The Collector, Sundargarh on behalf of Government of Odisha inviting Tenders in OFF-LINE mode from the eligible ELBO registered Electrical HT Contractors/Firms/ Manufacturers/ Suppliers/ Proprietors/ Agencies for "Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism" & "Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism" out of District Mineral Foundation Fund, Sundargarh on Turnkey basis. The approximate requirement of quantities along with specifications of Construction of Dedicated Feeder Works to be required along with scope of works are given as per the list enclosed herewith separately. The other details as well as scope of works, eligibility criteria and documents to be required for submission along with tender documents can be seen from the DTCN of this Tender Call Notice webhosted in Sundargarh District Official Website " www.sundargarh.nic.in ". The bidders registered in other State Government are required to produce non-assessment certificate obtained from Commercial Tax Authority of Government of Odisha at the time of submission of tender.		
2	Nature of Works	:-	(1) Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism on Turnkey basis. (2) Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism on Turnkey basis.
3	Class of Contractor	:-	HT Electrical Contractors
4	Earnest Money Deposit	:-	The bidders shall deposit the EMD/ Bid Security amount @ 1% of the estimated cost put to tender, as in the annexure, in shape of Demand Draft issued from any Nationalized/ Scheduled Bank in favour of Project Director, DRDA, Sundargarh to be drawn at Sundargarh.
5	Cost of Tender Paper (Non Refundable)	:-	The bidders shall deposit the cost of Bid Document as in the annexure towards tender paper cost, in shape of Demand Draft issued from any Nationalized/ Scheduled Bank in favour of Project Director, DRDA, Sundargarh to be drawn at Sundargarh.
6	Mode of submission of tender documents.	:-	Tender should be submitted in Off Line mode only through Registered Post/ Speed Post (Indian Post Offices) only and in no other means, in the address of Project Director, DRDA, Sundargarh, At/Po/District-Sundargarh, PIN-770001, Odisha.
7	Goods & Service Tax (GST)	:-	The estimated cost put to tender is inclusive of GST and no extra amount shall be paid towards the GST. Hence, the bidders may quote their rate accordingly.
8	Additional Performance Security (APS)	:-	The successful bidder, who has quoted less bid price/ rate than the estimated cost put to tender shall have to furnish exact amount of differential cost i.e. estimated cost put to tender minus quoted amount as Additional Performance Security in shape of Term Deposit Receipt/ Bank Guarantee duly pledged in favour of Project Director, DRDA, Sundargarh issued from any Nationalized/ Scheduled Bank within 7 days of issue of Letter of Acceptance (LoA), otherwise the bid of the successful bidder(s) shall be cancelled and the Earnest Money Deposit/ Bid Security shall be forfeited followed with initiation of proceeding for black-listing the Bidder(s).

9	Time of completion of works	:-	06 (Six) Calendar months from the date of Work Order.
10	Period of Availability of tender paper in the website	:-	From 24.01.2020 (11.00 A.M.) to 07.02.2020 (5.30 P.M.) Sundargarh District Website " www.sundargarh.nic.in "
11	Last date & time of seeking clarification, if any relating to the tender.	:-	By 30.01.2020 (05.30 PM) Email: "ori-dsundargarh@nic.in"
12	Issue of clarification by DRDA on the points raised by Bidders.	:-	By 04.02.2020
13	Last date of receipt of Bids	:-	Dt.07.02.2020 (5.30 PM)
14	Date of opening of Bid	:-	Dt.11.02.2020 (11.00 AM) In the Pragati Mandap, DRDA, Sundargarh.
15	Validity of Bid Documents	:-	The Bid for the work(s) shall be valid for a period of 90 days from the last date of receipt of Bid(s). Non-submission of cost of Bid Documents & Bid Security with the tender documents will lead to the Bidder debarred from participating in the bidding system, and his/her name should be informed to the Registering Authority for cancellation of his/her registration.
16	The bidders have to participate in OFF-LINE bidding only. Further details and addendum/ corrigendum/ cancellation of tender relating to this tender can be seen from the Sundargarh District Official website " www.sundargarh.nic.in ".		
17	The Authority reserves the right to reject any or all the tenders without assigning any reason(s) thereof.		

Sd/-

COLLECTOR : SUNDARGARH

Memo No. 1 9 1 /DRDA

Dated the 22nd January, 2020

Copy forwarded to the Editor, DHARITRI (jayadharitrisng@gmail.com) / SAMBAD (dambarudhar.n@sambad.in) / THE PIONEER (malayray2000@gmail.com) with a request to publish in their Daily Odia newspapers in small letter, single space & single line before **24.01.2020** for wide publication & circulation of this Tender Call Notice. The advertisement cost should be limited to **Rs.7,000/-** inclusive of all cost. Complimentary copy of newspaper containing the Tender Call Notice must be submitted along with bill to this office for reference, record and payment.

Sd/-

COLLECTOR : SUNDARGARH

Memo No. 1 9 2 /DRDA

Dated the 22nd January, 2020

Copy to the A.D.M., Sundargarh/ Rourkela/ Municipal Commissioner, RMC, Rourkela/ P.D., DUDA, Sundargarh/ EE, R&B Division, Sundargarh/ Rourkela/ EE, RWD, Sundargarh/ Rourkela/ EE, Irrigation Divn., Sundargarh/ EE, MI Divn., Sundargarh/ Sub-Collector, Sadar/Panposh/ Bonai/ PA, ITDA, Panposh/ Bonai/ Sundargarh/ All Block Development Officers & Tehsildars of the District/ DI & PRO, Sundargarh/ Rourkela/ D.W.O., Sundargarh/ PM, DIC, Rourkela/ GM, DIC, Sundargarh/ Executive Officers, Sundargarh/ Rajgangpur/ Biramitrapur Municipalities for information and with a request to display a copy of the Tender Call Notice in their respective office Notice Board for wide response.

Sd/-

COLLECTOR : SUNDARGARH

Memo No. 1 9 3 /DRDA

Dated the 22nd January, 2020

Copy to Superintending Engineer, WESCO, Rourkela Electrical Circle/ EE, WESCO, Sundargarh/ Rajgangpur/ Rourkela/ Rourkela-Sadar for information and necessary action. They are requested to display a copy of this Notice in their respective Office Notice Board for wide response.

Copy to all the Members of the Tender Committee for information & necessary action. They are requested to remain present during opening of Bids, as per the date, time and venue fixed in the tender call notice.

Sd/-

COLLECTOR : SUNDARGARH

Memo No. 1 9 4 /DRDA

Dated the January, 2020

Copy to DIO, NIC, Sundargarh with a request to upload this Tender Call Notice in the Sundargarh District Website "www.sundargarh.nic.in" by **24.01.2020** for wide publication and timely response by the intending Contractors/Manufacturers/Suppliers/ Proprietors.

Sd/-

COLLECTOR : SUNDARGARH

Annexure (Enclosure of Tender Call Notice No. 190 /DRDA Dated the 22nd January, 2020)

Sl. No.	Name of the work	Approximate Estimated Cost (Fig. in Rs.)	EMD Required (Fig. in Rs.)	Cost of tender paper	Time of completion	Class of Contractor
01	Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism on Turnkey basis.	Rs.2,39,12,864/-	Rs.2,39,200/-	Rs.10,000/-	06 Calendar Months	HT Electrical Contractor
02	Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism on Turnkey basis.	Rs.1,95,09,625/-	Rs.1,95,100/-	Rs.10,000/-	06 Calendar Months	HT Electrical Contractor

Sd/-

COLLECTOR : SUNDARGARH

SUNDARGARH DISTRICT AT A GLANCE:

Sundargarh District was constituted on the 1st January, 1948, out of the two ex–States of Gangpur and Bonai, which merged with Odisha on that day. True to its name, this beautiful District of Sundargarh with about 43 percent of its total area under forest cover and numerous colorful tribes dotting its landscape and with abundant mining potential is bounded by Ranchi District of Jharkhand on the North, Raigarh District of Chhatisgarh on the west and North West, Jharsuguda, Sambalpur and Angul Districts of Odisha on the South and South East and Singhbhum District of Jharkhand and Keonjhar District of Odisha on the east.

The Sundargarh town is the district headquarters. Geographically, the district is not a compact unit and consists of widely dissimilar tracts of expansive and fairly open, dotted with tree, clad isolated peaks, vast inaccessible forests, extensive river valleys and mountainous terrain. Broadly speaking, it is an undulating tableland of different elevations broken up by rugged hill ranges and cut up by torrential hill streams and the rivers IB and Brahmani. The general slope of the District is from north to south. Because of this undulating, hilly and sloping nature of landscape, the area is subjected to rapid runoff leading not only to soil erosion but also to scarcity of water for both agriculture and drinking purposes. Brahmani, Sankh, Koel and IB are the major rivers flowing through this District. Covering a geographical area of 9712 SQ. KMs., Sundargarh District is the second largest District of the state, accounting for 6.23 percent of its total area. Out of this total area, forests cover 4232.57 SQ. KMs., this being the second largest in the state, accounting for 8.53 percent of the state total.

Sundargarh District has 3 sub divisions, 18 Tehsils, 17 Blocks and 279 Gram Panchayats and 1779 no. of villages (includes 8 Census Towns and 9 out growths) and 04 Urban Local Bodies. Topographically, this district is located between latitude 21 degree 36' N to 22 degree 32' N and longitude 83 degree 32' E to 85 degree 22' E. The population of this District is 20,93,437, which is fifth most populous District of the state, out of which the rural population is 13,55,340 and urban population is 7,38,097 and the TRIBAL population of the district is 10,62,349, which is more than 50% of the total population. The literacy rate of the district is 73.34%.

The tribal all over the state/country particularly in the area of Sundargarh are known for their performing arts in the form of indigenous tribal songs, music and rhythmic dance. Music and dance forms an integral part of their life and living. The dances and songs of tribal as well as the music they play with their traditional musical instruments are so vibrant and rhythmic that many foreign visitors evince interest to visit tribal pockets only to catch a glimpse of such music and dance. But with changing times, the melodious song, music and dance forms of tribal are in the process of dying out. The tribal people have extra ordinary sports talents, whose reflections are found in their culture and lifestyle also. Many players from Odisha, especially from Sundargarh district like Jerina Tirkey, Dipika

Toppo, Asha Kerketta and Anita Kerketta are among several emerging girls from the tribal of Sundargarh district in hockey, who share a dream – they all want to play hockey professionally and represent India internationally just like Dilip Tirkey, Lazarus Barla, Subhadra Pradhan, Jyoti Sunita Kullu and Binita Toppo as done in the past. Padmashree Dr. Dilip Tirkey also captained the Indian Hockey Team. After all, both girls and boys at village level in Sundargarh district are making India proud.

Similarly, so many players both girls and boys from the villages are rising under football game also. It is the time to improve their talents by participating in different tournaments at block, district and National level. Likewise, other sports equipment under cricket, volleyball.

The climate of this District is characterized by extremely hot summers and cool winters. Climate is hot & moist sub humid. Normal rainfall of the District is approximately 1230 mm, but there is a deviation in receipt of rainfall pattern which is influencing crop production.

Sundargarh is recognized as an industrial district in the map of Odisha. Steel Plant, Coal Mines, Power Plants, Fertilizer Plant, Cement factory, Ferro Vanadium Plant, Machine building factory, Glass and china clay factory and Spinning mills are some of the major industries of this District. Sundargarh occupies a prominent position in the mineral map of Odisha and is rich in iron ore, limestone, manganese, dolomite, and fire clay. Major industries are the Odisha Cements Ltd, Hart Fertilizers Ltd, and Odisha Industries Ltd. The industrial town of Rourkela in this District has the first government sector plant built with foreign collaboration and was the first in India to use LD oxygen technology.

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CRITICAL Bid Information (FACTSHEET)

Sl. No	Item	Details
1	Bid Identification No .	Collector & District Magistrate, Sundargarh (Bid Identification Notice No/DRDA-SNG-RE-02/2019-20)
2	Name of the Work	(1) Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism on Turnkey basis. (2) Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism on Turnkey basis.
3	Officer Inviting tender	Collector & District Magistrate, Sundargarh.
4	Officer concerned with head quarters authorized for the Tender.	(1)Project Director, DRDA, Sundargarh (Contact No. 06622-273873) (2) Project Co-Ordinator, DRDA, Sundargarh (Contact No. 8217783418)
5	Accepting Authority	Collector & District Magistrate, Sundargarh
6	Intended completion period	06 (Six) Calendar months from the date of Work Order.
7	Availability & downloading of Tender Documents from the Website.	Dt.24.01.2020 (11.00 AM) to Dt.07.02.2020 (5.30 PM) "www.sundargarh.nic.in" .
8	Seeking clarification, if any relating to the tender.	By 30.01.2020 (05.30 PM) Email: ori-dsundargarh@nic.in.
9	Issue of clarification by DRDA on the points raised by Bidders.	By 04.02.2020
10	Last Date for submission & receipt of Bids	Dt.07.02.2020 (5.30 PM)
11	Date of Bid Opening	Dt.11.02.2020 (11.00 AM). If Holiday, the next working Day with same time.
12	Place of Bid Opening	Pragati Mandap, DRDA, Sundargarh
13	Address for communication	Project Director, DRDA, Sundargarh, At/Po/District-Sundargarh (Odisha),PIN-770001
14	Cost of Tender Paper (Non Refundable)	The bidders shall deposit the cost of Bid Documents @ Rs.10,000/- per project as per annexure in shape of Demand Draft issued from any Nationalized/ Scheduled Bank in favour of Project Director, DRDA, Sundargarh to be drawn at Sundargarh.
15	Earnest Money Deposit	The bidders shall deposit EMD/ Bid Security @ 1% of the estimated cost put to tender, as per annexure, in shape of Demand Draft issued from any Nationalized/ Scheduled Bank in favour of Project Director, DRDA, Sundargarh to be drawn at Sundargarh.
16	Validity of Proposal	The Bid for the work(s) shall be valid for a period of 90 days from the last date of receipt of Bid(s). Non-submission of cost of Bid Documents & Bid Security with the tender documents shall lead to debar the Bidder from participating in the bidding system, and the name of the Agency should be informed to the Registering Authority for cancellation of his/her registration.
17	Mode of submission of Bids (Off-Line)	Through Speed Post/Registered Post (Indian Post) only and in no other means.
18	Currency of Contract	Indian Rupees
19	Language of Contract	English
20	Schedule of bids for Technical information	Annexure-I
21	Abstract on General terms & Conditions.	Annexure-I I
22	Financial Bid (2 nos.) (Separate for each project)	Annexure-III & IV
23	Certificate of No Relationship	Annexure-V
24	Proforma of Bank Guarantee for Performance Guarantee.	Annexure-VI
25	Under Taking to abide with all the terms and conditions of the Tender	Annexure-VII
26	Undertaking that HT Electrical Contractor/Firm is not Blacklisted.	Annexure-VIII
27	Original Affidavit regarding authenticity of documents submitted. (Separate affidavit for each work).	Annexure-IX

DETAILED TENDER CALL NOTICE(D.T.C.N.)

INVITATION FOR BIDS(IFB)

Bid Identification Notice No/DRDA-SNG-RE/02/2019-2020

The Collector, Sundargarh on behalf of Government of Odisha inviting Sealed Tenders in **OFF-LINE** mode from the interested and eligible ELBO registered Electrical HT Contractors/Firms/Manufacturers/ Suppliers/ Proprietors/ Agencies for "Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism" & "Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism" out of District Mineral Foundation Fund, Sundargarh on Turnkey basis. The nature of works may exceed/decrease or vary depending on actual requirement at the time of placing of orders/during execution.

- 1) Bid documents consisting of specifications of works, schedule of quantities and set of terms and conditions of contract and other necessary documents can be downloaded from the Sundargarh District official website www.sundargarh.nic.in from **24.01.2020 (11.00 AM) to 07.02.2020 (5.30 PM)**. The tender paper cost as mentioned against each project should be deposited along with the tender documents in shape of Demand Draft only issued from any Nationalized/ Scheduled Bank in favour of "Project Director, DRDA, Sundargarh" payable at Sundargarh. The cost of tender paper is non-refundable and in case of non-submission of the same, the Bid shall be rejected.
- 2) Bid(s) must be accompanied with EMD @ 1% of the estimated amount put to tender, as mentioned in the Tender Call Notice against each project, in shape of Bank Draft issued from any Nationalized/ Scheduled Bank in favour of "Project Director, DRDA, Sundargarh" payable at Sundargarh. ***In case of non-submission of EMD with valid reason supported with authenticated documents issued by appropriate authority, the Bid will be rejected followed with forfeiture of tender paper cost.***
- 3) Sealed tender should be submitted in the address of Project Director, District Rural Development Agency, Sundargarh, At/Po/Dist-Sundargarh, State-Odisha, PIN-770001 through **Regd. Post/Speed Post only and in no other means. The envelope containing the tender documents must be super-scribed with "Name of the Project, Tender Call Notice No. & Date for which the Bidder is participated. If any bidder(s) want to compete for more than one project as listed in the Tender Call Notice, they are required to submit the tender paper separately for each project as well as EMD and Tender Paper Cost.** The sealed tender documents must reach the office of the Project Director, District Rural Development Agency, Sundargarh on or before **07/02/2020 (5:30 PM)** positively. Receipt of tender documents in DRDA, Sundargarh after due date and time for any reason including postal delay, the DRDA will not at all responsible for the same, and such bids will not be considered for opening. ***In case the last date of receipt of tender documents will fall on holiday or closed due to any reason, then it will be allowed to receive the tender documents up to next working day with same timing.***
- 4) There shall be two stage bidding process- (1) Technical & (2) Financial. The technical bid along with enclosures of required documents, EMD, Tender Paper Cost must be placed in a sealed envelope separately super-scribing "Technical Bid". Similarly, the financial bid should contain in a separate sealed envelope super-scribing as "Financial Bid". Those two envelopes shall be placed in a envelope (A-4 size) super-scribed with "Name of work, Tender Notice No. & Date".

- 5) The Tenders will be opened on **Date.11/02/2020 at 11.00 AM** in the Pragati Mandap, DRDA, Sundargarh in presence of the bidders or their authorized representatives. ***If the office happens to be closed on the day of opening of the bids as specified, the bids will be opened in the next working day at the same venue and time.***
- 6) The Sealed bid documents are to be submitted in cover, which must be properly sealed and shall contain **signed** DTCN along with self attested photo copy of the following documents. In absence of complete documents, the bid will be rejected. The tenderers would be under obligation to produce EPF and Labour License before the undersigned as and when required.
- a. Valid Registered Electrical H.T. Contractor License issued by Electrical Licensing Board of Odisha (ELBO).
 - b. PAN Card.
 - c. Valid GST Certificates/Registration Certificates with GST No.
 - d. EPF Registration with up to date challan.
 - e. ESI Registration with up to date challan / Labour Insurance.
 - f. **Work Experience Certificate relating to execution of similar nature of works with project value of minimum Rs.80.00 lakh in a single Work Order with satisfactory completion, if any, duly issued by the Competent Authorities.**
 - g. Up to date Income Tax Clearance Certificate i.e. up to 2018-19.
 - h. Paper related to yearly turnover for the last three financial years i.e. 2016-17, 2017-18 and 2018-19 duly issued/certified/signed by the Chartered Accountant along with Audit Report for the said FYs.
 - i. No Relation Certificate. (In the format at Annexure-V).
 - j. Original Affidavit regarding authentication of documents submitted with Tender documents for each work to be participated by the bidders.
 - k. Other documents required as per the relevant clauses of the DTCN and special condition, if any.
- 7) **The Defaulter and Blacklisted contractors are debarred from participation in this tender process. Accordingly, if any Firm/Agency has been blacklisted earlier and participated in the tender process, the tender of such Firm(s) will not be considered by the Tender Committee.** The bidders registered in other State Govt. are required to produce non-assessment certificate obtained from Commercial Tax Authority of Govt. of Odisha at the time of submission of tender.
- 8) ***The Bidders are required to quote their price in percentage rate basis only at appropriate blank place provided in Bill of Quantities (BoQ)/Financial Bid enclosed hereunder at Annexure-III and Annexure-IV both in figure and words, separately for each project, which will be negotiable by competent authority during finalization of the Tenders.*** In case of any confusion in percentage rate quoted by the Bidder(s), the rate mentioned in words will be taken as final. ***Also Bidders are required to sign below the overwriting or correction made by him in the BoQ/ Financial bid(s).*** The Bidders are also required to put their signature on each and every page of the tender paper and documents attached there under.

- 9) The Bidders must have minimum yearly Turnover of **Rs.3.00 Crore (Rupees Three Crore)** in any of the last three financial years (i.e. 2016-17, 2017-18 & 2018-19). Copy of supporting documents like Audit Report in support of the same must be submitted along with technical bid documents.
- 10) Work Experience Certificate relating to execution of same nature of works with an project value of minimum Rs.80.00 lakh in a single Work Order with satisfactory completion, if any, duly issued by the Competent Authorities. Preference should be given to the experienced Contractors, subject to the decision of the Tender Committee.
- 11) Other details can be seen in the bidding documents.
- 12) Any enquiry regarding tender may be consult to Rural Electrification Section of DRDA, Sundargarh during office hours.
- 13) The authority reserves the rights to reject any or all the Tenders without assigning any reason thereof.

Sd/-

**Collector & District Magistrate
Sundargarh**

INFORMATION TO BIDDERS

The Collector & District Magistrate Sundargarh invites sealed bids from eligible interested bidders on Turnkey Basis for "Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism" & "Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism" out of District Mineral Foundation Fund, in the district of Sundargarh.

01.00 DEFINATION OF TERMS:

In construing this contract and the scope of work, the following words will have same meaning herewith assigned to them unless there is something in the subject or context in consistent with such construction.

01.01 Owner/Purchaser/Authority:

The "Authority/Owner/Purchaser" shall mean the Collector & District Magistrate Sundargarh and shall include its legal representative Successors and Assignees.

01.02 Contractor/Suppliers:

The "Contractor/Suppliers" shall mean the firm whose tender has been accepted by the Authority and shall include its legal representatives Successors and assignees.

01.03 Engineer in Charge:

The "Engineer in Charge" shall mean the Electrical Engineer-in Charge of the work for on behalf of the Authority or Executive Engineer of WESCO or his authorized representative.

01.04 Consignee:

The "Consignee" shall mean the person authorized by the Collector & District Magistrate Sundargarh to receive the materials, supervise and take measurement of the work.

01.05 Site:

The "Site" shall mean the actual place of the proposed project as detailed in the specification or other place where work has to be executed under this contract.

01.06 Specification:

The "Specification" shall mean collectively all terms stipulated in the contract known as General conditions of contract and technical field requirement, technical specification and such amendments as may be made in the agreement pertaining to qualities of materials and workmanship to be furnished under the contract.

01.07 Contract:

The "Contract" shall mean and include the following documents:
Information to Tenderer.
General terms of Contract and Technical field requirement.
Technical Specification.
Contract Agreement.
Contractor tender proposal including Clarification Letter.
Letter of Intent.
Work Order.
Agreement.

01.08 Commissioning:

The "Commissioning" shall mean the first authorized operation of the equipment/installation after completion of erection, testing, initial adjustment, statutory approvals etc.

01.09 Approved:

The "Approved" shall mean the written approval of the Consulting Engineer/Engineer-in-Charge of WESCO.

01.10 Months:

Months shall mean the calendar month.

01.11 Performance test:

The "Performance Test" shall mean the entire test as prescribed in the specification/ISS to be carried out by the contractor before taking over the installation by the WESCO.

01.12 Final Acceptance:

The "Final acceptance" shall mean the written acceptance of the works performed under the contract after successful completion of performance & Guarantee Period by WESCO.

02.00 **BIDDING DOCUMENTS:**

Bids can be downloaded from the Sundargarh district official website www.sundargarh.nic.in. The Authority shall not be responsible for any postal delay.

02.01 The Bids will be opened in presence of Bidders/ Bidder's representatives following due procedures as mentioned in the Tender Call Notice & Fact Sheet.

02.02 Bids without E.M.D will be rejected outright; no adjustment of any previous deposit will be entertained. The E.M.D shall be forfeited in case of withdrawal of bids after the last date of submission and/ or non-acceptance of order.

02.03 Bids without submission of the cost of Tender documents should be rejected outright; no adjustment of any previous deposit will be entertained. The tender paper cost so deposited shall be forfeited in case of withdrawal of bids after the last date of submission and/ or non-acceptance of order.

03.00 **SUBMISSION OF TENDER:**

03.01 Sealed tenders together with descriptive and illustrative literature superscribing Tender Notice No. and date with name of the project are to be submitted/ sent by Registered Post/ Speed Post (India Post) only in the address of Project Director, DRDA, Sundargarh, Odisha. However, the Authority will not be held responsible for postal delay, if any or for non-receipt of bid documents in time.

03.02 The Bidders are required to prepare their bid documents on the following manner.

03.03 Envelope- A- Pre-qualification data i.e. attested copies of:

- a. Valid Registration Electrical H.T. Contractor License issued by Electrical Licensing Board of Odisha (ELBO).
- b. PAN Card.

- c. Valid GST Certificates/Registration Certificates with GST No.
- d. EPF Registration with up to date challan.
- e. ESI Registration with up to date challan/ Labour Insurance.
- f. Work Experience Certificate relating to execution of similar nature of works in last three years duly issued by the competent authorities. The Contractor/ Agency participating in the tender process must have executed a single project having minimum project value of Rs.80.00 lakh in a single Work Order with satisfactory completion, or else they will not be eligible for competition in this tender process.
- g. Up to date Income Tax Clearance Certificate.
- h. Paper related to minimum yearly Turnover of Rs. 3.00 Crore (Rupees Three Crore only/-) in any of the last three financial year (i.e. 2016-17, 2017-18 & 2018-19) duly issued or certified or signed by the Chartered Accountant along with Audit Report.
- i. No Relation Certificate. (In the format at Annexure-V).
- j. Original Affidavit regarding authentication of documents for each work to be participated by the bidders.
- k. Other documents required as per the relevant clauses of the DTCN and special condition, if any.

03.04 Envelope- B- The price offer shall be furnished as per Price Bid.

The bank instrument and other data as described above under each Para shall be kept in different marked envelopes A & B duly sealed and appropriately marked with Envelope, Name of the Project, Bid specification number, name of work. All the two sealed envelopes i.e. A and B shall be kept in a big envelope marked Envelope-C superscribing the name of the Bid specification No. & Name of Work.

On the stipulated date/time the envelopes marked 'C' containing bids received shall be opened before the bidders/ representatives of bidders present. Thereafter the relevant envelopes marked A and B of each bidder shall be opened in order. If on opening of envelope 'A', the bid security and cost of tender paper, in case the bid documents are downloaded from website is prima facie in order, then the same will be read out as necessary.

The Sealed envelope 'B' containing price bids shall be kept in safe custody which shall be opened, whose bids will be found to be substantially responsive after due check and scrutiny. During evaluation to find the responsiveness of bidders, the undersigned will have the right to seek any clarification that might be necessary. The bidders are expected to respond to such queries within seven days of issue of the letter. However queries of undersigned and bidders response shall not affect the eligibility criteria in any manner. In case it will not be possible to open both the Technical and Financial bid in the same day, then the Bidders shall be intimated the next date and time for opening of Financial Bid.

04.00 **ADDITIONAL PERFORMANCE SECURITY (APS):**

The successful bidders, those who have quoted less bid price/ rate than the estimated cost put to tender shall have to furnish exact amount of differential cost i.e. estimated cost put to tender minus quoted amount as Additional Performance Security in shape of Term Deposit Receipt/ Bank Guarantee duly pledged in favour of Project Director, DRDA, Sundargarh issued from any Nationalized/ Scheduled Bank within 7 days of issue of Letter of Acceptance (LoA) and before execution of Agreement, failing which the bid of the successful bidder(s) shall be cancelled and the Earnest Money Deposit/ Bid Security shall be forfeited followed with initiation of proceeding for black-listing the Bidder(s).

05.00 **TERM OF PAYMENT:**

100% payment will be made after completion of work in full shape, testing, inspection by the Electrical Inspector, Government of Odisha and taken over by the WESCO Authority. The Workers Cess, other taxes & cess if any will be deducted from the bills as per prevailing rules.

06.00 **PAYING AUTHORITY:**

Collector, Sundargarh will be the paying authority.

07.00 **GUARANTEE:**

In the event of any defect in the material arising out of inferior quality of raw material and bad workmanship within a period of 12 months of execution of work, the Bidder shall guarantee to replace the defective material at site on free of cost and to the satisfaction of the Authority. However if the contractor fails to do the same within a reasonable time, the Authority reserves the right to effect repair or replacement of the same works, and the amount so incurred for the purpose shall be met/encashed out of the performance Bank guarantee deposited with DRDA.

08.00 **INSURANCE:**

8.1 All the materials shall have appropriate insurance cover from the time the same are out from the manufacturer premises till the work completed.

09.00 **THIRD PARTY INSURANCE:**

09.01 The Contractor shall, prior to commencement of the jobs under this Work Order, take out a comprehensive insurance policy against any damage or loss or injury may occur to any property or to any person or any employee or representative of any outside agency/company engaged or not engaged for the performance of the service and arising out of the execution of the work or temporary work or in carrying out of jobs under this Work Order.

09.02 **SUPERVISION AND VERIFICATION OF QUANTITY OF MATERIALS & WORKS:**

The work after due completion under the supervision of Executive Engineer (Electrical) WESCO or his authorized representative shall be inspected by Electrical Inspector or any other competent authority as per Guideline of Energy Department, Government of Odisha. All arrangement for this inspection including deposit of statutory fees shall be the responsibility of the contractor.

09.03 **PRE-DESPATCH INSPECTION OF MATERIALS:**

Before commencement of the work, all the major materials are to be inspected by the site Engineer of WESCO & representative of Collector and District Magistrate Sundargarh in the respective stores of contractor to ensure the quality and standard of materials.

10.00 **COMMENCEMENT AND COMPLETION OF WORK:**

The work shall have to commence within such period so that the total work under this contract shall have to be completed within a specified time (Maximum 180 days) from the date of placement of order. The phase wise completion period shall be intimated by the successful bidder to the controlling officer in due course. The bidder has to mobilize erection team adequately to maintain target period for the total completion of the work as per program.

10.01 PENALTY CLAUSE:

In case the work is not completed within 6 months i.e. 180 days from the date of issue of work order, the contractor has to pay a penalty of 0.5% of the total value of work order for each month of delay, subject to maximum of 5% of the contract value, which is to be deducted from the respective bill of the concerned contractor.

11.00 PERFORMANCE & SCHEDULE TO BE FURNISHED:

The successful bidder has to submit to Collector & District Magistrate for approval within 15 days from the date of issue of order a detailed schedule of program in the form of Bar chart/GNATT Chart indicating various activities involving drawing Schedule of material procurement, testing, reliability runs/ delivery etc. The Collector & District Magistrate reserves the right to call for further necessary detailed program during currency of the contract to follow up the progress of work adequately.

12.00 SERVICE GUARANTEE:

12.01 Work Completion:

In no case, the successful bidder shall abandon the scheme till completion of the work, for the same successful bidder shall have to give an undertaking in proper forms otherwise risk purchases clause shall be applicable.

12.02 Nature of Price(s):

The quoted price shall be firm throughout the contract period including the extension period (s) if any. The price schedules should be properly filled up and submitted along with other documents, failing which the tender shall be rejected. Any increase in price, taxes and duties beyond the scheduled period of the order will not be borne by Authority, if the delay is due to any failure on the part of the Bidder. The quoted price should be inclusive of all Taxes & Duties such as Income Tax, Work Contract Tax, Service Tax, Workers Welfare Cess, GST etc.

12.03 Quantity:

The quantity mentioned in tender schedules is provisional. The Authority reserves the right to vary the quantities while placing the order.

12.04 Risk Purchase:

The time of completion of work stipulated in the Work order shall be deemed to be the essences of the contract and if the Bidder fails to complete the work within the period prescribed, for such delay the Authority shall be entitled to complete the work be nearest other substitute on the account and the risk of bidder and bidder shall be liable to compensate for any loss or damage which the purchaser may sustain by reason of such failure on the part of the Bidder.

13.00 USE OF CONTRACT DOCUMENTS AND INFORMATION

- A. The Contractor shall not without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan information furnished by or on behalf of the purchaser in connection therewith, to any person.
- B. The contractor shall not without the purchaser's prior written consent, make use of any document or information except for purpose of performing the Contract.

14.00 **STATUTORY OBLIGATION AGAINST THE CONTRACT**

The Contractor shall be responsible to comply with all statutory obligations arising out of the Law of the Land. The contractor should be duly registered with PF, ESI Authority and the liability for such payment to the concerned authority shall be entirely borne by them. No service Tax shall be paid to the contractor against this contract. The work contract Tax, if applicable also shall not be paid. If service Tax/Work Contract Tax is applicable during the period of execution of the job, the same shall be borne by the contractor. Owner shall not accept any responsibility whatsoever on the taxes and duties as stated above, the bidder is expected to take these into account in his price bid.

15.00 **RESERVATION:**

The purchaser reserves the right to deviate any of the terms and conditions stated herein and to split up the orders as and when necessary and reject any or all tenders without assigning any reasons whatsoever and does not bind himself/herself to accept the lowest tenders.

16.00 **LEGAL JURISDICTION:**

Material pertaining to this order including its execution from the placement of the order and if any disputes thereby the necessary judicious affairs and court case shall be within jurisdiction of Sundargarh district only.

17.00 **FORCE MAJEURE:**

The bidder shall be under no liability if he is prevented from carrying out any of his obligations by reasons of War, Invasion hostilities (whether war declared or not) riots. Civil commotion, Mutiny instruction, Rebellion revolution, Accident, Earthquake fire, Floods, Government Order and/or restrictions (except power supply restriction), delay or inability to obtain materials due to import or other statutory restrictions or other causes beyond the reasonable control of the bidder.

18.00 **ACCEPTANCE OF ORDER:**

The Collector & District Magistrate, Sundargarh will communicate acceptance of Bid to the successful bidders by letter of intent/formal order. The successful bidder shall communicate the acceptance of the order along with performance Bank Guarantee so as to reach the purchaser within 7 days from the date of issue of the said letter of intent/order. If the acceptance of order and the performance Bank Guarantee is not received within the above period, then the Earnest Money against the Tender is liable to be forfeited.

20.00 **GENERAL:**

20.01 Earnest Money in shape of DD in favour of "Project Director, DRDA, Sundargarh" issued from any Nationalized/ Scheduled Bank payable at Sundargarh should be submitted in an envelope along with technical bid.

20.02 Cost of Bidding, Scheduled Contract Documents as mentioned against each project must be submitted in an envelope along with technical bid.

- 20.03 Last date and time of receipt of bid= **Date. 07.02.2020 up to 5.30 PM.**
- 20.04 Date and time of opening of TECHNICAL BID = **Date. 11.02.2020 at 11:00AM**
in the Pragati Mandap, DRDA, Sundargarh.
- 20.05 Date and time of opening of FINANCIAL BID will be intimated to all responsive bidders after evaluation of technical proposal, if not possible to open the same on the same day.
- 20.06 Authority reserves the right to cancel/withdraw the invitation of bids at any stage of the tender without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.
- 20.07 The Bidder shall be required to keep their offers valid up to 90 days from the date of opening of bids.
- a) Telex, Telegraph or in-complete offers shall be rejected outright.
- b) The correspondences with regard to the above shall be made at the following address:

**DISTRICT RURAL DEVELOPMENT AGENCY, SUNDARGARH
AT/PO/DISTRICT-SUNDARGARH, PIN-770001
ODISHA, INDIA
TELEPHONES: (91) 06622 – 273873,
E-Mail: ori-dsundargarh@nic.in.**

Sd/-
**Collector & District Magistrate
Sundargarh**

INSTRUCTIONS TO BIDDERS

01.0 SCOPE:

The Collector & District Magistrate Sundargarh invites sealed bids from eligible interested bidders on Turnkey Basis for "Construction of Dedicated Feeder Power Supply from Bonai (33/11KV PSS) to Khandadhar Eco-Tourism" & "Construction of Dedicated Feeder Power Supply from Lephripara (33/11KV Grid Substation) to Sarafgarh Eco-Tourism" out of District Mineral Foundation Fund, in the district of Sundargarh.

The major work covers:

- 1- Construction of Dedicated 11 KV line.
- 2- VCB Arrangement at grid S/S.
- 3- Construction Substation.
- 4- Construction of LT Line.
- 5- Erection of Four-Pole Structure.
- 6- Line Isolator.

02.0 COST OF BIDDING:

The Bidder shall bear all costs associated with the survey, preparation and submission of the bid to Project director, DRDA, Sundargarh. The Purchaser/Owner shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

03.0 CONTENT OF BIDDING DOCUMENTS:

The goods required, bidding procedure and other contact terms are prescribed in the bidding documents in addition to the invitation for bids, the Bidding documents include:

- (a) General Condition of Contract
- (b) Qualification Requirements
- (c) Schedule of Requirements
- (d) Technical Specifications
- (e) Price Schedules & Schedules of Bids
- (f) Earnest Money,
- (g) Performance security form.

The Bidder is expected to examine all instructions, forms, terms & specifications in the bidding documents. Failure to furnish all information required as per the bidding documents, the bid so submitted come under non-responsive category and liable for rejection.

04.0 CLARIFICATION OF BIDDING DOCUMENTS:

A prospective Bidder requiring any clarification of the Bidding documents may notify the purchaser/owner in writing or by fax at the purchaser's mailing address indicated in the invitation of Bids. The purchaser/owner shall respond in writing to any request for clarification of the bidding documents which it receives much prior to the deadline for the submission of bids prescribed by the purchaser.

05.00 AMENDMENT TO BIDDING DOCUMENTS:

05.01 At any time prior to the deadline of final submission of bids, the purchaser/owner may, for any reason whether at his own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding documents by amendment, if necessary.

05.02 The amendment shall be uploaded to Sundargarh district official web portal www.sundargarh.nic.in.

05.03 In order to afford prospective Bidders reasonable time in which to take amendments into account in preparing their bids the purchaser may at his discretion extend the dealing for the submission of bids.

06.00 PRELIMINARY EXAMINATION:

06.01 The purchaser/owner shall examine the bids to determine whether they are complete. Whether any computational errors have been made, whether required sureties have been furnished. Whether the documents have been properly signed, and whether the bids are generally in order.

06.02 Prior to the detailed evaluation, the purchaser/owner shall determine the substantial responsiveness of each bid to the Bidding Documents. For purpose of these clauses, a substantially responsive bid is one which confirms to all the terms and conditions of the Bidding Documents without material deviations. The purchaser's determination of a bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.

06.03 A bid determined as not substantially responsive shall be rejected by the purchaser and may not subsequently be made responsive by the Bidder by correction of the non- conformity.

06.04 The purchaser/owner may waive any minor informality or non-informality or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

07.00 CONTRACTING THE PURCHASER:

07.01 No Bidder shall contract the purchaser/owner or any manner relating to its bid, from the time of the bid opening to the time the contract is awarded, unless requested by the purchaser for any clarification, if any.

07.02 Any effect by a Bidder to influence the purchaser in the purchaser's Bid evaluation, bid comparison or contract award decision may result in the rejection of the Bidder's bid.

08.00 PURCHASER'S/OWNER'S RIGHT TO VARY QUANTITIES AT TIME OF AWARD:

The Purchaser reserves the right to increase or decrease of the quantity of goods services specified in the schedule of requirement during execution of contract without any change in price or other terms and conditions.

09.00 PURCHASER'S/OWNER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS:

The Purchaser reserves the right to accept or reject any or all Bids at any time prior to award of contract, without thereby incurring liability to affected bidders of any obligation to inform the affected Bidders of the grounds the purchaser's action.

10.00 CONTRACTOR'S/FIRM'S REPRESENTATIVE:

In addition to a Project Coordinator, the Contractor's/Firm's shall engage one or more competent representative to supervise or carrying out the works on site. He shall be fluent in language for day to day communications. Their names shall be communicated in writing to the purchaser before works begins. Any instruction or notice which the purchaser gives to the Contractor's/Firm's representative shall be deemed to inform to the Supplier.

11.00 OBJECTION TO CONTRACTOR'S/FIRM'S EMPLOYEES:

The Contractor's firms shall, upon the purchaser's written instruction can be remove from the works any person employed by him in the execution of the works, who misconduct or is incompetent or negligent.

12.00 SAFETY PRECAUTIONS:

The Contractor's shall observe all applicable regulation regarding safety on the site.

13.00 CLEARANCE OF SITE:

During the progress of the work time to time the Contractor shall clear away and remove all surplus materials and rubbish disposal in an approved manner. On completion of the work the supplier shall remove all suppliers' equipment and leave the whole of the site clean and in a workable condition to the satisfaction of the purchaser. The supplier shall obtain prior approval of the purchaser to remove the surplus materials.

14.00 OPPORTUNITIES OF OTHER CONTRACTORS:

The supplier shall in accordance with purchaser's instruction, cooperate with and afford to other contractors engaged by the purchaser to work on the site and persons lawfully so engaged upon the site all reasonable opportunities for carrying out their work provided that the same shall not obstruct or disturb the progress of the work. The supplier shall also afford such opportunities to the employees of the purchaser.

15.00 AUTHORITY FOR ACCESS:

No persons other than the employees of the Contractor/Firm, WESCO officials & Representative of Collector & District Magistrate, Sundargarh shall allowed on the site except with the written consent of the purchaser.

16.00 OBLIGATION OF THE PURCHASER:

Assistance with Local Regulation:

The purchaser shall assist to the extent possible to the supplier in ascertaining the nature and extent of any laws, regulation, order or by-laws and customs in India, where the goods are to be erected, which may affect the Supplier in the performance of his obligation under the contract. The purchaser shall if so requested procure for the contractor copies thereof, where available and information relating thereto at the supplier's cost.

17.00 **LABOUR:**

17.01: **ENGAGEMENT OF LABOUR:**

The Contractor shall, unless otherwise provided in the Contract, make his own arrangement for the engagement of all labour and for their payment, housing, feeding and transport. The Contractor/Firm is encouraged to the extent practicable and reasonable, to employ staff and labour with the required qualification and experience from sources within the region of work.

17.02: **REPORT OF LABOUR:**

The supplier shall within twenty-four (24) hours of the occurrences of any accident at or about the site in connection with the execution of the work, report such accident to the purchaser. The supplier shall also report such accident to the competent authority whenever such report is required by the Law.

The supplier shall keep proper wages books and time sheets showing the wages paid to and the worked by all workmen employed by him in and for the performance of the contract and shall produce such wages books and time sheets on demand for inspection through the authorized representative of the Purchaser for further furnish to the Purchaser. Such information relating to the wages and conditions of employment of workers may be asked by the purchaser time to time.

17.02: The Contractor shall take all necessary steps to comply with the various applicable laws/rules/regulations/notifications including but not limited to the provisions of contract Labour (regulation and Abolition act) 1970 as amended, Minimum wages act 1984, Workman Compensation Act 1968, payment of Bonus Act 1985 and all other applicable laws and rule framed there under including any statutory approval required from the Central/State Government, Ministry of Labour in relation to the Contractor's Employee/Labour/Workmen deployed to perform the service under this Work Order.

18.00 **WORKMAN COMPENSATION:**

18.01: The Contractor shall take out a comprehensive insurance policy under the Workman Compensation Act 1923, to cover such workers, who will be engaged to undertake the jobs covered under this Work Order and a copy of the Insurance Policy will be given to the Owner solely for its information, reference and records. The Contractor shall ensure such insurance policies are kept at all times.

18.02: The Contractor shall keep the Owner indemnified at all times, against all claims that may arise under this Work Order, including claims of compensation under the provisions of Workmen Compensation Act 1923, and as amended from time to time or any compensation payable under any other law for the time being in force by any workman engaged by the Contractor/Sub-contractor/Sub-agent in carrying out the job involved under this work order and against costs and expenses, if any of the Owner's rights make recovery.

18.03: The Owner shall be entitled to deduct from any money due to or to become due to the Contractor under this work order or under other contract, money paid or payable by way of compensation as aforesaid or cost of expenses in connection with any claims thereto. The Contractor shall abide by the

decision of the Owner as to the sums payable by the Contractor under the provisions of this Clause.

18.04: Nothing contained in this Work Order, shall establish any relationship of any kind between the Owner on the one hand and the employees, workmen and labour of any kind whatsoever of the Contractor on the other hand.

19.00 RESTRICTIONS ON WORKING HOURS:

19.01: No work shall be carried out on the site outside normal working hours or on the locally recognized days or rest, unless

- a. The contract so provides, or
- b. The work is unavoidable or necessary for the saving of life or property for the safety of the work in which in case the supplier shall immediately advise the Purchaser, or
- c. The Purchaser gives his consent.

19.02: The Contractor shall be expected to employ on the work only his regular skilled employees with experience of the particular type of work. No female labour shall be employed after dark. No person below the age of eighteen years shall be employed.

19.03: In case the Purchaser becomes liable to pay any wages or dues to the labour/Government agencies under any of the provisions of the Minimum wages Act, Workman Compensation Act, contract Labour Regulation Act or any other law due to act of omission of the Contractor, the Purchaser may make payments and shall recover the same from the Contractor's bills/invoices.

20.00 TAKING OVER:

20.01: The Goods and Services shall be taken over by the WESCO Utility, when they have been completed in accordance with the contract, except in minor respects that do not affect the use of the Goods and services for their intended purpose, have passed the test on completion and a Taking over Certificate has been issued.

21.00 NOTIFICATION OF AWARD:

21.01: Prior to expiry of the bid validity, the Purchaser shall notify the successful Bidder in writing or by Fax/E-mail, that its bid has been accepted.

21.02: The notification of award shall constitute the formation of the Contract.

21.03: Upon the successful Bidder, furnishing of Security Bank Guarantee, the purchaser shall promptly notify each unsuccessful Bidder and shall discharge their Earnest Money.

21.04: At the same time as the purchaser notifies the successful bidder that its bid has been accepted, the purchaser shall sent the bidder a Contract Form to be executed between the bidder & purchaser.

21.05: Within 15 days of receipt of the Contract Form, the Bidder shall sign and return it to the purchaser along with the Performance Bank Guarantee.

21.06: The Contract is to be executed on Rs. 100/- Non-Judicial Stamp Paper.

22.00 **CONFIDENTIALITY:**

The technical information drawing and other related documents forming part of this work order and the information obtained during the course of investigation under this work order shall be the Owner's exclusive property and shall not be used for any other

purpose except for execution of this Work Order, the technical information drawing, records and other document shall not be copied, transferred or divulged and/or disclosed to third party in full/part, not misused in any form whatsoever except to the extent for the execution of this Work Order.

22.01: In the event of any breach of this provision, the Contractor shall indemnify the Owner against any loss, cost or damage or claim by any party in respect of such breach. In provision of this clause shall remain effective for a period of Two (2) years from the expiry of termination of this Work Order.

QUALIFICATION REQUIREMENTS

01.0

GENERAL:

- a. The Bidder must have valid Electrical H.T. Contractor License issued by Electrical Licensing Board of Odisha (ELBO).
- b. PAN Card.
- c. Valid GST Certificates/Registration Certificates with GST No.
- d. EPF Registration with up to date challan.
- e. ESI Registration with up to date challan/ Labour Insurance.
- f. Up to date Income Tax Clearance Certificate.
- g. Minimum yearly Turnover of Rs. 3.00 Crore (Rupees Three Crore only/-) in any of the last three financial year (i.e. 2016-17, 2017-18 & 2018-19) duly issued or certified or signed by the Chartered Accountant along with Audit Report.
- h. Documents in support of execution of similar nature of works executed by the Contractor/ Agency in last three years duly issued by the competent authorities. The Contractor/ Agency participating in the tender process must have executed a single project having minimum project value of Rs.80.00 lakh in a single Work Order with satisfactory completion.

02.0

The Bidder should furnish the information on all past works and satisfactory performance.

03.0

All bids submitted shall also include the following information:

1. Copies of original documents defining the constitution or legal status, place of registration and principal place of business of the Company/Firm/Partnership etc.
2. The bidder should furnish a brief write up, backed with adequate data explaining his available capacity and experience (both Technical & Financial) for the manufacture and supply of the required materials within the specified time of completion after meeting all his current commitment.
3. The Bidder should clearly confirm that all the facilities exist in the factory from where material to be procured for inspection and testing and these will be made available to the Purchaser or his representative for inspection before any material dispatched to work site.

04.0

Even through the Bidder meets the above qualifying criteria, he is subject to be disqualified if he has:

1. Made misleading or false representation in the statements and attachments submitted in proof of qualification requirement and/ or
2. Record of poor performance such as not properly completing the contract, inordinate delay in supply completion, litigation history or financial failure etc.

05.0

Notwithstanding anything started above, the purchaser reserves the right to assess bidder's capability and capacity to perform the contract.

06.0

Bidder participating, if not have facility to manufacture materials required for the work, must submit their vendors list from where they will procure the material with their credential and annual turnover. While choosing vendors the bidder must ensure that vendor must have supplied the equivalent quantity of materials in any one year during the last three years.

GENERAL CONDITION OF CONTRACT & TECHNICAL FIELD REQUIREMENT

SCOPE OF WORKS:

The scope of Works include execution on turnkey Basis with complete system design, procurement/manufacture, manufacturer's quality assurance, shop testing (including type testing where specified/required after award of work), transportation, storage, erection, including all civil/structural works, site testing, commissioning of all items & materials as elaborated below including all associated activities that through not exclusively specified here but are required for the completion of the entire works under this project.

01.00: GENERAL:

This specification intends to cover but not restrict to the following activities, Services and works.

- a. Complete design and engineering of all the systems, sub-systems. Equipment, materials and services.
- b. Providing engineering data, drawings and O&M manuals for Owner's review, approval and records.
- c. Manufacturing, supply, testing, packing, transportation and insurance from the manufacturer's work to the site.
- d. Receipt, storage, insurance, preservation and conservation of equipment at the site.
- e. All civil and structural works as required.
- f. Fabrication, pre-assembly (if any), erection, testing and putting into satisfactory operation of all the equipment/material including successful commissioning.
- g. In addition to the requirements indicated in this section (Technical specifications), all the requirements as stated in other sections shall also be considered as a part of this specification as if completely bound herewith.
- h. The Bidder shall be responsible for providing all material, equipment and services specified or otherwise which are required to ensure operability, maintainability and the reliability of the complete work covered under this specification.
- i. All services & activities required to be given contractually, by the bidder during warranty period.

02.00: DETAILED SCOPE:

The major work covers:

- 7- Construction of Dedicated 11 KV line.
- 8- VCB Arrangement at grid S/S.
- 9- Construction Substation.
- 10- Construction of LT Line.
- 11- Erection of Four-Pole Structure.
- 12- Line Isolator.

02.01: SURVEY:

The scope covers detailed route survey for all proposed works relating to dedicated feeder power supply to the mentioned locations, dedicated 11KV line, works at grid S/S, construction of Sub-station, Construction of LT line, four pole structure erection etc.

03.00: **CONSTRUCTION OF LINE & SUBSTATION:**

03.01: NEW 11KV LINE:

Construction of 11KV spur line to be constructed with a span length of 80 meters, as per technical specification, satisfying I.E. rules, R.E.C. standard and WESCO norms. These lines shall have provision of AB switches of 400Amp, rating at T-off points only where the spur line length exceeds 2 Km.

03.02: The scope includes supply, installation, testing and commissioning the following.

- i. 3 Phase 11/0.4 KV 250 KVA 3Star rated Distribution Transformers shall be fitted with L.A. and other equipments and accessories as per technical specification, satisfying I.E. Rules, REC standard and as per the cost analysis framed and sanctioned by WESCO.
- ii. All structures, cables, earthing and all other items, not specifically mentioned but necessary for safe operation of the distribution transformer is included in scope. The cable from DT to DB and from DB to Overhead lines shall be run properly, duly clamped with poles doe protection of cable.
- iii. LT Distribution Box shall have proper locking arrangement.

03.02: The Contractor shall survey the area, fix the location of DT keeping in view that DT is as close as practically possible to the load centre of the area to be fed. Contractor shall obtain the approval for final DT location from engineer in charge of WESCO.

03.03: For three phase DT. Gang operated AB switches shall be mounted between 11KV line dropper & HG fuse.

04.00: **CONSTRUCTION OF LT LINES:**

The LT line shall be of following configurations:

150 x 150 mm RS Joist (09 Meter long) (34.6 kg per meter)

LT Line using AB Cable shall be constructed on 9 meter Joist Pole complete with suspension clam , dead end clamp including belting of clamps etc complete as required for supporting LT AB conductor, earthing arrangement, anti climbing device, danger board, stay sets as required, bolts, nuts & washers and any other hardware required to complete the work, should be as per the technical specification ,satisfying I.E. Rules, REC standard and as per the cost analysis framed and sanctioned by WESCO.

05.00: ERECTION OF TRANSPARENCY BOARD:

A Transparency Board of size (Height- 5ft x Width- 4ft) is to be erected for each project before starting of the work. The Transparency Board should have the following details:

1. Name of Project –
2. Executing Agency –
3. Village –
4. Gram Panchayat –
5. Block –
6. Year –
7. Project Estimate Cost –
8. Contractor Name –
9. Project Commencement Date –
10. Project Completion Date –

The board should be displayed with white paint and the back ground with red paint in the upper part & blue paint in the lower part with logo of DMF Sundargarh. The detail specification and drawing is available in specification part of Transparency Board. **The scheduled amount shall be provided for each Transparency Board, which shall be included in the bill.**

06.00: GENERAL REQUIREMENTS & INSTRUCTIONS:

06.01: Sub-stations or Transformers installed/erected or JOIST/PSC poles installed under this scheme will inscribed with the name of the scheme i.e. 'DISTRICT MINERAL FOUNDATION FUND (DMF)' and year of execution in white paint in the background of deep blue paint.

06.02: For HT & LT line the scope covers detailed survey, proposal for feeder bifurcation pole spotting, optimization of pole location, pole design, testing fabrication and supply of all type of transmission line poles including cross arms, angles, channels, braces, top brackets, stay sets, bolts, nuts and washers, D-shackle, all type of insulators, all type of pole accessories like: danger plate, anti climbing device, stay sets, guarding arrangements etc., design, selection of type of foundation for pole footing and erection of poles, supply and application of zinc rich paint, pole earthing, fixing of insulators, supply of conductors and accessories, stringing of conductors along with all necessary line accessories and testing-commissioning of line & sub-station should be as per technical specification, satisfying I.E. rules, R.E.C. standard and WESCO norms. The concerned Executive Engineer of WESCO utility shall inspect, examine the equipments and materials to be used for work at manufacturer or supplier works site. All the transformers shall be tested and sealed by WESCO authorities at manufacturers premises. The contractor/supplier shall provide all facilities as may be required to carry out the tests in accordance to be approved standard free of cost.

06.03: Bidder is required to follow the statutory regulations stipulated in Electricity Act 2003, Indian Telegraph Act 1889, I.E. Act 1910, Electricity (Supply) Act 1948, Indian Electricity Rules 1956 with all amendments till date and other local rules and regulations referred in this specifications.

- 06.04: Bidder shall obtain approvals & clearance and right of way from all agencies involved. All lines shall generally be routed through public land/along the road.
- 06.05: The Bidder shall be responsible for transportation to site of all the materials to be utilized as well as proper storage and preservation of the same at his own cost, till such time the erected line is taken over by the WESCO.
- 06.06: Failure of any equipment to meet the specified requirements of tests carried out at works or at site shall be sufficient causes for rejection of the equipments. Rejection of equipments will not be held as a valid reason for delay in the completion of the works as per schedule. Contractors shall be responsible for removing all rejections and supply the equipment that meet the requirement.

GENERAL CONSTRUCTIONAL PRACTICES (11KV)

SURVEY:

Successful bidder shall carry out detail survey and prepare the detail route of 11KV, HT lines, LT lines, Four pole structure, Sub-station and location of Transformer with single diagram & submit to concern Executive Engineer for approval.

POLE SPOTTING:

A. SPAN:

Average span of HT & LT lines with proposed conductors is given in the table below.

Sl. No.	Line Class	Conductor Type	Nominal Conductor size in sq.mm	Max. span in meters.
1	11KV 3Ph (for new line & spur line)	AAAC	55/80/100	80
2	LT 3Ph 4W	ABC	3x35+1x25	30
3	LT 3Ph 4W	ABC	3x50+1x55	30
4	LT 3Ph 4W	ABC	3x95+1x100	30

B. ROAD CROSSING:

At all major road crossings, the poles shall be fitted with strain/ disc type insulators but the ground clearance at the roads under maximum temperature and in still air shall be such that even with conductor broken in adjacent span ground clearance of the conductor from the road surfaces shall not be less than the specified height of Indian Electricity Rules, 1956 as amended up to date.

C. POWER LINE:

Where the proposed lines require crossing over another line of the same voltage or lower voltage, provisions to prevent the possibility of its coming into contact with other overhead lines shall be made in accordance with the Indian Electricity Rules, 1956 as amended from time to time. All the works related to the above proposal shall be deemed to be included in the scope of the Contractor. Where existing lines of higher voltages are to be crossed under another line, the bidder shall take up suitable rerouting so as to obtain necessary sectional clearance, otherwise crossing through 11KV cable shall be proposed.

D. TELECOMMUNICATION LINE CROSSINGS:

The angle of crossing shall be as near to 90 degree as possible. However, deviation to the extent of 30 degree may be permitted under exceptionally difficult situations.

E. CLEARANCE FROM GROUND/BUILDINGS/TREES & TELEPHONE LINES:

Clearance from ground, buildings, trees and telephone lines shall be provided in conformity with the Indian Electricity Rules, 1956 as amended up to date. The bidder shall select the height of the poles such that all electrical clearances are maintained 150x150 RS & GI Joist shall be used for all road, drain crossings and lines.

- F. The minimum planting depth of poles shall be governed by IS:1678. However, if due to the ground conditions, e.g. water logged etc. depth of planting of poles shall be suitably increased the bidder will supply the poles of suitable height in order to maintain the required clearance, the vendor will submit the details of the same on case to case basis.
- G. Guarding mesh shall be used in all electric line/telecom line/road/drain/canal crossing and at all points as per statutory requirements. The bidder shall provide & install anti climbing devices and danger plates on all poles and DT stations.

DESIGN PARAMETERS:

- a. Factor of safety 2.0 in Normal Condition for 33KV & 2.5 for 11KV line & LT line Joist supports.
- b. Wind Pressure on Pole & Conductor- As per IS 802.
- c. In addition to wind load on cross-arms, insulators guy-wire etc shall be considered.
- d. Wind load on full projected area of conductor and pole is to be considered for design.
- e. Ground clearance should not be less than the specified height of Indian Electricity Rules, 1956 as amended up to date.
- f. The live metal clearance shall be as per IS: 5613 and shall be min. 330 mm for 33KV line.
- g. Pole accessories like danger plates, phase plates and number plates shall be provided.

POLES :

Erection of Pole, Joist footing and Compaction of soil.

Pits are too excavated to a size of 0.6 meter x1.5 meter with its longer axis in the direction of the line. In case bidder employs Earth augers, the Pit size can be considered 0.6 meter die with 1.5 meter depth.

For hard rock locations, 1 meter deep hole of diameter 20% in excess of the longest dimension of the bottom most portion of pole shall be excavated.

The pole shall be grouted in the pit with 1:2:4 nominal concrete mix at the time of pole erection.

The planting depth of pole over the base precast concrete slab shall be 1500 mm in the ground except in wet soil and black cotton soil where depth shall be increased by 0.2 meter to 0.3 meter with reduced wind span.

EARTHING OF POLES:

In 11KV & LT, each pole shall be earthed with coil type earthing as per REC Construction Standard J-1.

EXTENSION OF POLE:

PSC pole with pole extension arrangement up to two meters shall be used at low ground level locations for maintaining ground clearance and for road crossings for HT & LT lines, Extension of pole shall be use of 100x50x6mm galvanize channel up to three meters. An overlap of one meter shall be maintained with the pole. Wherever such extended pole will be used the span on both sides of the extension pole shall be suitable reduced to take care of loading on the pole.

PROVIDING OF GUYS/STRUT POLES TO SUPPORTS:

Strut poles/flying guys wherever required shall be installed on various pole locations as per REC construction standards. For selection of guying location REC guidelines & construction practices shall be followed.

The stay rod should be placed in a position so that the angle of rod with the vertical face of the pit is 300/450 as the case may be.

G.I stay wires of size 7/3.15 mm (10 SWG) with GI turn buckle rod of 16 mm dia & 16 stay rod shall be used for 33KV line.

The anchor plate shall be fixed to 200mmx200mm MS plate of 6mm thickness. M.S. rod with a bolt arrangement at one end other end is giving shape of 40mm dia circle to bind one end of the stay wire.

CROSS ARMS:

Cross Arms for 11KV Overhead power line shall be made out of 75x40x6 mm M.S. channel. Cross Arms made out of M.S. angle shall not be used. Cross arms shall conform to specification given under the head miscellaneous items in this specifications.

CROSSINGS:

All crossings shall be at right angles Guarding shall be providing at major crossings. The Guarding shall consists of GI guard cross arm of length 2.5 meter made out of 75x40x6 mm channel & shall not be dipped galvanized generally conforming to IS :2633/72.The clamps shall also be hot dipped galvanized generally conforming to IS: 2633/72. Guarding shall be erected with ground & line clearance as per the I.E. rules. The guarding shall be provided with GI wire 8 SWG for 11KV & LT line & 4SWG for 33KV line. Binding wire & suitable bolt & nut bolts for cross arm to cross arm. Guard wire shall be separately earthed at both ends. Crossings the roads/canals or any other lines shall be as per the REC construction standard and WESCO norms.

ANTI-CLIMBING DEVICES:

Anti Climbing Devices shall be provided with G.I. Barbed wire they shall be provided and installed by the Contractor for all poles. The barbed wire shall conform to IS: 278 (Grade A1). The barbed wires shall be given chromating dip as per procedure laid down in IS: 1340.

PAINTING MATERIALS:

All the metal parts except G.I. parts are to be painted with one coat of red oxide and one coat of aluminums paint.

STRINGING OF CONDUCTOR:

- I. The works include spreading of conductors or HT/LT AB Cable without any damage and stringing with proper tension without any kinks/damage including binding of conductor at pin points, jumpering at cut points etc. The ground & line clearances at road crossings along roads. LT .crossings & other crossings shall be as per the relevant I.E. rules.

- II. All the joints or splices shall be made at least 15 meters away from the pole. No joints or splices shall be made in spans crossing over main roads, railways and small river spans. Not more than one joint per-conductor per span shall be allowed. The compression type fitting shall have all corners rounded, burrs and sharp edges removed and smoothed.
- III. While Re-conductoring of 11KV line, disconnection/connection of existing Distribution Transformer shall be in the scope of the contractor/bidder. The supply and erection of line material for achieving the DT disconnection and connection shall be in the scope of the contractor.
- IV. The empty conductor drums, available after laying of conductor, shall be disposed of by the contractor at his cost. These drums may be used for rewinding of conductor removed from the line at the later stage of Re-conductoring work.

TECHNICAL SPECIFICATION FOR 11KV LINE MATERIALS

SUPPORT POLES, CROSSARMS AND NUTS & BOLTS

01.00: **SCOPE:**

This Specification covers Design, Engineering, Manufacturing, Testing, Inspection before dispatch, Forwarding, Packing, Transportation to site, Insurance(both during transit & storage), Storage, Erection, Supervision, Testing and Commissioning of 11KV support Poles, Cross Arms and Bolts & Nuts for use in the networks of WESCO Odisha.

02.00: **DESIGN REQUIREMENT:**

The wind pressures to be applied to the conductors, poles and cross arms are specified in IS 5613(Part 1/Section 1): 1995 and as stipulated in the Service Conditions.

03.00: **JOIST POLES:**

Poles shall be of rectangular type with an overall length of 8.0 M, 9.0 M & 10 M suitable for use in LT/HT overhead power lines and double pole & four pole structures associated with the lines and for substations.

04.00: **APPLICABLE STANDARDS:**

Except when they conflict with specific requirements in this Specification, the JOIST pole shall comply with the relevant provisions made in the following Indian standards or the latest versions thereof.

- a) IS: 1678, Specification for pre-stressed concrete poles for overhead power, traction and telecommunication lines.
- b) OS: 2905, Method of test for concrete poles for overhead power and telecommunication lines.
- c) IS: 7321, Code of practice for selection, handling and erection of concrete poles for overhead power and telecommunication lines.

05.00 **APPLICATION:**

05.01: **8.0 M POLES:**

These poles shall be used at tangent locations for 11KV and LT line in wind pressure Zones of 100 kg/M sq. in accordance with REC Connection Standards No. A-5.

05.02: **9.0 M POLES:**

These poles shall be used for double pole structures of distribution transformer centers as per REC Connection Standards F-2 to F-4 and for special locations in 11KV and LT lines such as road crossing etc.

05.03: **10.0 M POLES:**

These poles shall be used for locations in 11KV and LT/HT lines.

06.00 **MATERIAL:**

06.01: CEMENT:

The cement used in the manufacture of pre-stressed concrete poles shall be ordinary or rapid hardening Portland cement conforming to IS: 269 - 1976 (Specification for ordinary and low heat Portland cement) or IS: 8041 E- 1978 (Specification for rapid hardening Portland cement).

06.02: AGGREGATES:

Aggregates used for the manufacture of pre- stressed concrete poles shall confirm to IS: 383 (Specification for coarse and fine aggregates from natural sources for concrete). The normal maximum size of aggregates shall in no case exceed 12 mm.

06.03: WATER:

Water should be free from chlorides, Sulphates, other salts and organic matter; Potable water will be generally suitable.

06.04: COVER:

The cover of concrete measured from outside of pre-stressing tendon shall be normally 20mm.

06.05: EARTHING:

Earthing shall be provided by having length of 8 SWG GI wire embedded in concrete during manufacture and the ends of the wires left projecting from the pole to a length of 100mm at 250 mm from top and 150mm below the ground level.

TECHNICAL SPECIFICATION FOR STEEL MATERIALS

100X50 MM MS CHANNEL 50X50X6 MM MS ANGLE

01.00:

SCOPE:

This specification covers the manufacturing, testing before dispatch and delivery at destination at site stores in Sundargarh District.

100X50 MM MS CHANNEL
75x40 MM MS CHANNEL
50X50X6 MM MS ANGLE

As per I.S: 2062 and its latest amendments for grade A Standards.

The steel materials shall comply with the requirements of latest issue of IS-2062 Gr-A except where specified otherwise.

02.00:

TECHNICAL SPECIFICATION FOR 11KV INSULATORS:

SCOPE:

This Specification covers Design, Engineering, Manufacture, testing, Inspection before dispatch, forwarding, packing, transportation to site, insurance (both during transit & storage), Storage, Erection, Supervision, testing commissioning of 11 KV Insulators for use in the networks of WESCO, Odisha.

03.00:

PIN INSULATORS:

Nominal Voltage	33 kv	11kv
Visible discharge Voltage	27 KV rms.	9KV rms.
Wet power frequency one minute withstand voltage	75KV rms	35 KV rms.
Power frequency puncture Voltage	180KV rms.	105 KV rms.
Impulse withstand voltage peak	170 KV peak	75 KV peak
Creepage distance	840mm	320mm
Protected creepage distance	420mm	
Minimum failing load up to conductor size 100 mm sq.	10 KN	

04.00:

PERFORMANCE CHARACTERISTICS:

- a) The insulators shall be suitable for use on the WESCO distribution system with conditions as shown in the sections on Service Conditions and System Conditions.
- b) They shall conform to IEC 720 or IS 731 and shall meet the following performance criteria.

05.00: **DISC INSULATOR:**

PERFORMANCE CHARACTERISTICS:

Nominal Voltage	33KV	11KV
Minimum number of discs string	4	2
Visible discharge voltage	27 KV rms.	9KV rms.
Wet power frequency one minute withstand voltage	75 KV rms.	35 KV rms.
Power frequency puncture voltage	1.3 times the actual dry flashover voltage of the unit	
Impulse withstand voltage peak	170 KV	75 KV
Minimum creepage distance	840mm	320mm
Minimum protected creepage distance	420mm	-
Minimum mechanical failing load for conductor size of 232 MM sq. AAAC.	120KN	120KN
80& 100MM sq.	90	90
55mm sq.	70	70

06.00: **TESTS:**

Type, acceptance and routine tests shall be carried out and results given along with certification as appropriate in the Technical Data Schedule and Test Certificates Schedule of this specification.

07.00: **TYPE TESTS:**

The following type tests are required after award of works:

- Visible discharge test.
- Impulse voltage withstand test.
- Wet power frequency voltage withstand test.
- Electro-mechanical failing load test for string insulator units (porcelain type).
- 24 hour mechanical strength test.

07.01: **ACCEPTANCE TESTS:**

The test samples having withstood the routine tests shall be subjected to the following tests according to the sampling procedure of IEC 383 clause 23.

- Verification of dimensions.
- 24 hour mechanical strength test.
- Electro-mechanical failing load test for string insulator units (porcelain type).
- Puncture test.
- Porosity test (porcelain only).
- Test for galvanization of ferrous parts.

07.02: **ROUTINE TESTS:**

The following routine tests shall be conducted on each set and results are to be furnished for consideration:

- Visual examination.
- Tensile load test.
- Power frequency voltage test.

07.03: POST INSULATOR FOR PRIMARY SUBSTATIONS:

07.04: POST INSULATOR (Clamp top type):

Bidders may offer substation designs using post insulators of the clamp top type. The insulators shall be suitable for use in WESCO primary substations with conditions as show in the sections on Service Conditions and System Conditions. They shall conform to IEC 273 or IS 2544 and shall meet the following performance criteria:

Normal Voltage	33KV	11KV
Web and dry power frequency one minute withstands voltage.	75 KV rms.	35 KV rms.
Power frequency puncture withstand voltage.	1.3 times the actual dry flashover voltage.	1.3 times the actual dry flashover voltage.
Impulse withstand voltage peak	170KV peak	75 KV peak
Minimum creep age distance	840 mm	380mm
Minimum protected creep age distance	420mm	-
Minimum failing load (bending)	12.5 KN	12.5 KN
Minimum failing load (torsion)	2000 Nm	1200Nm
Visible discharge voltage	27KV rms	9 KV rms

08.00: **STAY INSULATORS (11KV):**

The insulators shall be suitable for use in the WESCO distribution system with conditions as shown in the sections on Service conditions and System Conditions 11KV Stay insulators shall be used on L.V. stays.

08.01: PERFORMANCE CHARACTERISTIC SHALL BE STRICTLY AS PER RELEVANT IS:

08.02: MATERIALS:

The insulators shall be brown glazed porcelain.

08.03: DESIGN:

The bidder shall guarantee that the dimensions and tolerance of the insulators offered are in accordance with the drawing which shall accompany the bid documents. The insulators shall be used with 7/8 SWG (7/4.00mm) steel stay wire, having an overall diameter of 12.2 mm and tensile strength of 70 kg/sq. mm. The insulators shall be suitable for use having a minimum stay wire hole diameter of 22 mm and be such that a straight stay wire can be passed through it.

TECHNICAL SPECIFICATION FOR 11KV LINE FITTINGS

01.0

SCOPE:

This Specification covers Design, Engineering , Manufacture, testing, inspection before dispatch, forwarding, packing, transportation to site, insurance (both during transit & storage), Storage, Erection, Supervision, testing and commissioning of 11KV line Fittings for use in the networks of WESCO Odisha.

02.00

MEASUREMENT TEST FOR STAY WIRE:

DESCRIPTION	REQUIRED VALUE (GRADE-4)
Nominal size of stay wire	7/4.00mm
Nominal Diameter of individual wires	4.00mm
Minimum Diameter of Individual wires	3.90 mm
Maximum Diameter of individual wires	4.10 mm
Minimum ultimate tensile strength of individual wire	700N
Minimum percentage elongation at rupture before stranding	5%
Minimum percentage elongation at rupture after stranding	4.25%
Wrapping test for ductility Turns on and off its own diameter	8
Lay ration of finished strand	19 to 21
Minimum weight of zinc coating before starting	490 g/mm sq.
Minimum weight of zinc coating after starting	475 g/mm sq.
Chemical test: Sulphur and phosphorus content	Less than or equal to 0.060% each.

TECHNICAL SPECIFICATION FOR ALL ALUMINIUM ALLOY CONDUCTORS (AAAC):

01.00

SCOPE

This specification covers design, Engineering , Manufacturer, Testing , Inspection before dispatch, forwarding, packing, transportation to sites, insurance (both during transit & storage), storage, erection, supervision testing & commissioning of all sizes of All Aluminum Alloy Conductors of the aluminum-magnesium-silicon type for use in the distribution overhead power lines of WESCO of Odisha.

02.00

STANDARDS

Except where modified by the specification, the Aluminum Alloy Conductor shall be designed, manufactured and tested in accordance with latest editions of the following standards.

IEC/ISO Other International Standard	IS	Subject
ICE: 1089		Round wire concentric lay overload electrical stranded conductors.
	IS 398	Aluminum Alloy Stranded Conductors
	IS 9997	Aluminum Alloy redraw rods for electrical purposes
IEC 502: 1994		Extruded solid dielectric insulated power cables for rated voltages 1.0 KV up to 30 KV.
IEC 104		Aluminum Magnesium Silicon alloy wire for overhead line conductors
	IS 1778	Reels and drums of bare conductor.
BS: 6485-1971		PVC Covered conductors for overhead power lines

03.00:

SPARE PARTS AND SPECIAL TOOLS:

- The Bidder shall provide a list of recommended spare parts, special erection and installation tools/equipment together with their individual prices. This list shall identify all essential spares items for any recommended maintenance for a period of five years after commissioning.
- The owner may order all or any of the spare parts/ erection/ installation tools listed at the time of contract award and the parts so ordered shall be supplied as part of the definite works. The owner may order additional spare at any time during the contract period at the rates stated in the Contract Document
- A spare parts catalogue with price list shall be provided and this shall form part of the drawings and literature to be supplied.
- The Bidder shall given an assurance that spare parts and consumable items will continue to be available through the life of the equipment, which shall be 25 years minimum. However, the Contractor shall given a minimum of 12 months notice in the event that the Contractor or

any sub-contractors plan to discontinue manufacture of any component used in this equipment.

- Any spare apparatus, parts or tools shall be subject to the same specification, tests and conditions as similar material supplied under the Contract. They shall be strictly interchangeable and suitable for use in place of the corresponding parts supplied with the plant and must be suitably marked and numbered for identification.
- Spare parts shall be delivered suitably packed and treated for long periods in storage. Each pack shall be clearly and indelibly marked with its contents, including a designation number corresponding to the spare parts list in the operation and maintenance instructions.

TECHNICAL SPECIFICATION FOR 11KV 400 AMPS 3 POLE AB SWITCH

01.0 **SCOPE:**

This specification covers manufacturing testing and supply of 11KV 400 AMPS 50 Hz Air Break switches for outdoor installation in horizontal configuration. The switches are suitable for operation under off load conditions only and are intended for use on Distribution Sub-stations and tapping sectionalizing points of 11KV lines.

02.00 **DESCRIPTION OF THE MATERIALS:**

The 11KV A.B. Switch sets shall conform to the following parameters:-

1) Number of poles	3
2) Number of post insulator per pole	2 nos 12 KV post insulator
3) Nominal system voltage	11KV
4) Highest System Voltage	12 KV
5) Rated frequency	50HZ
6) System Earthings	Effectively Earthings.
7) Rated nominal current	400 amps.
8) Altitude of installation	Not exceeding 1000 M

03.00 **STANDARDS:**

The AB switch set shall conform to the following standards.

- a) IS -9920(Part -I to V)
- b) IS- 2544/1973 (for porcelain post insulators)
- c) IS -2633, (for galvanization of ferrous parts) or its latest amendments if any.

04.00 **INSULATOR MAKE:-**

12 KV post insulators complete with post and cap duly cemented to be used in the AB Switch Set conforming to IS-2544/1973.

The tenderer shall furnish the type test certificate of the post insulators from their manufacturer for reference and scrutiny, after award of work.

The tenderer shall mention make, type of insulation materials, metal fittings, Creep age distance, protected Creep age distance, tensile strength, compression strength, torsion strength and cantilever strength.

05.00 **TECHNICAL DETAILS**

5.1 General:

The 11KV A.B Switch set shall be the gang operated rotating single air break type having 2 post insulator per phase. The operating mechanism shall be suitable for manual operation from the ground level and shall be so designed that all the three phases shall open or close simultaneously. The Switches shall be robust in construction, easy in operation and shall be protected against over travel or straining that might adversely affect any of its parts. The required base M.S Channel(hot dip galvanized) phase coupling rod, operating rod with intermediate guide braided with flexible electrolytic copper, tail piece of required current carrying capacity and operating mechanism with ON & OFF positions shall be provided. The operating rod shall be medium gauge of 32 mm diameter nominal bare G.I. pipe single length 6 meters. The phase coupling rod for gang operation shall be of medium gauge 25 mm dia nominal bore G.I. Pipe. The Rotating post insulators shall be provided with suitable bearing mounted on a base channel with 8 mm dia thrust collar and 6mm split pin made out of stainless steel. The operating down rod shall be coupled to the spindle (minimum dia-32mm) for gang operation through another suitable bearing by two numbers 10mm dia stainless steel bolts with double nuts. All the bearings shall be provided with grease nipples. All metal (ferrous) parts shall be galvanized and polished. The pipe shall be galvanized in accordance with IS-4736/1968. The post insulators should be fixed with the base channel using Galvanized Nuts and Bolts

06.00 **SAMPLE, DRAWING & LITERATURE**

Samples of each item 11KV 400 amps. A.B. Switch shall be furnished and three copies of drawings item similar to the sample shall be furnished along with the tender

The details of construction and materials of different parts of the A.B. Switch shall clearly be indicated in the tender and illustrative pamphlet/literature for the same shall be submitted along with the tender.

07.00 **TESTS & TEST CERTIFICATE:**

Type Test:

Certificates for the following type tests conducted within five years proceeding on a prototype set of A.B. Switch in a Govt. Approved Testing Laboratory preferably at CPRI Bangalore shall have to be submitted for reference after award of work.

Dielectric Test: (Impulse and one minute were 5 power frequencies withstand voltage test).

- Temperature rise test (for contracts and terminals).
- Short Time current and peak withstand current test.
- Mainly active load breaking capacity test.
- Transformer off-load breaking capacity test.

- Line charging breaking capacity test.
- Cable charging breaking test.
- Operation and mechanical endurance test.
- Mechanical strength test for post insulator, as per IS-2544/1973 shall be furnished.
- Test galvanization of metal (ferrous) part.

Route Tests:

The following routine tests shall have to be conducted on each set and results are to be furnished for consideration of deputing inspecting officer for inspection and conducting testing of the materials.

1. Power frequency voltage dry test.
2. Measurement of resistance of main circuit.
3. Tests to prove satisfactory operation.
4. Dimension check.
5. Galvanization test.

08.00 **GUARANTEED TECHNICAL PARTICULARS:**

The tenderer shall furnish the guaranteed technical particulars duly filled in the proforma along with the tender.

09.00 **COMPLETENESS OF EQUIPMENT:**

All fittings, accessories or apparatus which may not have been specifically mentioned in this specification but which are usual or necessary in equipment of similar plant shall be deemed to be included in the specification and shall be supplied by the Tender without extra charge. All plant and equipment shall be completed in all details whether such details are mentioned in the specification or not.

10.00 **INSPECTION:**

Routine tests shall be conducted at the place of manufacturer. The tenderer are required to furnished details of equipment which will be used for testing along with tender. The tenderer of those manufacturers who do not have adequate testing facilities for conducting routine and acceptance test are liable for cancellation. The successful bidder has to furnish routine test certificate and guaranteed certificate for approval prior to offer of materials for inspection for each consignment of offer.

TECHNICAL SPECIFICATION FOR 11 KV 200 AMP THREE POLE H.G. FUSE SETS

01.00 **SCOPE:**

This specification covers manufacturing testing and supply of 11KV 200 AMPS 3 pole, H.G. Fuse Sets.

02.00 The 11KV H.G. Fuse shall be suitable for outdoor operation in horizontal configuration under the climatic conditions specified. It shall be the following rating.

- | | |
|---------------------------------|----------------------------|
| 1) Number of poles | 3 |
| 2) Number of insulator per pole | 2 nos 12 KV post insulator |
| 3) Nominal system voltage | 11KV |
| 4) Highest System Voltage | 12 KV |
| 5) Rated frequency | 50HZ |
| 6) System earthlings | Effectively earthlings. |
| 7) Rated nominal current | 200 Amps. |
| 8) Altitude of installation | Not exceeding 1000 M |

03.00 **STANDARDS:**

The H.G. fuse Set shall conform to the following standards.

- a) IS -9385-1980 (for high voltage expulsion fuses and similar fuses).
- b) IS- 2544/1973 (for porcelain post insulators or its latest amendments if any).
- c) IS -2633-1979, (for galvanization of ferrous parts)

04.00 **INSULATOR MAKE:**

12 KV post insulators complete with pedestal cap duly cemented to be used in 11KV H.G. Fuse sets conforming to IS-2544/1973.

05.00 **TECHNICAL DETAILS:**

The H.G. Fuses shall have adjustable arcing horns made of solid copper rod having 7.62 mm dia. The horns shall be fitted with screwing devices with fly nuts for fixing and tightening the fuse wire. It shall have robust terminal connector 5s of size 80 mm x 50 mm x 6 mm made of copper casting (95% minimum copper composition) duly silver plated with two numbers of 12 mm dia brass bolts and double nuts with flat brass washers. The connector should be capable of connecting crimpable conductor up to 80 mm size (ACSR/Alloy) with bimetallic solder less sockets. The H.G. Fuses Set shall be suitable for horizontal mounting on sub-station structures. The minimum clearance between the adjacent phases of the fuse set shall be 760 mm and

the centre to centre (distance between two post insulators of the same phase) shall be 410 mm. All metal (ferrous) parts shall be galvanized and polished. Only 12 KV post insulator original cemented and not pin insulators shall be used for the H.G. fuse set.

06.00 **TESTS & TEST CERTIFICATE:**

Certificates for the following type tests conducted on a prototype set of H.G. Fuse set in Govt. approved Testing Laboratory preferably at CPRI, Bangalore shall have to be submitted for reference and Scrutiny, after award of work.

1. Dielectric test (impulse & one minute wet power frequency withstand voltage test).
2. Temperature rise test (for terminals).
3. Mechanical strength test for the post insulator as per IS 2544/1973.
4. Test for galvanization of metal (ferrous) parts

TECHNICAL SPECIFICATION FOR 33 KV & 11KV SURGE ARRESTOR (L.A)

01.0 SCOPE:

This Specification covers Design, Engineering, Manufacturer, testing, inspection before dispatch, forwarding, packing, transportation to site, insurance (both during transit & storage), Storage, Erection, Supervision, testing and commissioning of 33 KV & 11 KV Surge Arrestor (L.A.) for use in the networker of WESCO, Odisha.

02.00 TECHNICAL:

The Station Class Surge Arrestor shall be heavy duty, metal oxide, gapless type generally for installation on the 33 KV and 11KV sides of 33/11 KV Primary substations and 11/0.4 KV Distribution Substation.

The performance requirements are as follows:

PERFORMANCE CHARACTERISTICS OF SURGE ARRESTERS

SL. NO.	NOMINAL SYSTEM VOLTAGE	11 KV	33 KV
	Class	Station Class	Station Class
1	Arrestor voltage rating	12 KV	33 KV
2	Rated frequency	50 HZ	50 HZ
3	Continuous operating voltage, RMS	9.6 KV	24KV
4	Leakage current through arrestor at operating	Less than 1 mA	Less than 1 mA
5	Long duration discharge class	Class 2	Class 2
6	Nominal 8/20 us discharge current peak	10 kA	10 kA
7	Maximum lighting impulse residual voltage with 8/20 us discharge current peak	32 KV (24KV)	70 KV (60KV)
8	Maximum switching impulse residual voltage peak	28 KV (24KV)	70 KV (60KV)
9	Maximum residual voltage with steep current peak	38 KV (34KV)	93 KV (85KV)
10	High current impulse test value(4/10 wave)	100 kA	100 kA
11	Insulator housing impulse withstand voltage, 1.250 wave-peak	41.6 KV	110.5 KV
12	Insulator housing power frequency voltage withstand capacity for one minute (wet)-peak	29.68 KV	74.2 KV
13	Minimum creepage distance of insulator	380mm	900mm
14	Minimum protected creepage distance	Not applicable	450 mm

N.B.:

(Figure shown in bracket are preferred ratings. Insulation withstands voltage of arrestor housing shall be related to the residual voltages in accordance with clause 5.1 of IEC: 99.4).

GUARANTEED TECHNICAL PARTICULAR OF 11 KV 400 AMPS A.B. SWITCHES

SL. NO.	PARTICULARS	11 KV 400 AMPS A.B. SWITCHES (DESIRED VALUE)	PARTICULARS AS OFFERED BY THE TENDERER
1	Name of the manufacturer and Country of origin	To be specified by the tenderer	
2	Type of Switch	Rotating type only	
3	Suitable for mounting	Horizontal type only	
4	Number of supporting post insulator per phase	2 Nos 12 KV Post insulator per phase as per ISS -2544/1973	
5	Post insulator (a) Name of the manufacturer and Country of origin	To be specified by the tenderer	
	(b) Type of cementing	To be quoted original cemented only	
	(c) One minute power frequency withstand voltage dry	35 KV RMS	
	(d) One minute power frequency withstand voltage wet	35 KV RMS	
	(e) Visible discharge voltage	9 KV RMS	
	(f) Dry Flashover voltage	To be specified by the tenderer	
	(g) POWER FREQUENCY: Puncture withstand voltage	1.3 times of actual dry flash over voltage	
	(h) Creepage distance	230 mm minimum (actual creepage distance for which type test have been conducted is to be specified by the tenderer after award of work)	
6	Impulse withstand voltage for positive and negative polarity (1.2/50) micro second wave)		
	(a) Across the isolating distance	85 KV (Peak)	
	(b) To earth & between poles	75 KV (Peak)	
7	One minute power frequency withstand		
	(c) Across the isolating distance	32 KV (RMS)	
	(d) To earth & between poles	28 KV (RMS)	
8	Rated normal current and rated frequency	400 Amps 50 HZ	
9	Rated short circuit making capacity	25 KA (peak)	
10	Rated short time current	16 KA (RMS)	
11	Rated peak withstand current	40 KA (RMS)	
12	Rated mainly active load breaking capacity	10 A	
13	Rated transformer off load breaking capacity	6.3 A (RMS)	
14	Rated line charging breaking capacity	2.5 A (RMS)	
15	Rated cable charging breaking capacity	10 A (RMS)	
16	Minimum clearance between		

	adjacent phases		
	(a) Switch Closed (Centre to Centre)	760 mm	
	(b) Switch Opened (Centre/ Edge of Blade)	380 mm	
17	Temperature rise		
	(a) Temperature rise should not exceed to maximum Limit as specified below at an ambient temperature Not exceeding in 40° \c 65° C, Copper contacts silver faced Terminal of Switch intended to be connected to external conductor by bolts and screw at an ambient temperature at 40°C should not exceed 50 ° C.		
18	Vertical clearance from top of insulator cap to mounting channel	254 mm (Minimum)	
19	Type of contact	(a) Self aligned, high pressure jaw type fixed contracts of electrolytic copper of size 80 x 50 x 8mm duly plated. Each contact should be reverted with three nos. Copper rivets with a bunch (minimum 3 mm thick) consisting of copper foils, each may vary from 0.15 mm to 0.25 mm. This total thickness of copper foils per jaw should be 6 mm. Jaw assembling are to be bolted through stainless steel bolts and nuts with stainless steel flat and spring washer.	
		(b) Solid rectangle at blade type moving contact of electrolytic copper size 220 mm x 50 mm x 8 mm duly silver plated.	
		(c) Pressure spring to be used in jaw contacts shall be phosphorous bronze having 8 nos. of turn x 28 mm height x 14.4 mm diameter with 14 SWG wire(minimum 6 Nos. springs shall be used).	
20	Connectors	Terminal connectors for both movable and fixed should be of copper casting (minimum 95% copper composition). The fixed connector shall of size 80 x 50 X 8 mm and the size of movable connector shall be of size 80 x 50 x 8 mm with machine finishing duly silver plated with 2 Nos. 12 mm dia holes	

		provided with suitable brass bolts and double nuts with brass flat washers and 2 nos. soldered less bio metallic sockets for each connector suitable up to 80 sq. mm. conductor.	
21	Moving Contact	Movable contact is to be supported by galvanized angle of 50 x 50 x 5 mm in each phase and the moving contact are to be bolted through 2 nos stainless steel bolts and nuts with stainless steel flat and spring washers, suitable.	
22	Galvanization	(a) Iron parts shall be hot deep galvanized as per IS-2633/1972.	
		(b) The pipe shall be galvanized as per IS 4736/1968.	
23	Details of phase:		
	(a) Coupling Rod	25 mm nominal bore G.I. pipe of medium gauge.	
	(b) Operating Rod	32mm nominal bore G.I.Pipe medium gauge single length 6 mtrs. The detailed dimension of the G.I. pipe as per IS-1239(Pt.I) are mentioned below: ----- Nominal: Outside diameter Base: Diameter thickness ----- Max. Min. 25 mm 34.2mm 33.3mm 3.25 mm 32mm 42.9mm 42mm 3.25mm	
	(c) Arcing Horn	10mm dia G.I. rod with spring assisted operation.	
	(d) Force of fixed	Contact spring to be specified by the tenderer.	
	(e) Copper braided flexible	320 mm length of flexible electrolytic topes. Copper tape or braided chord (with tin coated) having minimum weight 450 gms. per meter and both ends shall be crimped with copper sockets through brass bolts and nuts with brass flat washers. Two nos. of suitable copper sockets shall be used at both ends. The minimum no of flexible wires should be 1536 of 36 SWG for each flexible chord.	
	(f) Quick break device	Lever Mechanism	
	(g) Bearings	4 nos. self lubricant bearing to be provided with grease nipple including 4th bearing being a thrust bearing.	
	(h) Locking arrangement Pad	Locker and Key arrangement at both 'ON' and 'OFF' position.	
	(i) Earth Terminal	To be provided at base channels.	
24	Supporting Channels	75mm x 40mm M.S. channel hot deep galvanized.	

25	Weight of each pole Complete	To be specified by the tenderer	
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N.B.:

- i) Ferrous parts shall be duly galvanized as per IS-2633/1972 & Non-ferrous parts shall be silver plated.
- ii) Certificate from a Govt. Approved Laboratory regarding composition of Copper in electrolytic copper casting of materials should be submitted during inspection of materials at the cost of tenderer.

GUARANTEED TECHNICAL PARTICULARS FOR H.G. FUSE SET

11 KV 200AMPS, 3 POLE

SL. NO.	PARTICULARS	DESIRED VALUE	VALUES OFFERED BY THE TENDERER
1	Name of the manufacturer and Country of origin	To be specified by the tenderer	
2	Operating voltage	11 KV	
3	Number of insulators per phase	2 nos. 12KV Post insulator per phase	
4	Rated normal current and normal frequency	200 Amps. 50 Hz	
5	Vertical clearance from top of insulator cap to mounting channel	254mm (Minimum)	
6	Height of the riser for carrying the horns	150mm from the cap (top) of insulator	
7	Post insulator:		
	(a) Name of the manufacturer and Country of origin	To be specified by the tenderer	
	(b) Type of cementing	To be quoted original cemented only	
	(c) One minute power frequency withstand voltage dry.	35 KV RMS	
	(d) One minute power frequency withstand voltage wet.	35 KV RMS	
	(e) Visible discharge voltage	9 KV RMS	
	(f) Dry flashover voltage	To be specified by the tenderer	
	(g) Power frequency puncture withstand voltage	1.3 times of actual dry flash over voltage.	
	(h) Creepage distance	230 mm minimum (actual creepage distance for which type test have been conducted is to be specified by the tenderer.)	
8	Impulse withstand voltage (1.2/50 micro second wave positive & negative polarity)		
	(a) Across the isolating distance.	85 KV (Peak)	
	(b) To earth & between poles.	75 KV (Peak)	
9	One minute power frequency withstand voltage		
	(a) Across the isolating distance	32 KV RMS	
	(b) To earth and between poles	28 KV RMS	

10	Details of arcing horns	Solid Copper rod having 7.62 mm dia silver plate provided with screwing arrangement on the fuse carrier made of copper casting for fixing fuse wire. (Total length 63.5mm). All the bolts, nuts and washers should be made out of brass.	
11	Riser unit (150 mm total height)	(a) Riser cum connector made out of copper casting (with minimum 95% copper composition) having riser size 50 mm height x 30 mm width x 8 mm thickness and connector size 80 x 50 x 6 mm duly silver plated and machine finishing provided with 2 nos. 12 mm dia brass bolts and brass double nuts with flat brass washer and 2 nos. solder less bimetallic sockets per each connector suitable up to 80 mm sq. conductor	
		(b) 100 mm height G.I. riser made of 19 mm nominal bore medium gauge G.I. pipe welded with 2 nos G.I. Flat of 30 X 5 mm at both ends fixed with 10 mm dia stainless steel, bolts and nuts with flat stainless steel spring washers.	
12	Supporting Channels	75 x 40 x 6mm M.S. Channel (Galvanized)	
13	Galvanization	All ferrous parts should be galvanized as per IS-2633/1972 & all non-ferrous parts should be duly electroplated with silver.	
14	Weight of cash pole complete	To be specified by the tenderer	

N.B:

Certificate from a Govt. Approved Laboratory regarding composition of copper in electrolytic copper casting and galvanization as per ISS may be furnished during inspection of materials at the cost of tender.

THREE PHASE DISTRIBUTION TRANSFORMER

PART 1: TECHNICAL SPECIFICATION FOR DISTRIBUTION TRANSFORMER OF CAPACITY 25/63/100/250 KVA

01.00 SCOPE:

- 01.01 The specification covers the design, engineering, manufacturer, stage inspection, testing, pre-delivery inspection, supply, delivery, loading, unloading and performance requirements of 11/0.433 KV non-sealed type aluminum wound BEE specified **Star rated Distribution Transformers** for outdoor use in the networks of WESCO. The transformers shall be double wound, three phase, CRGO M3 Grade (0.23mm) or better, oil immersed with ONAN cooling with Oil filled up to maximum permissible level. The ratings required under this specification are **250 KVA with Aluminum windings.**
- 01.02 The equipment offered should have been successfully type tested within five years from date of tender and the designs should have been in satisfactory operation for a period not less than three years as on the date of bid opening. Compliance shall be demonstrated by submitting with the bid, (i) authenticated copies of the type test reports and (ii) performance certificates from the users, specifically from central Government, State Government or their undertakings.
- 01.03 The scope of supply should also include the provision of type test. ***Purchaser reserves the rights to waive type tests as indicated in the section on Quality Assurance, Inspection and Testing in this specification before installation /fitting at the work site.***
- 01.04 The transformer shall conform in all respect to highest standards of engineering, design, workmanship, this specification and the latest revisions of relevant standards at the time of offer and the purchaser shall have the power to reject any work or material, which, in his judgment, is not in full accordance therewith.

02.00 REQUIREMENTS:

(A) (FOR KHANDADHAR ECO-TOURISM DEDICATED POWER SUPPLY):

Requirements for 11/0.4KV DP S/S for 250 KVA Transformer	
Sl. No.	Description of Materials
1	Pressure Channel 100X50X6mm.2.8mtr.Long 2Nos.(9.2kg/mtr.)
2	Transformer mounting Channel 100x50x6mm. 2.8mtr.Long 2nos.(9.2kg./mtr.)
3	A/B switch and H.G. Fuse Mounting Channel 75x40x6mm. 2.8mtr.Long 4Nos.(6.8kg./mtr.)
4	Cantilever Channel for supporting A/B switch and HG fuse arm 75x40x6mm.1.5mtr.Long 4Nos. (6.8kg./mtr.)
5	Angle for cantilever arrangement for A/B switch & H.G. fuse 50x50x6mm. 1.5mtr Each, 4Nos. (4.5Kg/mtr.)
6	Transformer belting 50X50X6mm angle-2.8mtr long 2nos(4.5Kg/mtr) with side angle (total 7mtrs)
7	Angle for mounting L.T. Distribution box 50x50x6mm.-2.5mtr.Long,2Nos.(4.5Kg./mtr.)
8	75x40x6 mm Channel 1.5 mtr. Long 1 No.(6.8 kg/mtr) for supporting of AB Switch Handel.
9	11KV Disc Insulator (T & C)(45KN)

10	11KV HW Fitting (T & C Type)(two bolted)
11	11KV A/B Switch 3 pole.(400Amp)
12	11KV H/G Fuse 3pole(400Amp)
13	11KV Lightning Arrestor(9KV,10KA) Station class
14	H.T. Stay set complete
15	HT Stay Insulator type-C
16	HT Stay Clamp(1.9Kg/Pair)
17	7/10 SWG Stay wire
18	G.I. Pipe Earthing, 40mm. Dia medium gauge 3mtr. Long.
19	Earthing of support(Coil type)
20	No.6 G.I. wire for Earthing (Dia 4.8mm)
21	Concrete materials for stay Anchor Plate
22	Padding & Concreting material for support.
23	Material for masonry work for earth pit
24	Charcoal, Salt etc. for earthing.
25	Clamp, Connector & Jumpering material.
26	G.I. .Bolts, Nuts assorted size
27	Sundries (Aluminium Binding tap, insulating tap, fencing metal spreading, Anti-climbing device, Paint. Danger Board etc.)
28	L.T. distribution box with MCCB, busbar & kitkat fuse arrangement for 250KVA transformer.
29	L.T. 3½core PVC Cable 150 mm.sq. for 250KVA
30	Socket & other Cable Accessories.

Requirements for other material of 1Km. Of 3-ph.,3-Wire 11KV Line with pin Point and two nos Cut Points with double disc arrangement of 55mm² AAAC(60mtr. Span)

Sl. No.	Description of Materials
1	55mm ² AAA Conductors.
2	11 KV V- Cross Arm (MS) (10.2 Kg each)
3	Back Clamp for 'V' Cross Arm (1.7kg)
4	11 KV F Clamp 2.9 Kg. each
5	11KV Disc Insulator (t & c) 45KN
6	11KV H/W Fitting (T & c type) two bolted
7	11KV Pin Insulator
8	11KV GI Pin
9	H.T. Stay set complete
10	HT Stay Insulator type-C
11	HT Stay Clamp(1.9Kg pair)
12	7/10 SWG Stay wire
13	Earthing of support (Coil Type)
14	No.8 G.I. wire for earthing
15	Concrete materials for stay Anchor Plate
16	Padding & Concreting material for support.
17	G.I. Nuts, bolt Assorted size
18	75X40X6mm. Channel for straight cross arm (1.2mtr. X12Nos)
19	Sundries (Paint, danger Board, Clamp, Connectors, Anti-climbing device, Binding Tape, etc.)

Requirements for other material of 1Km. Of 3-ph 95 mm². AB Cable for LT line (30mtr. Span).

Sl. No.	Description of Materials
1	95 MM ABC
2	Pole Clamp for AB Cable
3	Dead end Clamp (For ABC)
4	Eye hook
5	Suspension Clamp
6	Neutral Connector Type B
7	LT Stay Set
8	7/12SWG Stay wire
9	LT Stay Clamp (1.40 Kg./Pair)

10	LT Stay Insulator
11	Earthing Coil
12	No.8G.I.wire for earthing
13	G.I. Nut & Bolts(Assorted size)
14	Piercing Connector Type B
15	Service Connection Distribution box (8 way)
16	Concreting of Stay
17	Padding & Concreting material for support.

Requirements for 11KV 4pole structure with One set of A.B. Switch with double disc arrangement.

Sl. No.	Description of Materials
1	9mtr. 150x150mm RS Joist
2	Top channel 100x50x6mm.2.8mtr.Long, 8Nos. (9.2kg./mtr.)
3	A/B switch mounting Channel 75x40x6mm.Channel 2x2.8mtr.Long (6.8kg/mtr.)
4	Bracing Channel 75x40x6mm.-8x3mtr.Long, (6.8Kg./mtr.)
5	Bracing angle 50x50x6mm.-8x4mtr.Long,(4.5Kg./mtr.)
6	Cantilever Channel for supporting A/B switch arm 75x40x6mm. 1.5mtr. Long, 2Nos. (6.8Kg./mtr.)
7	Angle for Cantilever arrangement for A/B switch 50x50x6mm. 1.5 mtr. 2Nos. (4.5Kg./mtr.)
8	AB Switch Handel fixing channel 1nos. 75x40x6mm. Channel-1.5mtr.long each, (6.8Kg/mtr.)
9	11KV Disc Insulator (T&C Type)
10	11KV H/W Fitting (T&C Type)
11	11KV A/B Switch 3Pole (400Amp)
12	G.I. Pipe Earthing, 40mm.Dia medium gauge 2.5mtr. Long
13	Earthing of Support (Coil type)
14	100mm.sq.Conductor
15	Clamp for bracing Channel
16	G.I. Nuts, bolt & Washer
17	No. 6 G.I. wire for earthing
18	Material for masonry work for earth pit
19	Charcoal, Salt etc. for earthing
20	Padding & Concreting material for support
21	Sundries (Danger board, paint, anti-climbing device, Clamp, Connector etc.)

Requirements for VCB

Sl. No.	Description of Materials
1	11KV O/D VCB with indoor CR panel & 2Core CT (CT-600-300-150/I-1A, STC 25I(A/3Sec., class: 0.5 & 5P10) without PT for Transformer protection.

(B) (FOR SARAFGARH ECO-TOURISM DEDICATED POWER SUPPLY):

Requirements for 11/0.4KV DP S/S for 250 KVA Transformer

Sl. No.	Description of Materials
1	Pressure Channel 100X50X6mm.2.8mtr.Long 2Nos.(9.2kg/mtr.)
2	Transformer mounting Channel 100x50x6mm. 2.8mtr.Long 2nos.(9.2kg./mtr.)
3	A/B switch and H.G. Fuse Mounting Channel 75x40x6mm. 2.8mtr.Long 4Nos.(6.8kg./mtr.)
4	Cantilever Channel for supporting A/B switch and HG fuse arm 75x40x6mm.1.5mtr.Long 4Nos. (6.8kg./mtr.)
5	Angle for cantilever arrangement for A/B switch & H.G. fuse 50x50x6mm. 1.5mtr Each, 4Nos. (4.5Kg/mtr.)
6	Transformer belting 50X50X6mm angle-2.8mtr long 2nos(4.5Kg/mtr) with side angle (total 7mtrs)
7	Angle for mounting L.T. Distribution box 50x50x6mm.-2.5mtr.Long,2Nos.(4.5Kg./mtr.)
8	75x40x6 mm Channel 1.5 mtr. Long 1 No.(6.8 kg/mtr) for supporting of AB Switch Handel.
9	11KV Disc Insulator (T & C)(45KN)
10	11KV H/W Fitting (T & C Type)(two bolted)
11	11KV A/B Switch 3 pole.(400Amp)
12	11KV H/G Fuse 3pole(400Amp)
13	11KV Lightning Arrestor(9KV,10KA) Station class

14	H.T. Stay set complete
15	HT Stay Insulator type-C
16	HT Stay Clamp(1.9Kg/Pair)
17	7/10 SWG Stay wire
18	G.I. Pipe Earthing, 40mm. Dia medium gauge 3mtr. Long.
19	Earthing of support(Coil type)
20	No.6 G.I. wire for Earthing (Dia 4.8mm)
21	Concrete materials for stay Anchor Plate
22	Padding & Concreting material for support.
23	Material for masonry work for earth pit
24	Charcoal, Salt etc. for earthing.
25	Clamp, Connector & Jumpering material.
26	G.I. .Bolts, Nuts assorted size
27	Sundries (Aluminium Binding tap, insulating tap, fencing metal spreading, Anti-climbing device, Paint. Danger Board etc.)
28	L.T. distribution box with MCCB, busbar & kitkat fuse arrangement for 250KVA transformer.
29	L.T. 3½core PVC Cable 150 mm.sq. for 250KVA
30	Socket & other Cable Accessories.

Requirements for other material of 1Km. Of 3-ph.,3-Wire 11KV Line with pin Point and two nos Cut Points with double disc arrangement of 55mm² AAAC(60mtr. Span)

Sl. No.	Description of Materials
1	55mm ² AAA Conductors.
2	11 KV V- Cross Arm (MS) (10.2 Kg each)
3	Back Clamp for 'V' Cross Arm (1.7kg)
4	11 KV F Clamp 2.9 Kg. each
5	11KV Disc Insulator (t & c) 45KN
6	11KV H/W Fitting (T & c type) two bolted
7	11KV Pin Insulator
8	11KV GI Pin
9	H.T. Stay set complete
10	HT Stay Insulator type-C
11	HT Stay Clamp(1.9Kg pair)
12	7/10 SWG Stay wire
13	Earthing of support (Coil Type)
14	No.8 G.I. wire for earthing
15	Concrete materials for stay Anchor Plate
16	Padding & Concreting material for support.
17	G.I. Nuts, bolt Assorted size
18	75X40X6mm. Channel for straight cross arm (1.2mtr. X12Nos)
19	Sundries (Paint, danger Board, Clamp, Connectors, Anti-climbing device, Binding Tape, etc.)

Requirements for 3-Ph 11KV line DP with A.B. Switch on 10mtr 150x150 Joist Pole with double disc arrangement.

Sl. No.	Description of Materials
1	10mtr. Long 150x150mm RS Joist Pole
2	11KV G.I. Pin
3	11KV Pin insulator
4	Top channel 100x50x6mm.2.8mtr. Long, 2Nos. (9.2kg./mtr.)
5	A/B switch mounting Channel 75x40x6mm.2x2.8mtr. Long (6.8kg/mtr.)
6	Bracing Channel 75x40x6mm.-2x3mtr. Long, (6.8Kg./mtr.)
7	Bracing angle 50x50x6mm.-2x4mtr. Long, (4.5Kg./mtr.)
8	Cantilever Channel for supporting A/B switch arm 75x40x6mm. 1.5mtr. Long, 2Nos. (6.8Kg./mtr.)
9	Angle for Cantilever arrangement for A/B switch 50x50x6mm. 1.5mtr. 2 Nos. (4.5Kg./mtr.)
10	75x40x6 mm Channel 1.5 mtr. Long 1 No.(6.8 kg/mtr) for supporting of AB Switch Handel.
11	11KV Disc Insulator (T&C Type)

12	11KV H/W Fitting (T&C Type)
13	11KV A/B Switch 3Pole (400Amp)
14	H.T Stay Set Complete
15	Stay Insulator
16	Stay Clamp
17	G.I. Pipe Earthing, 40mm. Dia. medium gauge 2.5mtr. Long
18	Earthing of Support (Coil type)
19	G.I. Nuts, bolt & Washer
20	Clamp for bracing Channel
21	No. 6 G.I. wire for earthing
22	7/10 SWG Stay wire
23	Concrete material for Stay Anchor Plate
24	Padding & Concreting material for support
25	Material for masonry work for earth pit
26	Charcoal, Salt etc. for earthing
27	Sundries (Anti-climbing device, Paint. Danger Board ect.)

03.00 CODES & STANDARDS:

Except where modified by this specification, the transformers shall be designed manufactured and tested in accordance with the latest editions of the following standards. The Bidder may propose alternative standards, provided it is demonstrated that they give a degree of quality and performance equivalent to or better than the referenced standards. Whether to accept or reject any alternative standard shall be adjudged by the purchaser. The Bidder shall furnish a copy of the alternative standard proposed along with the bid. If the alternative standard is in a language other than English, an English translation shall be submitted with the standard. In the case of conflict the order of precedence shall be 1) IEC or ISO Standards, 2) Indian Standards, 3) Other alternative standards.

IEC/ISO	Indian Standard	Subject
IEC 71		Insulation Coordination
IEC 76	IS 2026	Power Transformers
	IS 1180	Outdoor Three Phase Distribution Transformer up to 500KVA, 11/0.4 KV, Non-Sealed Type.
IEC 137	IS 2099	Business for Alternating Voltages above 1000 V.
IEC 156		Method of determining Electric strength of Insulating Oils.
IEC 296	IS 335	Specification for Unused Mineral Insulating Oils for Transformer and Switchgear.
	IS 6792	Method of determination of electric strength of insulating oils
IEC 354	IS 6600	Loading guide for oil immersed Transformers.
IEC 437		Radio Influence Voltage Measurement.
IEC 551		Determination of Transformer and Reactor Sound Levels.
IEC 616		Terminal and Tapping markings for power transformers.
IEC 722		Guide to the Lighting and Switching impulse testing of Power Transformers and Reactors.
ISO 1460/BS 729		Galvanizing.

The list is not to be considered exhaustive and reference to a particular standard or recommendation in this specification does not relieve the Supplier of the

necessity of providing the goods complying with other relevant standards or recommendations.

04.00 SERVICE CONDITIONS :

The service conditions shall be as follows:

Maximum altitude above sea level	1000 m
Maximum ambient air temperature	50 C
Maximum daily average ambient air temperature	40 C
Minimum ambient air temperature	-5 C
Maximum temperature attainable by an object exposed to the sun	60 C
Maximum yearly weighted average ambient temperature	32 C
Maximum relative humidity	100%
Average number of thunderstorm days per annum (isokeraunic level)	70
Average number of rainy day per annum	120
Average annual rainfall	1500 mm
Maximum wind pressure	260kg/m sq.

05.00 SYSTEM CONDITIONS:

The equipment shall be suitable for installation in supply system of the following characteristics.

Frequency		50 Hz +/-5%
Nominal System Voltages	11 KV System	11 KV
	LV system	433/250 V
Maximum System Voltages	11 KV System	12 KV
	LV system	476 V
Nominal short circuit apparent power of the system	11 KV System	500 MVA (IS:2026)
Insulation levels		
1.2/50 u sec impulse withstand	11 KV System	95 KV peak (as per BEE Clause No. 10)
Power frequency one minute withstand (wet & dry)	11 KV System	28 KV (RMS)
	LV system	3 KV (RMS)
Neutral earthing arrangements	LV system	Solidly earthed

PART 2: TECHNICAL SPECIFIC TECHNICAL REQUIREMENTS:

1	Rated KVA (ONAN rating)	25 KVA, 63KVA, 100KVA, 11/0.433KV	
2	No of Phases	3	
3	Type of Installation	Outdoor	
4	Frequency	50 Hz(+/-5%)	
5	Cooling Medium	Insulating Oil (ONAN)	
6	Type of Mounting	On channel	
7	Rated voltage		
	(a) High voltage winding	11 KV	
	(b) Low voltage winding	0.433 KV	
8	Highest continuous system voltage		
	(a) Maximum system voltage ratio(HV/LV)	12 KV/0.476 KV	
	(b) Rated voltage ratio (HV/LV)	11 KV/0.433 KV	

9	No of windings	Two winding transformers	
10	Type of cooling	ONAN (Oil natural/ Air natural)	
11	KVA Rating corresponding to ONAN Cooling	100%	
12	Method of connection: HV: Delta LV: Star		
13	Connection symbol	Dyn 11	
14	System earthing	Natural of LV side to be solidly earthed	
15	Percentage impedance voltage on nominal tap and kva base at 75 C corresponding to HV/LV rating and applicable to learnces:	% impedance + Tolerance % 4.5 + 10% (No negative tolerance will be allowed)	
16	Intended regular cyclic overloading of windings	As per IEC-76-1, clause 4.2	
17	Loading		
	(a) Anticipated continuous loading of windings (HV/LV)	Around 10%	
	(b) Anticipated continuous loading of windings (HV/LV)	110% of rated current	
18	(a) Type of tap changer	NA	
	(b) Range of taping	No Tap	
19	Neutral terminal to be brought out	On LV side only	
20	Over Voltage operating capacity and duration	112.5% of rated voltage (continuous)	
21	Maximum Flux Density in any part of the core and yoke at rated KVA, rated voltage i.e. 11 KV/0.433 KV and system frequency of 50 HZ	1.5 Tesla	
22	Insulation levels for windings:		
	(a) 1.2/ 50 microsecond wave shape impulse withstand (KVP)	HV:95 LV:NA	
	(b) Power frequency voltage withstand (KV-rms)	HV:28 LV:03	
23	Type of winding insulation		
	(a) HV winding	Uniform	
	(b) LV winding	Uniform	
24	Withstand time for three phase short circuit.	2 second	
25	Noise level at rated voltage and frequency.	As per NEMA Publication No. TR-1	
26	Permissible temperature rise over ambient temperature of 50 C		
	(a) Of top oil measured by thermometer	35 C	
	(b) Of winding measured by resistance	40 C	
27	Minimum HV clearance in air (mm)		
	(a) Phase to phase	280	
	(b) Phase to ground	140	

28	Bushing & Terminals		
	(a) HV winding line end	12 KV oil filled porcelain communicating type of bushing (Antiflog type)	
	(b) LV winding	0.4 KV porcelain type of bushing (antiflog type)	
29	Insulation level of bushing	HV	LV
	(a) Lightning impulse withstand (KVP)	95	Not applicable
	(b) 1 minute power frequency withstand voltage (KV-rms)	28	3
	(c) Creepage distance (mm) (minimum)	25 mm/KV	
30	Material of HV & LV conductor	EC grade Aluminium	
31	Maximum current density for HV and LV winding for rated current	1.6 Amp/mm sq.	
32	Polarization index i.e. ratio of megger values at 600 sec to 60 sec for HV to earth, LV to earth and HV to LV	Shall be greater than or equal to 1.5 but less than or equal to 5	
33	Core Assembly	Boltless type	
34	Transformer rating	Max Losses at 50% load (watts)	Max losses at 100% load (watts)
	(a) 25 KVA	210	695
	(b) 63 KVA	380	1250
	(c) 100 KVA	520	1800

Specification of Transparency Board



ଜିଲ୍ଲା ଖଣିଜ ପ୍ରତିଷ୍ଠାନ , ସୁନ୍ଦରଗଡ଼ DISTRICT MINERAL FOUNDATION, SUNDARGARH

କାର୍ଯ୍ୟର ନାମ –

କାର୍ଯ୍ୟର ନିର୍ବାହୀ ସଂସ୍ଥା –

ଗ୍ରାମ –

ଗ୍ରାମ ପଞ୍ଚାୟତ –

ବ୍ଲକ –

ଆର୍ଥିକ ବର୍ଷ –

ପ୍ରକଳ୍ପ ଅଟକଳ ପରିମାଣ –

ଠିକାଦାର ନାମ –

କାର୍ଯ୍ୟର ଆରମ୍ଭ ତାରିଖ –

କାର୍ଯ୍ୟର ଶେଷ ତାରିଖ –

Height- 5ft x Width- 4ft

Front Side of the Transparency Board.



ଜିଲ୍ଲା ଖଣିଜ ପ୍ରତିଷ୍ଠାନ , ସୁନ୍ଦରଗଡ଼
DISTRICT MINERAL FOUNDATION, SUNDARGARH

Name of Project –
Executing Agency –
Village –
Gram Panchayat –
Block –
Year –
Project Estimate Cost –
Contractor Name –
Project Commencement Date –
Project Completion Date –

Height- 5ft x Width- 4ft

Back Side of the Transparency Board.

The information should be written with best quality of paint.

NB:

A CONSOLIDATED AMOUNT OF RS.5,000/- WILL BE PAID TOWARDS THE COST OF TRANSPARENCY BOARD INCLUDING ALL COST.

GENERAL CONDITIONS OF CONTRACT/ TENDER

1. The tender will be examined for the document called for. The bid of the tenderer if not complete in all respect shall be rejected. However there can be consideration in case of documents which are not very important for the point of view of work i.e. which will not give indication of poor workmanship if deemed appropriate by the Tender Committee constituted for the purpose under the Chairmanship of Collector & District Magistrate, Sundargarh.
2. In case of HT lines or LT lines on the average there should be one D.P. per K.M of line. Besides to take care of bends more than 80 degree or for other exigencies if there is necessity there will be one cut point per K.M. on the average over and above the D.P. point. If for some reason the average cut point becomes more than 1 cut point per K.M. for which the tenders had to bear additional financial burden, the matter will be referred to Tender Committee constituted for the purpose of electrification. Depending upon the justification after going, into details the committee under the Chairmanship of the Collector and District Magistrate Sundargarh may pass the higher bill.
3. The rates quoted by the contractor should be inclusive of the materials, transportation, labour, applicable taxes and the cost of conveyance for inspection. At the time of handing over the line or substation they should be ready for charging and operation.
4. The work of the contractor will be inspected from time to time (stage inspection) by the authorized representative of the Collector cum District Magistrate Sundargarh and in case it is seen that the materials used is substandard or workmanship is substandard the contractor will be asked to change the material or to execute the work once again within the same stipulated time. If the contractor fails to do so, the relevant bills pertaining to the project will not be passed for payment and the work may be awarded to another contractor for whole or balance part of the work.
5. In case of any difference in opinion in work or work related matter, the Tender Committee will settle the issue which will be binding on the contractor/bidder.
6. **The contractor has to give an undertaking to the effect that he will abide by all the terms & conditions stipulated in the general conditions of contract/ tender and at no point of time he will disagree with the terms & conditions of contract/ tender. In case the Contractor will fail to abide with the terms & conditions of the contract or decision of the Committee, the contract may be cancelled and may be re-awarded to another bidder.**
7. **Documents in support of execution of similar nature of works executed by the Contractor/ Agency in last three years duly issued by the competent authorities. The Contractor/ Agency participating in the tender process must have executed a single project having minimum project value of Rs.80.00 lakh in a single Work Order with satisfactory completion.**
8. Prior to bidding, the tenderer should clarify their doubts pertaining to tender, if any, from the SE, WESCO, Electrical Circle Rourkela or from the concerned Executive Engineers of different Electrical Divisions, **the contact details are (SE, WESCO, Rourkela-9437058907/ EE, WESCO, Sundargarh-9437058861 for Sarafgarh Eco-Tourism and EE, WESCO, Rourkela-Sadar-9437156237 for Khandadhar Eco-Tourism or from the District Rural Electrification Section, DRDA, Sundargarh (Project Coordinator-8217783418).**

Sd/-
Collector & District Magistrate
Sundargarh

SCHEDULE OF BIDS FOR TECHNICAL

1. Name of tenderer with Office and Factory address, Tel. No. /Telex No./Fax no. :
2. Specification No. :
3. Address of Local Office and Tel. No. /Telex No./Fax no. :
4. Tenderer's Reference No. :
5. Last date and time of submission of Tender :
6. Date and time for opening of Tender :
7. Testing Facilities available :
8. Category of Organization :
9. Whether qualifying certificates submitted :
10. Whether agreed to
 - (a) Inspection Clause :
 - (b) Packing Clause :
 - (c) Retesting Clause :
11. Whether the material/equipment offered conformed to the relevant ISS specification and drawing :
12. Whether executed orders previously for the items tendered now. Please give full details of supplies made :
13. Whether the materials bears ISI mark :
14. Offer valid up to :
15. Delivery Schedule
 - (a) Commence with minimum quantity :
 - (b) Rate of delivery per month and completion time :
16. Technical literature/catalogue of the materials offered enclosed :
17. Bidders work experience including user's certificate furnished/not:
18. ISO-9001 Certificate Submitted :
19. Whether Guaranteed Technical Data Sheet Particulars submitted :
20. Any other:

Signature of Bidder
With Name and Seal of Firm

(Duly filled in and signed by the Bidder should be enclosed with the tender documents)

ABSTRACT OF GENERAL TERMS AND CONDITIONS

1. Earnest Money Furnished (DD NO. & DT) :
2. Tender Paper Cost (DD NO. & DT) :
3. Contractor/Firm's work experience including user's certificate furnished or not :
4. ISO-9001 Certificate submitted :
5. Guaranteed Technical Particulars :
6. Deliver/Execution
Date of commencement/ Execution :
7. Guarantee: Whether agreeable to furnish security deposit in shape of Bank Guarantee in case his/her tender is successful :
8. Terms of payment: Whether agreeable to WESCO standard terms of payment or not :
9. Sub-contractor/ Authorized representative :
10. Valid PAN Card Copy submitted :
11. EPF & ESI Registration copy with up to date Challan submitted. :
12. Turnover Certificate furnished from Chartered Accountant :
13. Valid GST Registration Certificate submitted :

Signature of the Bidder
Name & With Seal of Firm

(Duly filled in and signed by the Bidder should be enclosed with the tender documents)

FINANCIAL BID**Annexure-III****BILL OF QUANTITIES (BoQ)****PRICE SCHEDULE FOR CONSTRUCTION OF DEDICATED FEEDER FROM BONAI 33/11KV GRID SUBSTATION TO **KHANDADHAR ECO-TOURISM**, SUNDARGARH ON TURNKEY BASIS****PROJECT SL NO.01 OF TENDER CALL NOTICE NO: 190/DRDA/ Dt. 22.01.2020**

Sl. No.	Description of materials	Unit	Qty.	Rate in Rupees	Amount in Rupees.
Part-A (Transformer)					
1	Cost of Transformer : 1No.250 KVA 1 star	No	2	3,16,771.00	6,33,542.00
2	150 X 150mm RS joist (10 Mtr long)(34.6 kg per meter.(Each 275.4Kg)-For DP.	No	4	26,538.20	1,06,152.80
3	150X150mm RS joist (10 Mtr long)(34.6 kg per meter For HT Line.	No	368	26,538.20	97,66,057.60
4	150X150mm RS joist (09 Mtr long)(34.6 kg per meter For LT line.	No	40	21,123.18	8,44,927.20
5	150X150mm RS joist (10 Mtr long)(34.6 kg per meter For four pole structure.	No	4	26,538.20	1,06,152.80
6	11 KV VCB Complete set with CT (Out Door VCB with Indoor Panel).	No	1	3,89,400.00	3,89,400.00
Total (Part-A)					Rs.1,18,46,232.40
Part-B (Other Material)					
7	Cost for other material of 1Km. Of 3-ph.,3-Wire 11KV Line with pin Point and two nos Cut Points with double disc arrangement of 55mm ² AAC. (60mtr. Span).	KM	23.00	2,43,598.67	56,02,769.39
8	Cost of other material of 1Km. Of 3-ph 95 mm ² . AB Cable for LT line (30mtr. Span) Without pole cost.	KM	1.20	4,34,213.64	5,21,056.37
9	Cost of 11/.4 kv DP, Distribution Box and Other material for 100 kva s/s (Other Than Pole).	No.	2.00	1,46,985.40	2,93,970.80
10	Cost Of accessories of a four pole structure with Isolator.	No	1.00	1,38,621.46	1,38,621.46
	Cost of Isolator 400 Amp WITH PI.		3.00	36,119.80	1,08,359.40
11	11 KV PT.	No	3	20,060.00	60,180.00
12	2.5mmsq 10core Control Cable.	Mtr	200	389.40	77,880.00
13	2.5mmsq 4core Control Cable.	Mtr	100	132.16	13,216.00
14	Earthing of VCB.	LS			10,000.00
i	TOTAL COST B				68,26,053.42
ii	SUB TOTAL= A+B =C				1,86,72,285.82
iii	Stock, Storage & Insurance @ 3% of C = D		3%		5,60,168.57
iv	Sub TOTAL= E				1,92,32,454.39
v	T&P @ 2% of E = F		2%		3,84,649.09

vi	Contingency @ 3% of E = G		3%		5,76,973.63
vii	Transportation @ 7.5% of D+ GST on transportation cost=H		7.50%		17,02,072.21
viii	Erection Charges @ 5% of (A+A*3%)+APPLICABLE TAXES = I		5%		7,19,895.54
ix	Erection Charges @ 10% 5% of (B+B*3%)+APPLICABLE TAXES = J		10%		8,29,638.53
Total (Part-B) = E+F+G+H+I+J = K					Rs.2,34,45,683.40
Part-C (Civil Work)					
15	Cost of Brick boundary wall with grill gate	LS	2.00	53,440.00	1,06,880.00
16	Metal Spreading	LS	2.00	10,000.00	20,000.00
	VCB with CT Foundation	Set	1.00	60,000.00	60,000.00
i	Subtotal = L				1,86,880.00
ii	TOTAL PART- C= SUB TOTAL +GST@18% = M	Km	18%		2,20,518.40
iii	SUB TOTAL= N = K+M				2,36,66,201.80
iv	Labour Cess @ 1% of N		1%		2,36,662.01
v	inspection fees of HT line ,S/S, & LT line		2	5,000	10,000.00
Grand Total(Part-A + Part-B + Part-C)					Rs.2,39,12,863.81
Or Say					Rs.2,39,12,864.00

NB:

- The schedule of rate (Unit Cost) mentioned above item-wise are including GST & Cess and all other taxes as applicable. The Bidders are required to quote their rate accordingly, as no extra amount for GST & Cess will be paid over and above the scheduled amount mentioned above.
- The Bidders are required to quote their price on percentage basis i.e. LESS or EXCESS or EQUAL on the amount put to tender for the project, in the blank space provided below, both in figure and words compulsorily, failing which the bid will be cancelled. In case of any confusion in percentage rate quoted by the Bidder, the rate mentioned in words will be taken as final.

My/Our quoted Rate is _____ % (In Figure), _____ (In words)

* Less than/Excess over/ Equal to the amount put to tender. (The bidders are requested to strikeout whichever is not desirable by them).

01	Number of Correction:	
02	Number of Over Writing:	

SIGNATURE OF BIDDER

EE, WESCO Utility,
Rourkela Sadar Electrical Division

SE, WESCO Utility,
Rourkela Electrical Circle

Project Director,
DRDA, Sundargarh

FINANCIAL BID**Annexure-IV****BILL OF QUANTITIES (BoQ)****PRICE SCHEDULE FOR CONSTRUCTION OF DEDICATED FEEDER FROM LEPHRIPARA 33/11KV GRID SUBSTATION TO SARAFGARH ECO-TOURISM, SUNDARGARH ON TURNKEY BASIS****PROJECT SL NO.02 OF TENDER CALL NOTICE NO: 190/DRDA/ Dt. 22.01.2020**

Sl. No.	Description of Materials	Unit	Qty.	Rate in Rupees	Amount in Rupees
Part-A (Extension of 11KV line for dedicated 11KV feeder for power supply to Sarafgarh Eco Tourism under Lephripada Section)					
1	10 mtr long 150x150 MM RS joist pole for 11KV line & DP	Nos	334	26,538.20	88,63,758.80
2	9 mtr long 150x150 MM RS joist pole for S/S	Nos	2	21,123.18	42,246.36
3	11/0.4 KV 250 KVA BIS level-II star-1 transformer	Nos	1	316771.00	3,16,771.00
4	11/.4KV plinth mounted S/S using 9 mtr long 150x150 MM RS Joist pole with double disc arrangement for 250 KVA BIS Level-II Star I Transformer.(Without cost of transformer & Pole)	Nos.	1	1,56,444.40	1,56,444.40
5	Cost of other materials for 11KV. Line with 10 mtr. Long 150x150mm joist Pole with 55 mm ² AAAC and 2no.single pole cut point with double disc arrangement (50mtr. Span) excluding cost of pole.	Mtr.	15	2,65,167.00	39,77,505.00
6	Cost of other materials for 3 ph 11KV line DP with 400 Amp AB switch on 10 mtr long 150x150 MM RS Joist Pole (Excluding cost of Pole)	Nos	2	60,965.29	1,21,930.58
7	Total = (A)				1,34,78,656.14
8	3% Stock & Storage of (A)=(B)				4,04,359.68
9	Total (A)+(B)=(C)				1,38,83,015.82
10	2% T&P of (C)				2,77,660.32
11	3% Contingency of (C)				4,16,490.47
12	7.5% Transportation of (C) + applicable taxes				12,28,646.90
13	Erection Charges for PSC Pole @ 20% + applicable taxes	20%			0.00
14	Erection Charges for joist pole/Transformer@5% + applicable taxes	5%			5,60,468.11
15	Erection Charges of other items @10% + applicable taxes	10%			5,17,259.65
16	Sub-Total (D)				1,68,83,541.28
17	Plinth + applicable taxes		1	15,340.00	15,340.00
18	Boundary wall + applicable taxes		1	63,059.20	63,059.20
19	Metal spreading+ applicable taxes		1	11,800.00	11,800.00
20	Sub-total= E				1,69,73,740.48
21	Labour Cess 1 % of E		1%		1,69,737.40
22	Inspection fee of HT line				300.00
23	Drawing approval				400.00
24	Inspection fee of s/s				4,130.00
25	Processing fee				590.00
Total Part-A					Rs.1,71,48,897.40

Part-B (11KV Bay extension work at 33/11KV PSS Lephripada)					
Sl. No.	Description of work	Unit	Qty.	Rate	Gross Amount
1	10 Mtr. long 150x150 mm GI Joist Pole, 34.6 Kg/Mtr	Nos	12	30,621.00	3,67,452.00
2	11KV 1250 Amp Outdoor VCB with CT & indoor CR panel & with CT console box (CT-400-200-100/1-1A, including bimetallic clamps & connectors for feeder protection.	No	1	3,42,200.00	3,42,200.00
3	232 mmsq AAC for Bus Bar Arrangement	Km	0.5	1,84,670.00	92,335.00
11KB Bay Arrangement					
4	5.5Mtr x 16nos 100x50x6mm GI channel for Bay (9.56Kg/Mtr)	Kg	841	88.50	74,453.28
5	8Mtr x 8nos 50x50x6 mm Bracing Angel at bay (4.5Kg/Mtr)	Kg	288	88.50	25,488.00
6	11 KV Disc insulator 70KN (B&S Type)	No.	42	424.80	17,841.60
7	11 KV H/W Fitting (B&S Type)	No.	21	413.00	8,673.00
8	11 KV Pin Insulator	No.	9	94.40	849.60
9	11 KV GI Pin	No.	9	94.40	849.60
10	Coil earthing	No	4	195.88	783.52
11	GI nut bolts	Kg	30	92.04	2,761.20
12	Materials for concreting of poles	No	4	2,575.94	10,303.76
11KV Isolator mounting arrangement					
13	3.5Mtr x 4 nos 100x50x6mm galvanized iron channel for Top, at DP structure (9.56Kg/Mtr)	Kg	134	88.50	11,844.84
14	3.5Mtr x 4nos 75x40x6mm galvanized iron channel for bracing at DP structure (7.14Kg/Mtr)	Kg	100	88.50	8,846.46
15	4.5Mtr x4nos 50x50x6 mm Bracing Angel (4.5Kg/Mtr)	Kg	81	88.50	7,168.50
16	3.5Mtr x 4 nos 100x50x6mm galvanized iron channel for Isolator mounting at DP structure (9.56Kg/Mtr)	Kg	134	88.50	11,844.84
17	1.5 Mtr X 4 Nos 100x50x6 MM galvanized iron channel for cantilever arrangement for isolator	Kg	57.4	88.50	5,076.36
18	1.5Mtr x4nos 50x50x6 mm Angel for supporting of cantilever channel(4.5Kg/Mtr)	Kg	27	88.50	2,389.50
19	1.5 Mtr X 2 Nos 100x50x6 MM galvanized iron channel for supporting of Isolator Handel (9.56Kg/Mtr)	Kg	28.7	88.50	2,538.18
20	11 KV 800 Amp isolator with earth switch.	No	2	62,363.00	1,24,726.00
21	11 KV Disc insulator 70KN (B&S Type)	No.	24	424.80	10195.20
22	11 KV H/W Fitting (B&S Type)	No.	12	413.00	4,956.00
23	Coil Earthing	No	4	195.88	783.52
24	GI nut bolts	Kg	20	92.04	1,840.80
25	40mm dia. G.I. Pipe 3mtr long for earthing	No	2	1,239.00	2,478.00
26	25x6mm G.I. Flat	Kg	50	88.50	4,425.00
27	Materials for concreting of poles	No	4	2,575.94	10,303.76
28	Materials for masonry work for earth pit	No	2	472.00	944.00
29	Charcoal, salt etc. For earthing	No	2	531.00	1,062.00

11KV LA mounting arrangement					
30	3.5Mtr x 2 nos 100x50x6mm MS channel for Top, at DP structure (9.56Kg/Mtr)	Kg	66.9	88.50	5,922.42
31	3.5Mtr x 2nos 75x40x6mm MS channel for bracing at DP structure (7.14Kg/Mtr)	Kg	50	88.50	4,423.23
32	4.5Mtr x2nos 50x50x6 mm Bracing Angel (4.5Kg/Mtr)	Kg	40.5	88.50	3,584.25
33	Lightning Arrester (11 KV, 10KA) Station class	No	3	4,189.00	12,567.00
34	Coil earthing	No	2	195.88	391.76
35	40mm dia. G.I. Pipe 3mtr long for earthing	No	2	1,239.00	2,478.00
36	25x6mm G.I. Flat	Kg	50	88.50	4,425.00
37	Materials for concreting of poles	No	2	2,575.94	5,151.88
38	Materials for masonry work for earth pit	No	2	472.00	944.00
39	Charcoal, salt etc. For earthing	No	2	531.00	1,062.00
40	GI Nuts and Bolts etc.	Kg	10	92.04	920.40
11KV feeder take up & metering arrangement					
41	3.5Mtr x 2 nos 100x50x6mm galvanized iron channel for Top, at DP structure (9.56Kg/Mtr)	Kg	66.9	88.50	5,922.42
42	3.5Mtr x 2nos 75x40x6mm galvanized iron channel for bracing at DP structure (7.14Kg/Mtr)	Kg	50	88.50	4,423.23
43	4.5Mtr x2nos 50x50x6 mm Bracing Angel (4.5Kg/Mtr)	Kg	40.5	88.50	3,584.25
44	3.5Mtr x 2 nos 100x50x6mm galvanized iron channel for MU mounting arrangement at DP structure (9.56Kg/Mtr)	Kg	66.9	88.50	5,922.42
45	1.5 Mtr X 2 Nos 100x50x6 MM galvanized iron channel for cantilever arrangement for MU mounting	Kg	28.7	88.50	2,538.18
46	1.5Mtr x2nos 50x50x6 mm Angel for supporting of cantilever channel(4.5Kg/Mtr)	Kg	13.5	88.50	1,194.75
47	Coil Earthing	No	2	195.88	391.76
48	40mm dia. G.I. Pipe 3mtr long for earthing	No	2	1,239.00	2,478.00
49	25x6mm G.I. Flat	Kg	50	88.50	4,425.00
50	Materials for concreting of poles	No	2	2,575.94	5,151.88
51	Materials for masonry work for earth pit	No	2	472.00	944.00
52	Charcoal, salt etc. For earthing	No	2	531.00	1,062.00
53	GI Nuts and Bolts etc.	Kg	10	92.04	920.40
54	HT Stay Set	Set	4	1,239.00	4,956.00
55	HT Stay Insulator	No	4	59.00	236.00
56	7/8 SWG Stay Wire	Kg	72	88.50	6,372.00
57	Stay Clamp	Pair	4	147.50	590.00
58	Stay concreting	Nos	4	1,180.00	4,720.00
59	3 Ph 4 W HTTV meter	Nos	1	17,110.00	17,110.00
60	3 Ph 4 W 11 KV CT PT combined metering unit class of accuracy0.5 with burden 15 VA,PT	Nos	1	50,740.00	50,740.00

11KV VCB arrangement					
61	11KV.1-Phase oil cooled PT(11000V/v3/110V/v3) CLASS 0.5 / 3P, with PT console box	No	3	20,060.00	60,180.00
62	2.5mmsq 10core Control Cable	Mtr.	200	304.44	60888.00
63	2.5mmsq 4core Control Cable	Mtr.	100	132.16	13216.00
64	Earthing of VCB	LS		10,000.00	10,000.00
65	Total = (A)				14,65,249.75
66	3% Stock & Storage of (A)=(B)				43,957.49
67	Total (A) + (B) = (C)				15,09,207.24
68	2% T&P of (C)				30,184.14
69	3% Contingency of ©				45,276.22
70	7.5% Transportation of (C) + applicable taxes				1,33,564.84
71	Erection Charges for PSC pole +applicable taxes	20%			0.00
72	Erection Charges for Joist pole /Transformer / VCB +applicable taxes	5%			43,125.55
73	Erection Charges of other items + applicable taxes	10%			91,835.35
74	Sub-Total (D)				18,53,193.35
75	Metal spreading +applicable taxes	LS			30,000.00
76	Retention wall + applicable taxes	LS			5,000.00
77	Control Cable trench 300mm width + applicable taxes	R.mt.	50	7,783.28	3,89,164.00
78	VCB with CT Foundation + applicable taxes	Set	1	60,000.00	60,000.00
79	Sub-Total (E)				23,37,357.35
80	Labour Cess 1 % of E		1%		23,373.57
Total Part-B					Rs.23,60,730.92
Grand Total (Part-A + Part-B)					Rs.1,95,09,625.32
Or Say					Rs.1,95,09,625.00

NB:

- The schedule of rate (Unit Cost) mentioned above item-wise are including GST & Cess and all other taxes as applicable. The Bidders are required to quote their rate accordingly, as no extra amount for GST & Cess will be paid over and above the scheduled amount mentioned above.
- The Bidders are required to quote their price on percentage basis i.e. LESS or EXCESS or EQUAL on the amount put to tender for the project, in the blank space provided below, both in figure and words compulsorily, failing which the bid will be cancelled. In case of any confusion in percentage rate quoted by the Bidder, the rate mentioned in words will be taken as final.

My/Our quoted Rate is _____ % (In Figure), _____ (In words)

* Less than/Excess over/ Equal to the amount put to tender. (The bidders are requested to strikeout whichever is not desirable by them).

01	Number of Correction:	
02	Number of Over Writing:	

SIGNATURE OF BIDDER

EE, WESCO Utility,
Sundargarh Electrical Division

SE, WESCO Utility,
Rourkela Electrical Circle

Project Director,
DRDA, Sundargarh

CERTIFICATE OF NO RELATIONSHIP

I/We* hereby certified that I/We* am/are* **not related** to any Officer in the rank of Assistant Engineer & above in **District Rural Development Agency, Sundargarh/ Sundargarh Electrical Division/ Rourkela Sadar Electrical Division, WESCO Utility, Sundargarh**, where I/We* am/are* dropping the tender and in the rank of Under Secretary and above in the Government of Odisha in Energy Department. I/We* am/are* aware that, if the facts subsequently proved to be false, my/our* contract will be rescinded with forfeiture of E.M.D and security deposit and I/We* shall be liable to make good the loss or damage resulting from such cancellation.

I//We* also note that, non-submission of this certificate will render my/our* tender liable for rejection.

(*) - Strike out which is not applicable

Signature of the Tenderer

Date:-

PROFORMA OF BANK GUARANTEE FOR PERFORMANCE GUARANTEE

(To be stamped in accordance with Stamp Act.)

Bank Guarantee No.....

Date

This Guarantee Bond is executed this Day2020 by us the
..... Bank at.....
PO.....PS.....District.....
..... State.....

Whereas the Collector & District Magistrate Sundargarh (hereinafter called “Collector”) has placed order No..... Dt..... (herein after called “the Agreement”) with M/s(herein after called “Contractor”) for Dedicated Power Supply to Sarafgarh Eco-tourism/Khandadhar Eco-tourism on Turnkey basis and whereas collector has agreed to exempt from depositing of performance guarantee amount on furnishing by the Contractor to the Collector a Bank Guarantee of the value of 10% (Ten percent) of the contract price valid for 12 months from the date of completion of work of the said Agreement.

1. Now, therefore in consideration of the Collector having agreed to exempt from deposit of performance guarantee amount in terms of the said Agreement as aforesaid, we the Bank.

AddressCode
No.....) (herein after referred to as “the Bank”) do hereby
undertake to pay to the Collector an amount not exceeding Rs,.....
(Rupees.....) Only
against any loss or damage caused to or suffered by the Collector by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

2. I/We, the Bank do hereby undertake to pay the amounts due and payable under the guarantee without any demur, merely on a demand from the Collector stating that the amount calmed is due by way of loss or damage caused to or suffered by Collector by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement

or by the reason of any breach by the said Contractor's failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....
(Rupees)
only.

3. I/We, the Bank also undertake to pay to the Collector any money so demanded notwithstanding any dispute or dispute raised by the Contractor(s) in any suit or proceeding instituted / pending before any court or Tribunal relating thereto our liability under this Agreement being absolute and unrecoverable. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the Contractor(s) have no claim against us for making such payment.

4. I/We, the Bank further agree that the guarantee herein contain shall remain in full force and affect during the period that would be taken for the performance of this said Agreement and it shall continue to remain in force endorsable till all the dues of the Collector under by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till Collector certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharge this guarantee and will not be revoked by us during the validity of the guarantee period.

Unless a demand or claim under this guarantee is made on us or with.....
..... (Local Bank Name, Address and code No.).....
..... in writing on or before
..... (date) we shall be discharged from all liability under this guarantee thereafter.

5. I/We, the Bank further agree that the Collector shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Contractor(s) and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor or for any forbearance act or omission on part of the Collector or nay indulgence by the Collector to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provisions have effect of so relieving us.

6. The Guarantee will not be discharged due to change in the name, style and constitution of the Bank and or Contractor(s).
7. I/We, the Bank lastly undertakes not to revoke this Guarantee during its currency except with the previous consent of the Collector in writing.

Dated..... The Days of Two thousand

Notwithstanding anything contained herein above.

- 1) Our liability under this Bank Guarantee shall not exceed Rs.....
(Rupees Only
- 2) The Bank Guarantee shall be valid up to Only.
- 3) I/We or our Bank at (Name and Address of the Local Bank,) are liable to pay the guaranteed amount depending on the filling of claim and any part thereof under this Bank Guarantee only if you serve upon us or our local Bank at a written claim or demand and received by us or by local Branch at on or before, Dt,.....
Otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

For

(Indicate the name of the Bank)

N.B.:-

- 1) Name of the Contractor.
- 2) No & date of the purchaser order/agreement:
- 3) Name of the Bank.
- 4) Amount of the Bank Guarantee:
- 5) Name, Address and Code No. of the Local Branch:
- 6) Validity period or date up to which the agreement is valid:
- 7) Signature of the Constituent Authority of the Bank with Seal:
- 8) Name & Address of the Witnesses with signature:
- 9) The Bank Guarantee shall be accepted only after getting confirmation from the respective Bank.

UNDERTAKING

1. After careful examination of the above specifications together with the general conditions referred therein, I/we hereby offer to execute the works including supply of the materials & labour covered thereon complete in all respects as per specifications and general conditions at the rate quoted in attached schedule of prices of the tender on Turnkey basis. Our offer is valid up to 90 (Ninety) days from the date of opening of tender.
2. I/We hereby undertake to execute the work within the time specified in the tender.
3. I/We hereby guarantee the technical particulars given in the tenders, supported with necessary test reports from concerned authorities.
4. I/We hereby certified to have enclosed the required Tender Paper cost in shape of Demand Draft in favour of Project Director, DRDA, Sundargarh payable at Sundargarh along with the Tender Documents.
5. I/We hereby certified to have enclosed the E.M.D. Non-refundable in shape of Demand Draft in favour of Project Director, DRDA, Sundargarh payable at Sundargarh for Rs. _____ (Rupees _____) along with the Tender Documents.

I/We agree to abide with all the terms and conditions laid down in the Tender Documents.

Yours faithfully,

(Signature of the bidder with seal)

(Duly filled in and signed by the Bidder should be enclosed with the tender documents)

UNDERTAKING THAT THE FIRM / INSTITUTION IS NOT BLACKLISTED

I/We confirmed that our Firm is not blacklisted by any Government Institution / CPSE / SLPE/ Local Authority/ Agency.

For and on behalf of:

Signature (With Seal)

To:

**Collector & District Magistrate,
Sundargarh.**

(Duly filled in and signed by the Bidder should be enclosed with the tender documents)