

JHARKHAND BIJLI VITRAN NIGAM LIMITED



Request for Proposal

For

Appointment of Implementing Agency for R-APDRP (Part-B) Scheme for Simdega Town On Turnkey Basis

RFP Identification No.: .../PR/JBVNL/2014-15

Tender specification for

**Strengthening, Improvement and Augmentation of Distribution System Capacity under
R-APDRP Part-B scheme in Simdega Town**

Volume – I (General Conditions of Contract)

Date of Issue:

Date of Opening of Technical & Commercial Part:

..... at 3:00 PM

JHARKHAND BIJLI VITRAN NIGAM LIMITED

ENGINEERING BUILDING, HEC, DHURWA, RANCHI – 834004

(CIN No. U40108JH2013SGC001702)

Telephone: 0651-2401829, Fax: 0651-2400799

Website: www.jvnl.in

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Bid Highlights

Information Regarding e-tendering norms:
A. BID submission/opening will be through e-tendering norms only.
B. Any Demand Draft/Bank Guarantee should reach the purchaser before e-opening of the tender.
C. Bidder shall submit the General, Pre-qualification and technical details as part of General cum technical bid and Commercial bid through www.jharkhandtenders.gov.in
D. Bidder shall submit separate General cum Technical bid and commercial bid for the Project.
E. Necessary technical and financial e-forms for e-tendering of the BID will be uploaded on website www.jharkhandtenders.gov.in .
F. The bidder shall submit their eligibility and qualification details, commercial bid etc., in the online standard formats displayed in e-Procurement website. The bidder shall upload the scanned copies of all the relevant certificates, documents etc., in support of their eligibility criteria/technical bids and other certificates/documents in the e-Procurement web site. The bidder shall electronically sign on the statements, documents, certificates, uploaded by him, owning responsibility for their correctness/authenticity. The bidder shall attach all the required documents of the specific tender after uploading the same during the bid submission as per the tender notice and bid document. Registration with e-procurement and online bid submission, bidder may contact help desk of e-Procurement system at the following web address: www.jharkhandtenders.gov.in .

1.1	Scope of Work:	Design, Supply, survey, installation, erection, testing and commissioning, on turnkey basis under R-APDRP Part-B scheme of Simdega Town.			
			Item Details	Unit	Qty.
		1	66/11 or 33/11 KV SS : New/Augmentation		
			Augmentation of Power Transformer:		
			Augmentation of 5MVA Power Transformer to 10MVA of 33KV PSS @ Simdega	No	1
		2	11 kV Line : New Feeder/ Feeder Bifurcation		
			Augmentation of Conductor:-		
			Augmentation of Conductor of 11KV Simdega Feeder from Weasel to DOG to ACSR	km	4
			Augmentation of Conductor of 11KV Simdega Feeder from Weasel to Rabbit ACSR	km	5.4
		3	New 11KV Line for proposed PSS & New DTRs		
			New 11KV Line for proposed New DTRs with Rabbit ACSR	km	8.552
		4	Replacement/New of 11kV VCB:		
			Replacement of Existing 11kV VCB/OCB with 11kV Motorized VCB (Feeders;2)	Nos.	2
		5	11 kV : Fixed Capacitor Bank		
			HT Fixed Capacitor Bank of 3.6 MVAR	No	0
		6	Distribution Transformer: Capacity Augmentation/ New Transformer		
			Installation of New Distribution Transformer:		
			DT 25 KVA	Nos.	29
			DT 63 KVA	Nos.	14
			DT 100 KVA	Nos.	4
7	HVDS				
	LVDS is proposed to increase the length of HT Line by drawing new 11KV line using RABBIT ACSR for new DTRs for the network which will automatically results in the reduction of T & D losses and, increases the reliability and quality of power supply. Existing 11 kV - 16.03 km, LT -30.9 km. Existing HT: LT Ratio 0.52 Modified 11 kV-24.57 km (ext-16.03+New HT- 8.552 km 11 kv OH line, LT-28.562 km Modified HT: LT Ratio is 0.86	As per Proposal			
8	Consumer Metering				
	Meters which are not functioning properly due to sluggish in mechanism. Some of the meters are Jamed & not recording, Due to this there is no proper accounting of Energy. In order to achieve correct billing for the utilization made by the Consumers it is necessary to replace these existing Non Electronic/ Electromechanical and Jamed single phase & 3 phase Energy Meters by accurate single phase & 3 phase Electronic Energy Meters of appropriate capacity. As the Energy Meters are provided deep inside of the Consumer premises, there is all possibility of meter Tampering which reduces billing Energy. In order to account this unaccounted energy it is proposed to shift the meters to the place which is assessable to Utility Staff.				

Erection Conditions

		Type of Installation	No. of Install a-tions	
		Domestic	3924	
		Commercial	702	
		LT Industrial	27	
		HT Industrial		
		Agriculture	27	
		Others	9	
		Total	4689	
		Replacement of Consumer Meters With Box (Single phase)	Nos.	463
		Replacement of Consumer Meters With Box (Three phase)	Nos.	124
		Shifting of Service Mains	Nos.	196
		9 R & M of Distribution Transformers		
		The Distribution Transformers in the network do not have effective Earthing, LT Wiring and do not possess Lightning Arrestors. Hence it is proposed to provide, new Earthing, LAs and Wiring materials to these DTR's to reduce the supply Interruption due to HT & LT fuse blowing. Wedge Connectors & Lugs are used to reduce Energy Loss due to contact resistance & perfect Earthing system to bring down the EARTH RESISTANCE.	200kVA-5Nos. 100kVA-0Nos.	25
		10 R & M of existing 33KV PSS of Simdega Town:-		
		It is proposed for Renovation & modernisation of existing 1nos of PSS which need overhauling of power Transformers & replacement of existing 33KV & 11KV PROTECTION & SWITCHING EQUIPMENTS	No	1
1.2	Cost of Bid Documents and processing fees:	Non-refundable Demand Draft for Rs. 35000/- (Thirty Five Thousand Only) /- for cost of Bid Document in favour of " Account Officer, JBVNL " payable at Ranchi to be submitted with the bid. Original DD of cost of Bid Document and EMD in form DD/ Bank Guarantee to be deposited by the bidder to A.O. JBVNL before opening of the Technical Bid.		
1.3	Clarifications:	All queries relating to this bid document that the prospective bidder wants to be clarified during Pre-Bid Conference should be emailed to the e-mail ID gmrpdrp@gmail.com at least 3 days before the pre bid meeting date.		
1.4	Pre-bid conference:	Date. at AM/ PM. Place: JHARKHAND BIJLI VITRAN NIGAM LIMITED, Engineering Building, HEC, Dhurwa, Ranchi - 834004		
1.5	Joint Venture	Joint Venture is allowed (Maximum Two Partners).		
1.6	Estimated Cost of the Tender:	The Estimated Cost of the Tender is Rs. 3.08 Cr.		
1.7	Earnest Money Deposit (EMD) (Bid Security):	Demand Draft for Rs. 6,16,000/- (Rupees Six Lac SixteenThousand Only) in favour of " Account Officer, JBVNL " payable at Ranchi to be submitted with the bid. Alternatively, the Bidder may submit EMD through bank guarantee of any nationalized/ scheduled bank.		

Erection Conditions

1.8	Bid Validity:	Proposals must be valid for 180 days after the submission date.
1.9	Completion Period:	18 months from the effective date
1.10	Defect Liability Period	Defect liability period of 24 (Twenty Four) calendar months commencing immediately from the date of Handing / Taking Over of project.
1.11	Uploading of Proposals:	Only Successfully uploaded documents to be consider for evaluation.
1.12	Submission Address:	The Proposal submission address is: General Manager (R-APDRP), JHARKHAND BIJLI VITRAN NIGAM LIMITED , Engineering Building, HEC, Dhurwa, Ranchi - 834004 Tel.: 0651-2401829 Fax: 0651-2400799 e-mail: gmrpdrp@gmail.com
1.13	Commencement of Project:	From the date of issuance of Letter of Award (LOA) by JBVNL.
1.14	Effective Date	Effective date is the date from which the delivery period shall be counted which will be maximum of 15 days from the date of LOA.
1.15	Contract Performance Guarantee	The Successful Bidder, to whom the work is awarded, shall be required to furnish a Contract Performance Bank Guarantee from a Nationalized Bank/ Scheduled Bank in the approved format of JBVNL as a Contract Performance Security. The guarantee amount shall be equal to Ten percent (10%) of the contract value. Alternatively, successful Bidder can deposit the Bank Guarantee of amount equivalent to 5% (Five percent) of total contract value after receipt of Letter of Intent (LoI) and before execution of the agreement. In such case, the balance 5% (Five percent) of total contract value will be deducted from running account bills of the contractor.
1.16	Submission of PERT/ Bar Chart	The Contractor shall submit a Bar Chart/ PERT Network to the Chief Engineer (Project) within 15 (fifteen) days from the date of LOI for approval
1.17	Mobilization Advance Payment	Advance Payment (Optional) Payment of 10% (Ten percent) of the contract value of ex-works component of supply portion as mobilization advance shall be made after Contract Agreement on submission 110% value of an irrevocable Bank Guarantee bearing interest @ 13.5% per Annum.
1.18	Payment Authority	MD, JBVNL
1.19	Liquidated Damages and Penalty	@ 0.5% (half percent) of the contract price for each calendar week of delay or part thereof. However, the amount of liquidated damages for the Contract shall be limited to a maximum of ten percent (10%) of the total contract price.

Preamble: Background of the Project

Restructured Accelerated Power Development and Reforms Program (R-APDRP)

Ministry of Power, Govt. of India, has launched the Restructured Accelerated Power Development and Reforms Programme (R-APDRP) in the XIth Five year Plan. Power Finance Corporation Limited (PFC) has been designated by Ministry of Power, Govt. of India as the Nodal Agency for the programme. The programme spans from data acquisition at distribution level till monitoring of results of steps taken to provide an IT backbone and strengthening of the Electricity Distribution system across the Country under the programme. The objective of the programme is reduction of AT&C losses to 15% in project areas.

The Programme is proposed to be implemented on all India basis covering Towns and Cities with a population of more than 30,000 (10,000 in case of Special Category States) as per population data of 2001 Census.

Towns / areas for which projects have been sanctioned in Xth Plan APDRP shall be considered for the XIth Plan only after either completion or short closure of the earlier sanctioned projects.

The Programme

The Programme consists of Part-A covering Information Technology application in the electricity distribution system and Part B covering the System strengthening, improvement and augmentation of distribution system capacity.

Both parts entail planning of measures to be taken under the programme, implementation of such measures to be taken and monitoring / evaluation of results / impact of the programme as a whole and of its various components across the Country. The focus of the programme shall be on actual, demonstrable performance in terms of loss reduction. Establishment of reliable and automated systems for sustained collection of accurate base line data, and the adoption of Information Technology in the areas of energy accounting will be essential for the success of the R-APDRP.

The program is divided into 2 parts: Part-A and Part-B.

Part-A includes projects for establishment of baseline data and IT applications like Meter Data Acquisition, Meter Reading, Billing, Collections, GIS, MIS, Energy Audit, New Connection, Disconnection, Customer Care Services, Web self service, etc. to get verified baseline AT&C losses.

The I.T. implementation agency (ITIA) would supply, install and commission one integrated IT solution within the broad framework provided in the SRS (System Requirement Specification) document. Steering Committee of Ministry of Power under the guidance of Ministry of Power has finalized a detailed SRS document which covers all the components of the project including hardware, software, networking, GIS among others which shall help the utilities improve their performance.

Part-B includes distribution strengthening projects. In addition, in certain high-load density rural areas with significant loads, works of separation of agricultural feeders from domestic and industrial ones, and of High Voltage Distribution System (11kV) will also be taken up.

The activities to be covered under each part are as follows:

Part – A: Preparation of Base-line Data System for the project area covering Consumer Indexing, GIS Mapping, Automatic Metering (AMR) on Distribution Transformers and Feeders, and Automatic Data Logging for all Distribution Transformers & Feeders and SCADA / DMS system. It would include Asset Mapping of the entire distribution network at and below the 11kV transformers and include the Distribution Transformers and Feeders, Low Tension lines, poles and other distribution network equipment. It will also include adoption of IT applications for meter reading, billing & collection; energy accounting & auditing; MIS, Redressal of consumer grievances and establishment of IT enabled consumer service centers etc.

Part – B: It covers renovation, modernization and strengthening of 33/11 kV level Substations, Transformers, Re-conductoring of lines at 11kV level and below, Load Bifurcation, Feeder segregation, Load Balancing, Aerial Bunched Conductoring in thickly populated areas, HVDS, installation of capacitor banks and mobile service centers etc. In exceptional cases, where sub-transmission system is weak, strengthening at 33 kV levels may also be considered.

Bid Data Sheet

1.1	Name of the Client is:	JHARKHAND BIJLI VITRAN NIGAM LIMITED , Represented by : General Manager (R-APDRP), JHARKHAND BIJLI VITRAN NIGAM LIMITED , Engineer Building, HEC, Dhurwa, Ranchi – 834 004 Tel.: 0651- Fax: 0651-2400799 e-mail: gmrpdrp@gmail.com		
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		10	R & M of existing 33KV PSS of Simdega Town:-		
			It is proposed for Renovation & modernisation of existing 1nos of PSS which need overhauling of power Transformers & replacement of existing 33KV & 11KV PROTECTION & SWITCHING EQUIPMENTS	No	1
1.3	Pre-bid conference:	Date: Place: Jharkhand Bijli Vitran Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004 Receipt of query for pre-bid conference, not later than 5 days before the date of pre-bid meeting.			
1.4	Bid Validity:	Proposals must be valid for 180 days after the submission date.			
1.5	Clarifications:	May be requested not later than 3 days before the date of submission			
1.6	Language of the Bid:	English			

Erection Conditions

1.7	Joint Venture	Joint Venture is allowed (Maximum Two Partners).
1.8	Completion Period:	18 months from the effective date
1.9	Uploading of Proposals:	Only Successfully uploaded documents to be consider for evaluation.
1.10	Submission Address:	The Proposal submission address is: General Manager (R-APDRP) JHARKHAND BIJLI VITRAN NIGAM LIMITED , Engineering Building, HEC, Dhurwa, Ranchi - 834004 Tel.: 0651-.....Fax: 0651-2400799 e-mail: gmapdrp@gmail.com
1.11	Submission Date and Time:	Date: Note: If for any reason the proposal submission day happens to be a holiday, then the next working day will be the proposal submission day (the time for submission will remain same)
1.12	Opening of Technical & Commercial Proposal:	Date: Note: If for any reason the proposal opening day happens to be a holiday, then the next working day will be the proposal submission and opening day (the time for opening will remain same).
1.13	Opening of Price Proposal:	Price proposal of all qualified Bidders shall be opened on a date which shall be separately communicated later.
1.14	Estimated Cost of the Tender:	The Estimated Cost of the Tender is Rs. 3.08 Crore
1.15	Cost of Bid Documents and processing fees:	Non-refundable Demand Draft for Rs. 35,000/- (Rupees Thirty Five Thousand Only) for cost of Bid Document in favour of " Account Officer, JBVNL " payable at Ranchi to be submitted with the bid. Original DD of cost of Bid Document and EMD in form DD/Bank Guarantee will be deposited to Account Officer, JBVNL before opening of the Technical Bid.
1.16	Earnest Money Deposit (EMD) (Bid Security):	Demand Draft for Rs. 6,16,000/- (Rupees Six Lac SixteenThousand Only) in favour of " Account Officer, JBVNL " payable at Ranchi to be submitted with the bid. Alternatively, the Bidder may submit EMD through bank guarantee of any nationalized/ scheduled bank.

List of Abbreviations

S. No.	Abbreviation	Meaning
1	ABC	Aerial Bunched Cable
2	ACSR	Aluminum Conductor Steel Reinforced
3	AMI	Advanced Metering Interface
4	AMR	Automatic Meter Reading
5	AT&C	Aggregate Technical and Commercial
6	BDS	Bid Data Sheet
7	BG	Bank Guarantee
8	BIS	Bureau of Indian Standards
9	BOQ	Bill of Quantities
10	JBVNL	JHARKHAND BIJLI VITRAN NIGAM LIMITED
11	CENVAT	Central Value Added Tax
12	CMRI	Common Meter Reading Instrument
13	CT	Current Transformer
14	AO	Account Officer, JBVNL
15	DLMS	Device Language Message Specification
16	DMS	Data Management System
17	DO	Drop Out
18	DSS	Distribution Sub-station
19	DT/DTR	Distribution Transformer
20	EMD	Earnest Money Deposit
21	FPI	Fault Passage Indicator
22	GIS	Gas Insulated Sub-station
23	Govt.	Government
24	HG	Horn Gap
25	HOTO	Handing Over Taking Over
26	HT	High Tension
27	HVDS	High Voltage Distribution System
28	IEC	International Electro-technical Commission
29	IEEMA	Indian Electrical and Electronics Manufacturers' Association
30	IT	Information Technology
31	ITIA	Information Technology Implementation Agency
32	JV	Joint Venture
33	km	kilo meter
34	kV	kilo Volt
35	kVA	kilo Volt Ampere
36	LA	Lightning Arrestor
37	LD	Liquidated Damages
38	LOA	Letter of Award
39	LT	Low Tension
40	MAAT	Minimum Average Annual Turnover
41	MICC	Material Inspection Clearance Certificate

Erection Conditions

42	MIS	Management Information System
43	MODVAT	Modified Value Added Tax
44	MVA	Mega Volt Ampere
45	NABL	National Accreditation Board for Testing and Calibration Laboratories
46	NIT	Notice Inviting Tenders
47	O/H	Overhead
48	PERT	Program Evaluation Review Technique
49	PFC	Power Finance Corporation
50	PSS	Power Sub-station
51	PT	Potential Transformer
52	PVC	Poly Vinyl Chloride
53	R-APDRP	Restructured Accelerated Power Development & Reforms Programme
54	RE	Rural Electrification
55	RMU	Ring Main Unit
56	S/s	Sub-station
57	SBAR	State Bank Advance Rate
58	SCADA	Supervisory Control and Data Acquisition
59	SRS	System Requirement Specification
60	SSI	Small Scale Industries
61	U/G	Underground
62	UAT	User Acceptance Test
63	VCB	Vacuum Circuit Breaker
64	XLPE	Cross Linked Poly Ethylene

SECTION – I : GENERAL CONDITIONS OF CONTRACT

1. Definition of Terms

In constructing these General Conditions and the annexed Specifications the following words shall have the meanings herein assigned to them unless there is something in the subject inconsistent with such construct:

- The "Contractor/ Bidder/ Tenderer" shall mean an entity, or person, or an incorporated company, or a joint venture whose tender has been accepted by JBVNL for executing turn-key works and shall include his/ its heirs, executors, administrators, representatives and assign.
- The "JBVNL/Purchaser/ Owner/ Employer" shall mean the JHARKHAND BIJLI VITRAN NIGAM LIMITED whose Registered Office is situated at Engineer Building, HEC, Dhurwa, Ranchi - 834004, India and shall include its successor in office and permitted assigns.
- The "Engineer-in-charge" shall be the ESE-cum-Nodal Officer of concern Circle/Town .
- The 'Inspector' shall mean any firm or person or a company may be duly appointed and authorized in writing by GM,RAPDRP,JBVNL to inspect plant, equipment and works included in the Contract.
- "Plant" "Equipment", Work" or" Works" shall mean and include tools, plant, machines, stores and materials of all kinds to be provided and work to be done and services to be rendered by the Contractor.
- The "Contract" shall mean the agreement between JBVNL and the contractor for execution of the works incorporating the conditions, specification, JBVNL's drawing & Contractor's Drawings, Priced and completed schedules and include the various terms and conditions contained in the tender specifications, the Bidder's offer against such specifications and the results arrived at during subsequent deliberations as mutually agreed upon and embodied in the LOA/Agreement and also all amendments/additions thereof.
- "Contract Agreement" means the document recording the terms of the contract between JBVNL and the contractor.
- "Contract Price" means the sum stated in the contract Agreement as payable to the contractor for the execution of the works. The Contract Price shall be fixed and shall not be subject to contract price adjustment or exchange rate fluctuations, except where expressly stated otherwise in the contract.
- The word 'Site' shall mean the site of proposed work as detailed in the specification or any other place where the work is to be executed under the contract.
- "Tests on completion" shall mean such tests as are prescribed in the Specification, JBVNL Standards, I.E. rules, I.S.S. specifications etc. and/or tests mutually agreed upon by JBVNL and the Specification.

- "Performance guarantees" of the plant and equipment shall mean the guarantees given by the Contractor before taking over of the plant and equipment by JBVNL.
- "Acceptance Tests" shall mean such Tests as are required to prove the performance guarantees of the plant given by the Contractor before taking over of the Plant by JBVNL.
- "Commissioning" shall mean the first successful operation of the equipments as per specifications after all initial adjustments, trials, cleaning as reasonable required at site, if any, have been completed.
- "Initial operation" or "Reliability Run" shall mean operation of the contract plant and materials on load to prove satisfactory operation for specified period, which shall not be less than two weeks after commissioning of complete sub-station and associated transmission line.
- A 'Unit' is defined as combination of certain supply and erection schedules. The entire supply and erection schedules of the contract have been grouped into twelve units.
- A 'Useful Section' means that portion of the "Unit" which enhances the reliability of power supply or the capacity of distribution system or enables reduction in AT&C losses.
- "Commercial use" shall mean that standard of service efficiency and performance, the equipments are required to attain as contemplated in the specification/contract.
- "Guarantee period" shall mean the period of guarantee as explained under clause "Guarantee".
- "Month" shall mean calendar month.
- "Letter of Award" shall mean the JBVNL's letter conveying it's acceptance of the Tender subject to such reservations as may be stated therein.
- "Erection Supervision" shall mean the Supervision services rendered or exercised by the Contractor during the erection of the Plant and equipment as explained under clause.
- "Writing" shall include any manuscript, typewritten or printed statement under or over dated signature with seal as the case may be.
- "Approved" shall mean as approved by GM,RAPDRP,JBVNL.
- "F.O.R. Destination Price" shall mean delivery free of expenses to JBVNL, inclusive of insurance charge, at the works site stores including unloading and proper stacking.
- "Tonne" shall mean 1000 kilogram Weight.

Terms and conditions not herein defined shall have the same meanings as are assigned to them in the Indian Sales or Goods Act (Act III of 1930) failing that in the Indian Contract Act (Act IX of 1872) and failing that in the General Clause Act, 1897.

2. General

- 2.1.1. This tender document relates to strengthening, improvement and augmentation of distribution system capacity for reduction in AT&C losses of Simdega town on turnkey basis under R-APDRP Part-B Scheme.
- 2.1.2. The estimated cost has been furnished in this document as well as the NIT, which is tentative and may vary depending upon the actual volume of work. However, payment will be made for the actual work done based upon the item wise unit rates.

- 2.1.3. The Bidder should submit their offer for the complete works, subject to fulfillment of the requisite eligibility criteria.
- 2.1.4. JBVNL will provide no foreign exchange or import license to the contractor in connection with this contract.
- 2.1.5. Full technical as well as financial credentials of the Bidder should be furnished.
- 2.1.6. The Bidder will be deemed to have made themselves acquainted with any special difficulty associated with the site and work indicated in this document including any additional cost or expense which need to be incurred to ensure full compliance with current statutory regulations in force. The prices quoted shall include the cost of Right of way, way leave, crop/tree compensation, charging of equipments and lines etc., if any. All expenditures towards the above shall be borne by the contractor/Bidder. However, JBVNL shall extend all assistance in obtaining the clearances from the Govt. Department.
Only Statutory fee for Forest Clearance, Railway crossing, road re-instatement and electrical inspectorate will be reimbursed by JBVNL subject to production of documentary evidence such as money receipts towards payment of charges to local authorities namely Municipal Corporation, road department etc.
- 2.1.7. The tender price should include all expenses relating to labour such as shift working, overtime, incentive, etc. to ensure completion of work within the time fixed by JBVNL.
- 2.1.8. Unless warranted by the JBVNL, post bid opening correspondence will not be allowed.
- 2.1.9. The Bidder and all others receiving the tender documents (whether they submit the tender or not) shall treat the same including the specification and other documents attached there to as confidential.
- 2.1.10. The selected bidder / Contractor shall have to keep a minimum strength of manpower at site for execution of the project as given below:-

1	Project Head / Leader - 1	<p>Project Head will be the Head of the Project and will reside at Simdega on a full time basis throughout the execution of the project.</p> <p>Qualifications and Experience: Project Head will be a Graduate Electrical Engineer with minimum 15 years of experience in power sector in erection/ commissioning/ operation/ maintenance/ project management of Distribution system including 66/33/22/11kV lines, 66/33/22/11kV PSS, DSS, LT Lines, ABC, U/G cable, O/H lines etc.</p>
2	Project Managers – 1 (for each package)	<p>Project Managers will be the in-charge of his package where the work will be implemented and shall be stationed on full time basis in his area of jurisdiction for the entire contract period.</p> <p>Qualifications and Experience: Project Manager will be a Graduate Electrical Engineer having minimum 10 years of experience in power sector in erection/ commissioning/ operation/ maintenance/ project management of Distribution system including 66/33/22/11kV lines, 66/33/22/11kV PSS, DSS, LT Lines, ABC, U/G cable, O/H lines etc.</p>

3	Project Engineer – 2	<p>Project Engineers will be the in-charge of their Supply Division where the work will be implemented and shall be stationed on full time basis in his area of jurisdiction for the entire contract period.</p> <p>Qualifications and Experience: Project Engineer will be a Graduate Electrical Engineer having minimum 7 years of experience in power sector in erection/ commissioning/ operation/ maintenance/ project management of Distribution system including 66/33/22/11kV lines, 66/33/22/11kV PSS, DSS, LT Lines, ABC, U/G cable, O/H lines etc.</p>
4	Quality Control Engineer - 1 (for each package)	<p>Quality Control Engineers will work in close co-ordination with the Site Supervisor/Project Engineer to ensure proper material management, and effectively control the quality of execution of the work.</p> <p>Qualifications and Experience: Quality Control Engineer will be a Graduate Electrical Engineer having minimum 5 years of experience in power sector in erection/ commissioning/ operation/ maintenance/ project management of up to Distribution system including 66/33/22/11kV lines, 66/33/22/11kV PSS, DSS, LT Lines, ABC, U/G cable, O/H lines etc.</p>
5	Site Supervisors – 06 (Minimum one for each Supply Sub-division)	<p>Site Supervisors will supervise the electrification work of their Supply Sub-division where the work will be implemented and shall be stationed on full time basis in his area of jurisdiction for the entire contract period.</p> <p>Qualifications and Experience: Site Supervisor will be a diploma holder with a minimum 4 years of experience in supervision of line/ Station works of any electrical utility.</p>
6	Civil Engineer – 1 (One for the Project)	<p>Civil Engineer will be the in-charge of the civil works being implemented in the project area and shall be stationed on full time basis at Ranchi for the entire contract period.</p> <p>Qualifications and Experience: Civil Engineer will be a Graduate Civil Engineer having minimum 7 years of experience in the field of building construction, control room of PSS and other civil works related to power distribution system and their maintenance.</p>

The selected Bidder / Contractor, during the period of execution of the Project, shall keep, at site even more than above mentioned manpower in consistence with the targeted completion of the project.

- 2.1.11. Any restriction on working hours due to regulatory requirements applicable at site shall have to be adhered to by the selected Bidder / Contractor. All boarding, lodging, traveling allowance, transportation cost, labour cost etc. shall have to be borne by the selected Bidder/ Contractor.
- 2.1.12. No claim on account of labour problems and other types of hindrances in work at site will be entertained by JBVNL.
- 2.1.13. The selected Bidder / Contractor, of his own, will have to create proper storing facility as well as office facility at site.
- 2.1.14. The selected Bidder / Contractor will have to make its own security arrangement for protection of men and material.

2.2. Technical

- 2.2.1. Complete technical specification data, drawings and particulars of the equipments offered should accompany the tender.

- 2.2.2. The work shall be executed strictly as per the specifications & standard practices. Specification not provided, if any, will have to be got approved from JBVNL.
- 2.2.3. All equipments, to be supplied, should conform to the specifications with latest amendments. Deviations, if any, will have to be got approved from GM,RAPDRP,JBVNL.
- 2.2.4. All clearances should conform to the Indian Electricity Act, 2003 and CEA Safety Regulations, 2010, other recommendations and modern practices, as amended up to date.
- 2.2.5. Pre-despatch inspection of materials & equipments shall be carried out as per JBVNL standard practices. Materials may be inspected by authorized representative of JBVNL either at place of manufacturing or at work site etc.

2.3. Commercial

- 2.3.1. The Bidder participating in the tender must satisfy the conditions as stipulated in Eligibility Criteria section.
- 2.3.2. JBVNL reserves the right to assess or get assessed the financial and technical capability of the Bidder independently.
- 2.3.3. Modalities of payment to the Contractor will be as per the JBVNL's Standard Practice/ RFP terms. No deviation shall be allowed.

2.3.4. JBVNL SUPPLIED ITEMS

If any equipment or material is supplied by JBVNL, the contractor will have to arrange the loading of material from the stores of JBVNL and its safe transportation to the site stores of the contractor. The unloading, storing, security, insurance etc. of JBVNL's supplied materials will be the responsibility of the contractor. The cost of such supplied materials by JBVNL will be deducted from the contractor's bill. The rates applicable for the purpose of deduction will be the awarded rates or the issue rates of JBVNL whichever is higher.

The contractor will furnish indemnity bond for safe custody of materials/ equipments supplied by JBVNL.

3. Information for Bidders

- 3.1. Tenders containing Technical and Commercial offer and Price offer are invited by JHARKHAND BIJLI VITRAN NIGAM LIMITED, Engineer Building, HEC, Dhurwa, Ranchi-834004, herein after called JBVNL/Purchaser/Owner, from eligible, bona fide and experienced contractors having sound financial and technical background and management capacity for strengthening, improvement and augmentation of distribution system capacity under R-APDRP Part-B scheme in Simdega town, on Turnkey basis, for trouble free and successful operations. The Bidders should have a record of successful engineering, manufacturing, supply, delivery, storing, erection, supervision, testing & commissioning of the equipments & materials required.

3.2. GENERAL INFORMATION

- 3.2.1. JBVNL will receive tenders for the scope specified in clause 4. All tenders shall be prepared and submitted in accordance with these instructions after due physical site inspection.

Tenders shall not be accepted after the time and date fixed for receipt of tenders as set out in the document/ NIT.

3.2.2. The eligibility criteria has been detailed separately in this document.

3.2.3. Details of Tender:

a) Tender Notice No./PR/JBVNL/2014-15
b) Cost of Tender documents and processing fees(non refundable)	Rs. 35,000/-
c) Estimated Value of the Project	INR 3.08 Crs.
d) Earnest Money Deposit	INR 6,16,000/- (Rupees Six Lac Sixteen Thousand Only)-
e) Receipt of queries for Pre-bid meeting
f) Date of Pre-bid meeting
g) Last Date for sale of Tender documents
h) Last Date for submission of Tender up to AM/PM
i) Date of opening of Technical & Commercial Part at AM/PM
j) Date of opening of Price Bid	To be informed later

3.2.4. Tender Documents

Tender documents along with technical specifications etc. are available on website www.jharkhandtenders.gov.in. Bids should be submitted along with scanned copies of non refundable Demand Draft towards cost of Bid Document and Bank Draft or Bank Guarantee towards earnest money deposit failing which the tender shall summarily be rejected.

The tenders must be accompanied by cost of Bid document stated above in the form of a Demand Draft issued not later than the last date of sale and drawn in favour of Account Officer, JBVNL, payable at Ranchi, failing which the tender shall be summarily rejected.

3.2.5. Pre-bid Conference

The purpose of the pre bid conference is to allow potential bidders to ask questions and request clarifications about scope of work for bringing clarifications & elimination of ambiguity about RFP document. Based on the interaction during the pre-bid conference, necessary modifications / changes in the RFP document as deem fit will be carried out for providing clarity and addition/deletion of items for successful completion of the work.

The pre bid conference with the prospective Bidders will be organized on at 11:30 AM at Engineer Building, HEC, Dhurwa, Ranchi. The Bidders may send their queries up to 3 days prior to Pre-bid Meeting date to GM (R-APDRP) on e-mail gmrpdrp@gmail.com.

3.2.6. JBVNL shall not be responsible for non-receipt of the tender by the Bidder in case of delay by postal department, if the tender is sent by post.

- 3.2.7. The tender documents are not transferable and the tenders received after expiry of prescribed date and time will not be considered.
- 3.2.8. Issue of tender specifications/ documents to the Bidders will not be construed to mean that such Bidders are automatically considered qualified. JBVNL reserves the right to accept/ reject any or all tenders without assigning any reason whatsoever. JBVNL does not bind itself to accept the lowest tender.
- 3.2.9. Notwithstanding as stated above, JBVNL reserves the right to assess the Bidder's capacity and capability to perform the contract and relax the qualifying requirements at any stage.
- 3.2.10. JBVNL will not be responsible for or pay for expenses or losses, which may be incurred by any Bidder in the purchase and preparation of their tender.
- 3.2.11. Telegraphic tenders will not be accepted.
- 3.2.12. The Bidder shall quote the price for complete scope of work on Total Turnkey Basis. Tenders not covering the entire scope of work as detailed in the tender specification shall be treated incomplete and summarily rejected.
- 3.2.13. The Bidders shall quote their prices as well as all types of taxes, duties, freight & insurance, (as per Bid Proposal) except State and local taxes like octroi/entry tax etc.
- 3.2.14. The prices for each item as per schedule should be furnished along with the tender. For the erection part of the tender, the Bidder should not quote less than 18% of total contract price. If a Bidder quotes less than 18% of total contract price for erection part of the bid, the price for the erection part shall be deemed to be 18% of total contract price and the payment of supply portion shall be restricted to 82% of total contract price accordingly.
- 3.2.15. The selected Bidder/ Contractor shall supply the necessary drawings/ shop drawings and specifications of all parts.
- 3.2.16. The selected Bidder/ Contractor will have to provide suitable erection, supervision personnel to supervise the work of erection of the equipment/ lines undertaken by him.
- 3.2.17. Unless brought out clearly, the Bidder shall be deemed to conform strictly to the provisions of the bidding documents. All deviations from the specifications shall be clearly brought out in respective schedule of deviations. Any discrepancy between specification and bid if not clearly brought out in the schedule, will not be considered as a valid deviation.
- 3.2.18. If bidder is blacklisted by any state owned power distribution utilities in India, JBVNL reserves the right to reject his bid. An affidavit has to be submitted by the agency in this regard.
- 3.2.19. The respective rights of JBVNL and Bidder/ Contractors shall be governed by the Tender documents/ Contract Agreement signed between the JBVNL & the Bidder /Contractor.
- 3.2.20. The contract being on Turnkey basis, the Bidder is responsible for complete execution of the work under the scope of tender specification/ order. All the materials not appearing in the price schedule but are required for successful completion the work shall have to be arranged by the selected Bidder/ Contractor at his own cost. Similarly, any work activity not specifically indicated but is required for successful execution of job shall also be done by the Contractor at no extra cost to JBVNL.

- 3.2.21. If any non scheduled item is required due to field requirement during execution of work which is not covered in the bid proposal, it may be judiciously decided by JBVNL after proper rate analysis in special circumstances. The agency has to take up such work and complete it within agreed time period.
- 3.2.22. All civil work required during R&M of Existing PSS in connection with alteration, modification, extension of existing control room for housing of control panels, metering panels, panels & equipments related to SCADA & IT enabling features, has to be carried out by the contractor at the prevailing schedule of rates for civil works of JBVNL. The repair & maintenance of boundary wall of the existing PSS will also be carried out as per the schedule of rates of civil works prevailing in JBVNL.
- 3.2.23. In case of any ambiguity, error, omission, commission, confusion and typographical mistakes, JBVNL's interpretation will be final.
- 3.2.24. The Bidding Document consists of three volumes as indicated below:
VOLUME I: General conditions & General Technical Conditions
VOLUME II: Technical Specifications
VOLUME III: Construction Manual & Technical Drawings
- 3.2.25. The Bidders shall submit the following information and documents with their tenders in the proforma enclosed:
- Technical Proposal;
 - Price Bid;
 - Completed schedules, as required;
 - Board resolution supporting to the power of attorney.
 - List of Sub-contractors;
 - Copies of original documents defining the constitution or legal status, place of registration and principal place of business, notarized power of attorney of the authorized signatory of the bidder to submit the tender.
 - Total annual turnover in electrical construction work performed by the Bidder in his own name (not by any other company whose name has subsequently been changed, so as to form the current Bidder) in each of the last five years.
 - Experience in executing similar turnkey projects (Nature & Volumes) for each of the last five years and details of work in hand and contractual commitments, clients who may be contacted for further information on those contracts.
 - Qualifications and experience of key site management and technical person proposed for the contract.
 - C.V. of key personnel staff, i.e. team leader, project engineer, quality control engineer, civil engineer and site supervisor should be given as per enclosed schedule.
 - Reports of financial standing of the Bidder such as profit and loss statements and auditor's report for the past five years.
 - A certificate from a bank or a firm of licensed Chartered Accountants confirming the liquidity (liquid asset) of the Bidder at a date not earlier than one month prior to the last date for submission of tenders.

- A certificate from the banker evidencing adequacy of working capital for this contract, i.e. evidence of access of line(s) of credit and availability of other financial resources of the Bidder at a date not earlier than one month prior to the last date for submission of tenders.
- Authority to seek references from the Bidder's bankers.
- Information regarding any current litigation in which the Bidder is involved, the parties concerned and the disputed amount.
- Statement of safety policy and safety statistics for the last 5 years.
- Copy of QA Certification and associated documentation.
- Copy of environmental and health policy.
- Notarized affidavit undertaking that the bidder has not been black listed by any State Govt. / Central Govt. / Govt. undertaking in India.

4. Scope of Work

- 4.1. The work is to be executed on turnkey basis, the scope of which includes survey, network design, supply, manufacturer's quality assurance, shop testing (including type testing where specified/ required), transportation, storage, erection, including all civil/ structural works, site testing, commissioning of all items & materials including all associated activities though not exclusively specified herein and are required for the completion of the entire works.
- 4.2. This specification intends to cover but not limited to the following activities, services & works:
 - Providing engineering data, and drawing for JBVNL's review, approval and records.
 - Supply, testing, packing, transportation & insurance from the manufacturer's work to the site.
 - Receipt, storage, insurance, preservation and conservation of equipments at the site.
 - Fabrication, pre-assembly (if any), erection, testing and putting into satisfactory operation of all the equipments/ materials including successful commissioning.
 - In addition to the requirements indicated in this section, all the requirements as stated in Technical specifications shall also be considered as a part of this specification as if completely bound herewith.
 - Providing all materials, equipments and services specified or otherwise, including survey, which are required to fulfill the intent of ensuring operability, maintainability and the reliability of the complete works covered under this specification.
 - All services & activities required to be given contractually, by the Bidder, during warranty period.
 - Preparation of project completion report/ closure proposal along with a report clearly indicating completion of any outstanding/ remedial work that needs to be carried out.
 - Handing over the works to the employer for taking into commercial services.
- 4.3. For individual equipment specifications, reference shall be made to the relevant sections of this specification given under Volume-II: Technical Specifications. If for any item specification has not been mentioned, the relevant standards as applicable shall be followed. In all the cases the relevant standards with latest amendments shall be applicable.

- 4.4. It is not the intent to specify all aspects of design and construction of equipments mentioned herein. The systems, subsystems and equipments shall conform in all respect to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation.
- 4.5. All the raw materials such as steel, zinc for galvanizing, reinforcement steel and cement for foundation, coke for earthing, bolts, nuts & washers, danger plates, phase plate, number plate etc. required for substations & its structures shall be included in the scope of supply. Bidders shall clearly indicate in their offer, the sources from where they propose to procure the raw materials and the components.

Detailed Scope

- 4.6. Supply of Plant and Services under this tender covers all interventions required for satisfactory operations of the facilities unless specifically excluded. Scope includes Design, Supply, survey, installation, erection testing and commissioning, on turnkey basis under R-APDRP Part-B scheme in Simdega town, of:

	Item Details	Unit	Qty.
1	66/11 or 33/11 KV SS : New/Augmentation		
	Augmentation of Power Transformer:		
	Augmentation of 5MVA Power Transformer to 10MVA of 33KV PSS @ Simdega	No	1
2	11 kV Line : New Feeder/ Feeder Bifurcation		
	Augmentation of Conductor:-		
	Augmentation of Conductor of 11KV Simdega Feeder from Weasel to DOG to ACSR	km	4
	Augmentation of Conductor of 11KV Simdega Feeder from Weasel to Rabbit ACSR	km	5.4
3	New 11KV Line for proposed PSS & New DTRs		
	New 11KV Line for proposed New DTRs with Rabbit ACSR	km	8.552
4	Replacement/New of 11kV VCB:		
	Replacement of Existing 11kV VCB/OCB with 11kV Motorized VCB (Feeders;2)	Nos.	2
5	11 kV : Fixed Capacitor Bank		
	HT Fixed Capacitor Bank of 3.6 MVAR	No	0
6	Distribution Transformer: Capacity Augmentation/ New Transformer		
	Installation of New Distribution Transformer:		
	DT 25 KVA	Nos.	29
	DT 63 KVA	Nos.	14
	DT 100 KVA	Nos.	4
7	HVDS		
	LVDS is proposed to increase the length of HT Line by drawing new 11KV line using RABBIT ACSR for new DTRs for the network which will automatically results in the reduction of T & D losses and, increases the reliability and quality of power supply. Existing 11 kV - 16.03 km, LT -30.9 km. Existing HT: LT Ratio 0.52 Modified 11 kV-24.57 km (ext-16.03+New HT- 8.552 km 11 kv OH line, LT-28.562 km Modified HT: LT Ratio is 0.86	As per Proposal	

8	Consumer Metering		
	Meters which are not functioning properly due to sluggish in mechanism. Some of the meters are Jamed & not recording, Due to this there is no proper accounting of Energy. In order to achieve correct billing for the utilization made by the Consumers it is necessary to replace these existing Non Electronic/Electromechanical and Jamed single phase & 3 phase Energy Meters by accurate single phase & 3 phase Electronic Energy Meters of appropriate capacity. As the Energy Meters are provided deep inside of the Consumer premises, there is all possibility of meter Tampering which reduces billing Energy. In order to account this unaccounted energy it is proposed to shift the meters to the place which is assessable to Utility Staff.		
	Type of Installation	No. of Installations	
	Domestic	3924	
	Commercial	702	
	LT Industrial	27	
	HT Industrial		
	Agriculture	27	
	Others	9	
	Total	4689	
	Replacement of Consumer Meters With Box (Single phase)	Nos.	463
	Replacement of Consumer Meters With Box (Three phase)	Nos.	124
	Shifting of Service Mains	Nos.	196
9	R & M of Distribution Transformers		
	The Distribution Transformers in the network do not have effective Earthing, LT Wiring and do not possess Lightning Arrestors. Hence it is proposed to provide, new Earthing , LAs and Wiring materials to these DTR's to reduce the supply Interruption due to HT & LT fuse blowing. Wedge Connectors & Lugs are used to reduce Energy Loss due to contact resistance & perfect Earthing system to bring down the EARTH RESISTANCE.	200kVA-5Nos. 100kVA-0Nos.	25
10	R & M of existing 33KV PSS of Simdega Town:-		
	It is proposed for Renovation & modernisation of existing 1nos of PSS which need overhauling of power Transformers & replacement of existing 33KV & 11KV PROTECTION & SWITCHING EQUIPMENTS	No	1

All items to be supplied and erected shall be strictly as per the specifications given in Volume II of the Bid and should comply the relevant standards.

The volume of work indicated in the schedules may vary. JBVNL reserves the right to change the volume of work as per actual field requirements.

Any deviation taken by the bidder and not specifically / clearly brought out in the schedule will not be considered as a valid deviation.

4.6.1. Survey

The Contractor shall carry out, and be responsible for, final design of the works, including any site surveys, subsoil investigations and all other things necessary for proper planning design and execution. The initial site surveys will be carried out for tentative freezing of the material requirement and the work content finalization, within one month of commencement of project, and this will be a joint survey, along with the authorized representative and sample

check by JBVNL. The same shall be reviewed progressively on quarterly basis for freezing of the material requirement and work content. Design shall be prepared by qualified designers who are engineers and experienced in design of transmission and distribution systems. JBVNL has already identified the works to be carried out for improvement of existing network. The Contractor may also carry out analysis at his end, if so desire, to ensure that the proposed network design will result in reduction of line losses and achieve the end objective. The Contractor is free to suggest any changes in the proposed network to achieve the target of line loss reduction. The changes in design should be approved by JBVNL's Engineer-in-charge.

4.6.2. Based on the finalized network design, the Bidder shall carry out the field survey for deciding location of poles, single, double, or triple, distribution transformers etc. Besides, field survey will cover following:

- Proposed route of 33 KV, 11KV and LT Line.
- Proposed location of 33/11 KV sub-stations along with number, capacity of power transformers and number of 11 KV feeders to be taken out.
- R&M work including capacity augmentation of power transformers at existing 33/11 KV Substations from 5 MVA to 10 MVA.
- Locations of new distribution transformers.
- Location of RMUs and FPIs.
- Locations of AB Switches.
- Details of poles to be replaced/ additional mid span poles.

4.6.3. Feeder wise Bill of Quantity (BOQ), for each proposed work will be prepared by the Bidder and submitted to the JBVNL's Engineer-in-charge for his approval before commencing work.

4.6.4. All architectural and civil designs such as control room, foundation for equipment, transformer, isolators, VCB shall be got approved by the JBVNL's Engineer-in-charge.

4.6.5. Within substation yard, all clamps and connectors used for bus will be crimped. All the clamps and connectors connecting the equipments shall be of bolted type.

4.7. New Power Substations and Capacity Augmentation of existing PSS:

The contractor shall carry out the work of Construction of various new 33/11KV substations which consists of:

- 2*5 MVA, 33/11 kV Substations (with 33 KV outdoor Switchyard and 11 KV Indoor Switchgear).

The contractor shall carry out the work of augmentation of existing 5MVA, 33/11KV substations to 10 MVA power Transformers at various locations.

4.8. Supply & Installation of SCADA related equipments (Not applicable for Simdega Town)

4.8.1. JBVNL has already taken initiative towards implementation of the SCADA/DMS project in Ranchi Town as per the scope defined under R-APDRP Part-A and has appointed M/s Schneider Electric as Implementing Agency (SIA).

4.8.2. Supply & Installation of SCADA related equipments (RMU, FPI, Motorized Circuit Breakers, Numerical relays, WTI, OTI etc.) shall be taken up on priority basis for which the implementation schedule shall be submitted separately. The requirement for the SCADA compatible equipments has been elaborated in the Vol II Technical Specifications (Part-A).

4.8.3. The contractor shall provide all the necessary support to SIA while performing the interfacing activities for the SCADA related equipments (RMU, FPI, Motorized Circuit Breakers, Numerical relays, WTI, OTI etc.,) installed under the scope of this tender.

4.9. Meter Replacement

- Stop/Defective and electro-mechanical meters, list of which will be made available by JBVNL, are to be replaced.
- Energy meters are to be installed at the eye level so that it is convenient to read the meter, either manually or through MRI / DCU etc.
- All such new meters will be tested prior to its installation. It will be installed under the supervision of authorized representative JBVNL.

4.10. Service Line Replacement

Existing single phase & three phase service lines which are damaged/ deteriorated/ undersized/ as required are to be replaced by PVC armoured cable. Twin core, armoured PVC cable of size 4/6 sq. mm. shall be used for single phase service line. Proper load balancing shall be ensured while connecting services to LT Line. In case of three phase service line, PVC cable 3.5 core armoured 25.0 sq. mm., PVC cable 3.5 core armoured 50 sq. mm., PVC cable 3.5 core armoured 70 sq. mm. shall be used as per the connected load of the consumer.

4.10.1. Irrespective of the actual length of the service line drawn, the contractor shall be paid for the length of the complete service line:

- Single Phase service line with twin core armoured PVC cable 4.0/6.0 sq. mm, 25 meter
- Three Phase service line with 3.5 core, armoured PVC cable 10.0 sq. mm, 25 meters
- Three Phase service line with armoured 3.5 core, PVC cable 16.0 sq. mm, 25 meters
- Three Phase service line with armoured 3.5 core, PVC cable 25.0 sq. mm, 25 meters

4.10.2. Consumers which are unmetered, list of which shall be provided by Engineer-in-Charge, will also be provided with meter using PVC armoured cable and static energy meter.

4.10.3. Service ring / D-loop/ junction box is to be used on pole as required for proper laying of service lines.

4.11. Return of replaced old materials to the area stores of JBVNL

4.11.1. All the meters removed from the consumers' premises shall be packed in the card board boxes, individually, in such a way that no damage is done to the meter. The boxes shall be sealed with the brown sticker tape of 25 mm width so that box cover does not get opened at the time of transportation to stores or handling.

4.11.2. On the card board box, a paper slip shall be fixed giving details like name of consumer, his service connection number, final reading, make of meter, meter number and rating and condition of meter whether running, stopped /defective or burnt. In case a meter is found to

be tampered the same shall not be replaced and the matter will be reported in writing to the Engineer In charge or person designated by him for taking necessary action.

- 4.11.3. Old PVC wire will be rolled into bundles. The bundles should be tightened firmly and properly with PVC sticker strip or string. A tag should be attached with each bundle to indicate the weight of the bundle. As far as possible, bundle should consist of wire of the same size and same metal. Similarly action is required to be taken in case of GI wire.
- 4.11.4. Old conductor of same size shall be rolled into bundles. Bundles should be tightened firmly and PVC sticker strip or string regarding size of conductor shall be mentioned. Size, type & Weight of each bundle shall also be indicated on the sticker strip.
- 4.11.5. Materials released due to bay capacity augmentation and/or due to replacement like power transformers, distribution transformers, insulator, meter board, cut outs etc. are also required to be returned to JBVNL stores through proper documentation.
- 4.11.6. All other line materials released like, conductors, poles, cross arms; fabricated material, etc. shall be properly accounted for and returned to JBVNL area store after recording all necessary details including weight, length etc. wherever necessary. A detailed procedure for return of the old materials shall be prescribed by JBVNL.
- 4.11.7. In respect of accountal of devolution of released material, the process as formulated by JBVNL time to time shall be followed by the contractor
- 4.11.8. All dismantled meters and other materials shall be accounted jointly by the Engineer In-charge/ JBVNL and the Contractor or his representative. Materials shall be returned by the Contractor deploying suitable transport and stacked in the designated area stores of JBVNL.

4.12. Miscellaneous

- 4.12.1. Commencement of Supply & Works: The Contractor shall ensure that the supply and installation of material and service under the contract is as per work PERT/ completion schedule. The Contractor is to commence supply with the type tested materials with necessary routine test/ acceptance test certificates for a particular lot duly approved by JBVNL.

Type Test: The contractor shall submit Type test and routine test certificates as applicable, issued by NABL accredited / third party independent standard laboratories like CPRI, NPL etc.

- 4.12.2. Unit rates: The unit rates quoted shall include details which are obviously and fairly intended, and which may not have been included in these documents but are essential for the satisfactory completion of work. The unit rate quoted shall be inclusive of deployment of all plants, equipments, men, materials, skilled & unskilled labour etc. essential for satisfactory completion of work.
- 4.12.3. The prices for fabricated materials shall include all works relating to fabrication, galvanizing and delivery ex-contractors stores, unloading and loading. The quoted prices shall also include the cost of necessary quantity of steel and zinc, freight charges up to site store and other indirect charges incurred in connection with supply of finished materials.

4.12.4. Quantities/ length of 33 KV, 11 KV line and LT line, distribution transformers sub stations, 33/11 KV sub-station meters etc. indicated in the price schedules are only provisional. Final quantities will be known after completion of survey and may vary during actual execution of work. The Contractor shall execute the work based on the actual survey and as approved by the Engineer-in-charge. The scope of work also covers supply of other items, not specifically mentioned in this specification and/or bill of materials but are required for the successful installation, testing and commissioning of the 33 KV & 11 KV lines, 33/11 KV sub stations, distribution transformer sub stations, LT lines, service lines and energy meters.

4.12.5. The following works & services shall also be provided by the contractor.

- Unloading the equipments from the rail or road transport and moving those to storage area. Demurrage/ wharf age charge, if any incurred, shall be paid by the contractor
- Opening of packing cases, inspection and checking of materials for any damage or loss in transit shall be the responsibility of the contractor. All claims with the concerned authorities e.g. rail, transport, insurance etc. shall be lodged by the contractor.
- Complete erection of equipments, etc. covered under the contract, final preparation for testing, commissioning, final run and acceptance tests and putting the sub-station/ plant/line etc. into operation.
- All consumable, stores required for the above erection and commissioning works.
- All erection tools, lifting tackles, and all equipments, tools & tackles for transportation at site.
- Workshop, as required within the work area.
- Third party insurance ^[1] at site and insurance of personnel employed at site as required under Workman's Compensation Act. Security arrangement for watch and guard as required shall be made by Bidder at his own cost.
- All the technical/ skilled staff deployed for the job must possess the required qualifications and necessary licenses and permits.
- Contractor shall take all safety precautions during work and the workmen must use safety belts, hand gloves, masks and other devices as may be necessary for safety of the personnel.
- The contractor shall provide operating personnel during trial tests and till the PSS, DSS, lines and equipments etc. are taken over by JBVNL as specified in taking over Clause, defined later.
- Any other work not covered above but required for successful completion of the project has to be carried out by the contractor at his own cost.

^[1] **Note:** Before receipt of equipment at site but without limiting his obligations and responsibilities under this clause hereof, the Contractor shall insure against his liability for any equipment, material or physical damage, loss or injury which may occur to any property, including that of JBVNL or to any person including employee of the JBVNL, by or arising out of the execution of the contract or in the carrying out of contract. The third party insurance

cover shall be provided for the period from date of Ex-factory dispatch till taking over of the entire equipment after testing, commissioning and trial operation, if any.

Third party insurance shall be affected for an adequate amount to cover for any occurrence.

Terms shall include a provision whereby, in the event of any claim being brought or made against JBVNL in respect of which the Contractor would be entitled to receive indemnity under the policy, the insurer will indemnify JBVNL against such claims and any costs, charges and expenses in respect hereof.

- 4.12.6. Specifications of the plants and the drawings of the fabricated items and structures are given in Volume II and III of the Bid document.

5. Eligibility Criteria

Bidding is open to individual bidders as well as for consortium who satisfy the Eligibility criteria set forth in the tender documents with respect to their experience and financial capabilities as furnished by the Bidder in the corresponding bidding schedules. The Bidder shall also be required to furnish the information specified in the specification in their bid. Bidder must be a turnkey contractor having adequate experience in in-house engineering and design infrastructure facilities, quality assurance and safety setup to carry out similar type of work. The bid can be submitted by an individual firm or a joint venture. Specific requirements are given below:-

- 5.1. The bidder or any one partner in the case of consortium should have at least 3 years experience as a prime contractor of similar nature and complexities of works that is required under this contract which includes construction, erection, testing and commissioning of sub-transmission and/or distribution lines, Power substations, power transformers, and allied works to any Power distribution utility/ SEB/ Discoms etc.

Bidder/ Bidders should have to furnish no blood relation certificate with JUVNL and its subsidiary companies.

5.2. Technical Criteria

The bidder or the partners combined in case of consortium should meet the technical criteria of minimum quantity of supply of materials, survey, erection, testing and commissioning of the below listed works, during last ten (10) years as on the date of bid opening; which must be in satisfactory operation for at least two (2) years as on the date of bid opening (up to the date of bid opening) to meet specific requirement of experience for services.

1. **2 PSS** – 110/11kV or 66/11kV or 66/22 kV or 33/11 kV or 22/11kV New PSS

Any Combination of power Transformer voltage ratio with Primary Voltage of 110/66/33 kV and secondary voltage of 22/11 kV.

AND

2. **50 km line** –of 11kV or 22kV or 33 KV or 66kV or 110kV voltage class or in combination.

AND

3. **20 km line** with AB Cable / Underground cable of (HT / LT) or in combination.

AND

4. **50 nos.** of 11/0.4 KV Distribution transformer of rating of 100 KVA and above.

AND

5. **10 nos.** of Installation of RMU's or indoor Switchgear panel comprising of indoor VCB in PSS (66 kV, 33 kV, 22 kV, 11 kV) or indoor switching station (33 kV, 22 kV, 11 kV) individually or in combination. (only for SCADA towns)

5.3. To qualify, the bidder (single or Joint Venture) must have Minimum Average Annual Turnover (MAAT) for the best 3 years out of last five financial years (e.g. 2009-2010, 2010-11, 2011-12, 2012-13 & 2013-14) as stipulated below:-

$$\begin{aligned} &= 50\% \text{ of Estimated Value of the project} \\ &= 50\% \times \dots\dots\dots \text{Crs} \\ &= \text{Rs } \dots\dots\dots \text{Crores} \end{aligned}$$

Necessary documentary evidence viz. Profit/Loss statement or Auditor's Certificate or the attested copy of Income Tax return filed by the bidder or the attested copy of Sales Tax Clearance Certificate in proof of the financial turnover should be furnished along with the bid.

5.4. The bidder (Single or Joint Venture) shall have minimum Liquid Assets (LA)/ Credit Facility as stipulated below:-

$$\begin{aligned} &= 10\% \text{ of Estimated Value of the project} \\ &= 10\% \times \dots\dots\dots \text{Crs} \\ &= \text{Rs } \dots\dots\dots \text{Crores} \end{aligned}$$

Liquid Assets is defined as Cash and Cash equivalents (including bank balance) and current investments (Govt Bonds, debentures and mutual funds).

Credit facility would be checked only if liquid assets do not meet the Criteria. Credit facility is defined as Cash Credit, Bank Guarantee, Letter of Credit and Bank Overdraft. Credit facility letter should not be later than 1 month from the date of bid submission. i.e. for example if the date of submission is 1st August 2014 then the credit facility letter should be not before 1st July 2014.

In case of bidder being a holding company, MAAT and LA/ Credit Facility shall be that of holding company only i.e. excluding MAAT and LA/ Credit Facility of its subsidiaries. Further, in case of bidder being a subsidiary company, MAAT and LA/ Credit Facility shall be that of subsidiary company only, i.e. excluding MAAT and LA/ Credit Facility of its holding company.

Separate tender have been invited for execution of R-APDRP Part – B project in Simdega Town.

Inc case if the same Firm or Joint Venture Firms offering bids for more than one tender, the requirement of MAAT shall be cumulative of MAAT of each bid calculated on above basis.

Similarly, if the same Firm or Joint Venture Firms offering bids for more than one tenders, the requirement of minimum LA/credit facility shall be cumulative of minimum LA/credit facility of each bid calculated on above basis.

5.5. **Joint Venture Firms**

5.5.1. Joint Venture shall comprise of a maximum of two firms. A bid submitted by a Joint Venture must comply the following minimum criteria:-

- a) The lead partner shall meet, not less than 60% of the minimum criteria as mentioned above for MAAT and LA/ Credit Facility. It should for the best 3 years out of last five financial years (e.g. 2009-2010, 2010-11, 2011-12, 2012-13 & 2013-14) for MAAT and best out of last three years for LA.
- b) The other partner should meet not less than 40% of the criteria as mentioned above for MAAT and LA/ Credit Facility. It should be for the best 3 years out of last five financial years (e.g. 2009-2010, 2010-11, 2011-12, 2012-13 & 2013-14) for MAAT and best out of last three years for LA.
- c) Joint Venture should satisfy collectively the criteria of MAAT and LA/ Credit Facility. In other words the relevant figures of MAAT and LA/ Credit Facility of each of the partners of joint Venture shall be added together to arrive at the total capacity of the Joint Venture in the light of minimum criteria condition (a) & (b) as stated above.

5.5.2. In case of a Joint Venture, the following conditions shall also apply:

- The bid and in case of successful bid the specified form of Agreement shall be signed so as to be legally binding on the partners (form enclosed in Schedules).
- In case more than one of the partners meet the applicable eligibility criteria of lead partner as specified above, one of them shall be nominated as lead partner, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners. The lead partner shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the Joint Venture, and the entire execution of the contract, including payment shall be done exclusively with the lead partner as per power conferred to him in the Power of Attorney.
- All partners shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned above as well as in the bid forms and in the contract forms (in case of a successful bid). The Consortium/ Joint Venture Agreement entered into between the Joint Venture Partners shall be submitted with the bid.

5.6. The bidder (in case of Joint Venture, all partners) shall also furnish the following documents with its bid.

- A certificate from banker indicating various fund based/ non fund based limits sanctioned to the Bidder and the extent of utilization as on date. Such certificate should have been issued not earlier than three months prior to the date of bid opening. Whenever necessary, JBVNL may make queries with the Bidder's bankers.
- The complete Annual Reports including the Audited Statement of Accounts of the company for last five years of its own (separate) immediately preceding the date of submission of bid.

- 5.7. In the event the bidder (in case of Joint Venture, all or any of its partners) is not able to furnish the information of its own (i.e. separate), being a subsidiary company and its accounts are being consolidated with its group/holding/parent company, the bidder should submit the audited balance sheets, income statements, other information pertaining to it only (not of its group/Holding/Parent Company) duly certified by anyone of the authority [(i) Statutory Auditor of the bidder/ (ii) A certified practicing Chartered Accountant] certifying that such information/documents are based on the audited account as the case may be.
- 5.8. Similarly, if the bidder (in case of Joint Venture, all or any of its partners) happens to be a Group/Holding/Parent company, the bidder should submit the above documents/ information of its own (i.e., exclusive of its subsidiaries) duly certified as above that these information/documents are based on the audited accounts as the case may be.
- 5.9. The bidder should provide detailed information on any litigation or arbitration arising out of the contracts completed or under execution by it over the last five years. A consistent history of awards involving litigation against the Bidder or any partner of JV may result in rejection of bid.
- 5.10. Any firm participating in this bid jointly with one lead partner in any capacity shall not be associated with any other firm/lead partner quoting for this bid in any capacity (either as Joint Venture Partner or as a sub contractor). The lead partner is also not permitted to quote for this bid separately with different partners as a second bid. This practice means that any lead partner or associate or partner can participate in one and only one bid.
- 5.11. Bidder or any partner in Consortium should possess a valid Electrical Contractor's license issued by the Electrical Inspectorate of any State or Government of India under the relevant Act to perform works involving HT or higher voltage class electrical works.
- 5.12. In case of Bidder being a Consortium, an agreement shall be entered into by the partners with responsibilities of both the partners clearly defined and with confirmation of both the partners being jointly and severally liable for the execution of the Contract in accordance with the contract terms.
- 5.13. A copy of the agreement formally entered into by the Consortium partners on a non judicial stamp paper of requisite value duly verified by notary public/ oath commissioner shall be submitted with the bid. The Consortium agreement should indicate precisely the responsibility of each partner of Consortium in respect of planning, design, supply of materials and equipment, key personnel, work execution and financing of the project. The agreement shall not be modified during the term of the contract without the prior written permission of the JBVNL's competent authority.
- Note 1:** Information submitted by the bidder with respect to experience and qualifications shall be supported by (a) mandate letters/work orders giving details of scope and cost data AND (b) completion certificates issued by the officer of the organization to be submitted OR evidences towards receipt of final payment of at least 90% of the contract value, failing which their experience claims will not be considered for evaluation.

Note 2: Credentials accrued after due date of tender submission against queries raised by JBVNL shall not be considered for bid evaluation.

Clarification received after seven (7) days of issued of quarries letter shall not be entertained.

Note 3: The experience certificates shall comprise of either of the following:

- a) Experience certificates issued by respective officer of the organization on their letter heads with their seals and signature must include order no & date, scope of work, date of completion of work, total cost of work completed and overall performance. OR
- b) A certificate issued by a practicing Chartered Accountant on their letter heads giving Order No. & date, total cost of work completed and receipt of final payment of minimum 90% of the contract.

Note 4: Information provided on the bidder's financial capacity shall be duly certified by a practicing Chartered Accountant; documents submitted without the required certification will not be considered for evaluation. Further, details covered in the respective schedules, especially related to turn over shall be considered only if authenticated by a practicing Chartered Accountant.

Note 5: Since the tender proposed to be floated is a turnkey tender, no price preference will be extended to local SSI Units.

Note 6: JBVNL has the right to request the bidders to furnish the required documents/ clarifications before opening of price bid.

6. Basis of Bid Evaluation and Comparison

6.1. Bidder has to quote for the complete scope of work under the package as stated in this specification. Bid for part of the package will not be accepted.

6.2. JBVNL will 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 bids are generally in order.

6.3. (a) Arithmetical errors will be rectified on the following basis:-

If there is a discrepancy between the quoted lump-sum price and the total bid value obtained by multiplying individual item-wise unit price with their respective quantity, the unit price of individual item shall prevail and lump-sum price i.e., total bid value shall stand modified accordingly and the bid will be evaluated on the basis of so arrived modified lump-sum price. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of the errors as above, his Bid will be rejected and the amount of earnest money will be forfeited. The work will be awarded on the basis of modified lump-sum price but not on the basis of quoted price.

(b) The Bidder should ensure that the prices furnished in various price schedules are consistent with each other. In case of any inconsistency in the price furnished in the specified price schedules to be identified in Bid Form for this purpose, JBVNL shall be entitled to consider the highest price for the individual item for the purpose of evaluation and for the

purpose of award of the Contract / payment for the item, use the lowest of the prices in these schedules.

- 6.4. The quantities of various items covered under the package as furnished in the specification is only provisional. For evaluation purposes, the total prices quoted for complete work will be considered. The Bidder shall include in the total cost of his tender, the cost of supply and erection & Civil work of whole of the plant, equipments & materials including all types of taxes, duties, freight & insurance, etc. except State or local taxes like entry tax / octroi. Since the quantities of items as set out in various schedules would depend upon identification of route, the contractor shall be responsible to execute such final quantities of the items limited to tendered quantity. Upward deviation, if any, will be done after approval of Chief Engineer (Projects) and they shall be paid for such actual quantities based on the unit rates incorporated in the contract. For this purpose, unit rates for each items as required in the Bid Proposal sheets are also to be quoted.

6.5. Basis of comparison

- 6.5.1. Bids shall be compared for award on total lump-sum prices for the entire scope of work under the package and adding capitalization cost of losses of the power transformers. (Capitalization cost of losses will be evaluated as specified in specifications of Power Transformer of Volume-II (Technical Specifications) of the tender).
- 6.5.2. Rebates, if any, offered by any bidder shall be considered in bid evaluation. However conditional discounts/ rebates, if any, offered by the bidder shall not be taken into consideration for evaluating. It shall, however, be considered in case of award.

7. Work Schedule & Time for Completion of the Project

- 7.1. The completion period of the total turnkey project shall be eighteen (18) months from the effective date. Effective date is the date from which the delivery period shall be counted which will be 15 days after the date of LOA.
- 7.2. The work shall be considered to be completed only after due certification by the JBVNL's Engineer-in-charge under whom the work is being carried out.
- 7.3. Strict adherence to the time schedule for performing the works specified in the tender specifications shall be the essence of the contract.
- 7.4. JBVNL reserves the right to request for a change in the work schedule during pre award discussions with the successful Bidder.
- 7.5. The Contractor shall submit a Bar Chart/ PERT Network to the GM,RAPDRP,JBVNL within 15 (fifteen) days from the date of LOA for approval, with details such as a) supply of major material in each Unit and b) erection schedule for respective Unit along with mile stones and timeline to complete the project in given timelines.
- 7.6. The PERT Network/ Bar Chart shall consist of adequate number of activities covering various key phases of the work such as design, procurement, manufacturing, shipment and field erection, testing & commissioning activities. This PERT network shall also indicate the interface facilities to be provided by JBVNL and dates by which such facilities are needed. Finalization of the PERT Network/Bar Charts will be precondition to release of any initial advance payment to the contractor. During the performance of the contract, if in the opinion

of the JBVNL's Engineer-in-charge, proper progress is not being maintained; suitable changes will be made in the contractor's operations to ensure proper progress without any cost implication to JBVNL. The interface facilities to be provided by JBVNL in accordance with the agreed PERT network/ Bar Chart shall also be reviewed while reviewing the progress of the contractor.

- 7.7. The contractor should plan the "supply and erection" under each 'Unit' of work in such a way that the assets created get quickly converted into 'Useful section'

An indicative bar chart/ PERT Network for each 'Unit' is shown below for guidance of the contractor.

Time Line	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter (1 Year)	5 th Quarter	6 th Quarter (1.5 Years)
Supply (Cumulative at the end of each Quarter)	5%	30%	60%	90%	100%	
Erection (Cumulative at the end of each Quarter)		20%	40%	60%	80%	100%

- 7.8. Based on the above-agreed PERT Network/Bar chart, weekly/fortnightly progress report shall be submitted by the contractor as directed by the JBVNL's Engineer-in-charge.
- 7.9. Subsequent to the finalization of the PERT network/ Bar Chart, the contractor shall make available to the JBVNL's Engineer-in-charge a detailed program in line with the agreed PERT network/ Bar Chart. Such program shall be reviewed, updated and submitted to the JBVNL's Engineer-in-charge once every two months thereafter.
- 7.10. The above bar chart/ program shall be compatible with the JBVNL's IT environment and furnished to the JBVNL on such media as desired by the JBVNL. The details shall be furnished on CD as well.

8. Liquidated Damages for Delay in Completion of Projects

- 8.1. If the contractor fails to perform its obligation under the scope of work within the specified period given in the letter of award/ contract documents, the contractor shall pay to JBVNL as liquidated damages and not as penalty, a sum of half percent (0.5%) of the contract price for each calendar week of delay or part thereof. However, the amount of liquidated damages for the Contract shall be limited to a maximum of ten percent (10%) of the total contract price. For the purpose of LD computation due to delay in work, the contract price shall be taken as total contract price of the project.
- 8.2. Equipment and materials shall be deemed to have been delivered only when all of its components, parts, operating manuals, drawings have are also delivered. If certain components are not delivered in time, the equipments and materials will be considered as delayed until such time, the missing parts are also delivered.
- 8.3. Liquidated damages for not meeting performance during the guarantee period as detailed in technical specifications shall be assessed and recovered from the contractor. Such liquidated damages shall be without any limitations whatsoever and shall be in addition to the damages, if any, payable under any other clause of conditions of contract. Such liquidated damages shall be recoverable against the performance guarantee to be submitted by the contractor under 'Performance Guarantee' clause.

8.4. Penalty for deficiency in Services

8.4.1. In case the contractor misses any milestones against any given activity/activities, as committed in the PERT finalized at time of signing of agreement, a onetime Penalty shall be levied at the rate of 0.1% of the value of that activity per week. However if the contractor completes the overall work in a given time schedule the penalty levied shall be refunded.

8.4.2. In case of any deficiencies in services including deployment of required strength of resources as mentioned in clause 2.1.10, causing adverse impact on the progress of the project, JBVNL reserves the right to impose the penalty up to Rs. 1,00,000/- (Rs. One Lakh) per month per person. In case the deficiency in services persists, the JBVNL reserves the right to cancel the order in full or in part and blacklist the contractor.

9. Price

The prices shall remain "FIRM" for all equipments and materials except cost of Transformers, Cables and conductors. The prices for each item as per price schedule should be furnished along with the tender.

Bidders should furnish ex-works price for Transformers, Cables and Conductors separately only for the purpose of computation of Price Adjustment.

While quoting the Ex-works price, due credit under CENVAT scheme, as per relevant rules and regulations prescribed by the Government of India, wherever applicable, has to be taken into account by the Bidder.

In the case where equipment and materials have been listed under the schedule of items of foreign origin (to be imported), the responsibility of obtaining an import license, following procedures and payment of import duties and taxes will rest with the Contractor. The contractor should build these import taxes (net of tax benefits, if any) as the cost of the contract i.e. contract value.

The format to be filled for giving price components along with the taxes has been provided in Schedules.

9.1. General

9.1.1. The price for execution of the entire works covered under the scope of this Specification shall be quoted by the Bidder in the manner specified in the BOQ. The Ex-work price component, less advance will be subject to price adjustment only for equipment/materials/item of work specifically stated under clause 9.2 below (for which the Bidder shall quote a base price), based on separate formulae as per price adjustment provisions given herein.

9.1.2. Prices for Ex-work price component for all other equipments/items except specified at clause 9.2 below, and charge for inland freight & insurance etc. shall be FIRM and no price adjustment shall be applicable for these components for the entire duration of the contract.

9.1.3. No price adjustment shall be applicable on the portion of the Contract Price paid to the Contractor as advance payment.

9.2. Methodology for price adjustment

9.2.1. Conductor

The price adjustment of the Ex-works price components, less advance, of Conductor shall be as follows:-

$$d_{EC} = EC [0.80 \times (A_1 - A_0)/A_0 + 0.05 \times (L_1 - L_0)/L_0]$$

Where,

d_{EC} = Price adjustment amount payable on Ex-work price of Conductor, shipment-wise (if it works out negative, that would mean the amount to be recovered by JBVNL from the Contractor).

EC = Ex- work price for Conductor, shipment wise, less advance.

A = Published prices for EC grade aluminum ingots, as published by CACMAI/ National recognized published index acceptable to JBVNL.

L = All India consumer price index for industrial workers as published by Labour Bureau, Shimla (Govt. of India)

Fixed portion of the ex- work price component shall be 0.15. This shall not be subject to any adjustment.

9.2.2. Distribution Transformer/ Station transformer/ Power Transformer

For Cu Wound Transformer:

$$P_1 = P_0 \times \{0.15 + 0.23 \times (C_1/C_0) + 0.26 \times (ES_1/ ES_0) + 0.08 \times (IS_1/ IS_0) + 0.05 \times (IM_1/ IM_0) + 0.11 \times (TB_1/ TB_0) + 0.12 \times (L_1/ L_0)\} - P_0$$

For Al Wound Transformer

$$P_1 = P_0 \times \{0.13 + 0.17 \times (Al_1/Al_0) + 0.33 \times (ES_1/ ES_0) + 0.09 \times (IS_1/ IS_0) + 0.05 \times (IM_1/ IM_0) + 0.11 \times (TB_1/ TB_0) + 0.12 \times (L_1/ L_0)\} - P_0$$

Where,

P_1 = Price adjustment amount shipment wise (if it works out negative, that would mean the amount to be recovered by JBVNL from the Contractor)

P_0 = Ex-work price component of Distribution Transformer less advance. C, ES, IS, IM & L are the price indices for materials and labour as below:

C = Price of Copper Wire Bars, in Rupees per MT, as published by IEEMA

Al = Price of EC grade aluminum rods (Properzi rods), in Rupees per MT, as published by IEEMA.

ES = Price of Electrical Steel Sheets: C&F Price of Electrical Steel sheets in Rupees per MT, as published by IEEMA

IS (Iron & Steel) = Wholesale Price Index Number for ' Iron & Steel ' (Base 1993-94 =100), as published by IEEMA.

IM (Insulating Materials) = Price of Insulating materials, as published by IEEMA

TB = Price of Transformer Oil Base Stock (TOBS) in Rs. /Ltr., as published by IEEMA

L = All India average consumer price index number, for Industrial Workers (base 1982 = 100) as, published by Labour Bureau, Shimla (Govt. of India)

9.2.3. Cables

$$P_1 = P_0 \times \{0.85 + 0.15 \times (A_1/A_0)\} - P_0 + (M_1 - M_0)$$

Where,

P_1 = Price Adjustment amount per kilometer of cable (if it works out negative, would mean the amount to be recovered by JBVNL from the Contractor).

P_0 = Ex- works price per km of cable, less advance

A = Price index for PVC / XLPE as published by IEEMA

$M_1 - M_0$ = Change in metal component of the ex- work price of particular type & size of cable.

M = Weight in MT of metal per km of Cable x Published price index of metals per MT

The Bidder has to specify in his bid metal component per km for each type and size of cable.

- 9.2.4. The total adjustment for Transformer, Conductors and cables shall be subject to a ceiling of (\pm) 10% of Ex-works price.
- 9.2.5. (i) Subscription '0' refers to indices as on thirty (30) days prior to the date of opening of bids (referred to as base date indices)
(ii) Subscription '1' refers to indices as on 60 days prior to the date of shipment.
- 9.2.6. (a) For the purpose of Price Adjustment on ex-works price components of the equipment, the date of shipment for Goods shall mean schedule date of shipment or actual date of shipment, whichever is earlier. Scheduled date of shipment will be ex-works date of dispatch, governed by the accepted PERT Network/Bar Chart.
(b) No price increase shall be allowed beyond the original delivery unless specially stated in the Time Extension Letter, if any, issued by the JBVNL. The JBVNL will, however, be entitled to any decrease in the Contract Price which may be caused due to lower price adjustment amount in case of delivery of Goods beyond the original delivery / erection dates. Therefore, in case of delivery of Goods beyond the original delivery, the liability of JBVNL shall be limited to the lower of the price adjustment amount which may work out either on schedule date or actual date of dispatch of Goods.
- 9.2.7. In case IEEMA does not publish any of the price indices, as mentioned above, the Bidder shall indicate any nationally recognized published index for respective items and the source of the same shall be furnished in the Bid.
- 9.2.8. In case of non-publication of applicable indices for price adjustment purposes, the published indices prevailing immediately prior to the particular date shall be applicable.
- 9.2.9. If the price adjustment amount works out to positive, the same is payable to the Contractor by the JBVNL and if works out to be negative, the same is to be recovered by the JBVNL from the Contractor.
- 9.2.10. The Contractor shall promptly submit the price adjustment invoices for the supplies made, positively within three (3) months from the date of shipment whether it is positive or negative.
- 9.2.11. Bids shall conform to the price adjustment provisions detailed above, bids specifying prices for items on variable basis run the risk of rejection. A bid submitted on a fixed price basis will not be rejected but the price adjustment will be treated as zero.

10. Earnest Money

- 10.1. The bidders must deposit Earnest Money of Rs. 6,16,000/- (Rupees Six Lac Sixteen Thousand Only) along with the tender.
- 10.2. The Earnest Money should be deposited in the form of account Payee Bank Draft drawn in favour of the Account Officer, JBVNL payable at Ranchi or an irrevocable Bank Guarantee of equivalent amount issued by any Nationalized Bank of India/ Scheduled Bank in the form specified in the tender document.

- 10.3. Cheques/ fixed deposit receipts shall not acceptable towards deposit of Earnest Money. Tenders accompanied with above (cheques or fixed deposit receipt) on account of Earnest Money will be considered as without Earnest Money.
- 10.4. This Earnest Money Deposit (EMD) is required to protect the JBVNL against the risk of Bidder's conduct which would warrant the EMD forfeiture under the conditions detailed in the specification. This EMD shall be made payable to the JBVNL without any condition whatsoever.
- 10.5. The Bidder furnishing the bank guarantee against the Earnest Money as part of its bid for the amount as specified above shall ensure that the same is valid for a period of 8 (Eight) (240 Days) calendar months from the date of opening of the Technical and Commercial Part of tenders.
- 10.6. The EMD shall be furnished in a separate sealed cover and shall accompany the tender/bid. Original DD of cost of Bid Document and EMD in form Bank Guarantee to be deposited by the bidder to Account Officer, JBVNL before opening of the Technical Bid.
- 10.7. Any bid/tender not accompanied by Earnest Money will be rejected as non-responsive.
- 10.8. No Earnest Money will be accepted after opening of tender.
- 10.9. The successful Bidder shall have to submit the Performance Bank Guarantee (PBG) and sign the contract agreement within 15 days of issuance of LOI failing which the LOA shall be cancelled following the forfeiture of the EMD.
- 10.10. The EMD may also be forfeited if Bidder withdraws the bid during the period of bid validity.
- 10.11. EMD of the all Bidders, including the successful bidder, shall be refunded on signing of the Contract Agreement by the successful Bidder.

11. Contract Performance Guarantee & Performance Guarantee

The Successful Bidder shall furnish to the JBVNL a Contract Performance Guarantee (CPG) and Performance Guarantee (PG) against the contract as per the terms prescribed below.

- 11.1. The Successful Bidder, to whom the work is awarded, shall be required to furnish a Contract Performance Guarantee from a Nationalized Bank/ Scheduled Bank in the approved format of JBVNL as a Contract Performance Security. The guarantee amount shall be equal to ten percent (10%) of the contract value. Alternatively, successful Bidder can deposit the Bank Guarantee of amount equivalent to 5% (Five percent) of total contract value after receipt of Letter of Intent (LoI) and before execution of the agreement. In such case, the balance 5% (Five percent) of total contract value will be deducted from running account bills of the contractor. The amount of CPG so deducted shall be refunded after successful completion of the work and taking over of the project and submission of Performance Guarantee.
- 11.2. The Contract Performance Guarantee (CPG) shall be valid for entire contract period i.e. a period of 18 months from the date of LOA with a claim period of one year and shall be extended from time to time till the actual date of successful completion of testing and commissioning of works under the scope of contract and its taking over by the employer. After work is fully completed, the contractor shall furnish Performance Guarantee (PG) of the amount of 5% (Five percent) of the value of the order (supply and erection plus civil work). The Bank Guarantee of 5% submitted against Contract performance Guarantee (CPG) may be

- accepted towards Performance Guarantee by extending validity and claim period. However in case some supply items have guarantee period more than that of project, the Bank Guarantee of corresponding cost and validity is required to be submitted and the Performance Guarantee (PG) would be released only after receipt of such Bank Guarantee.
- 11.3. The successful Bidder shall have to submit the Performance Bank Guarantee (PBG) and sign the contract agreement within 15 days of issuance of LOI. If there is delay beyond the specified period in submission of Contract Performance Bank Guarantee, 15 days notice will be given after which JBVNL may order cancellation of LOA and forfeiture of EMD/Bid Guarantee as detailed under Earnest Money clause.
- 11.4. The Performance Bank Guarantee shall become acceptable to JBVNL only after verification by a competent authority/ officials of JBVNL.
- 11.5. The Performance Bank Guarantee shall guarantee the faithful performance of the contract in accordance with the terms and conditions as specified in the tender specifications. The performance bank guarantee shall cover the following guarantee also to the JBVNL:
- a) Successful and satisfactory operation of the equipment furnished and erected under the contract, as per the tender specifications.
 - b) The equipment provided and installed by the Contractor is free from all defects in design, material and workmanship. The Contractor shall, upon written notice from JBVNL, fully remedy free of expense to JBVNL such defects as developed under the normal use of the said equipment within the period of guarantee specified in the tender specifications.
- 11.6. To ensure satisfactory performance of all the equipments supplied and works to be covered under the contract, the contract performance bank guarantee shall cover the following guarantee also to the JBVNL:
- "The contractor shall warrant successful and satisfactory operation of the power sub-stations, distribution sub-stations, lines and allied works with all equipments, materials and works constructed as per the scope of contract, under the condition and for the service specified. He shall further warrant the power sub-stations, Distribution sub- stations, lines and allied works with all equipments and works represented and specified against any and all defects in design, materials and workmanship and shall upon written notice by the JBVNL fully remedy, free of expense to JBVNL, such defects as developed under the normal use of the said equipment within one year of service from the date of taking over".
- 11.7. The contract performance bank guarantee is intended to secure the performance of the entire contract. However, it is not to be construed limiting the damages under performance guarantee clause and damages stipulated in other clauses in the tender document.
- 11.8. The performance bank guarantee will be returned to the Contractor without any interest at the end of contract period; or on due performance and execution of the order in all respects and on presentation of "No Demand Certificate", whichever is later.

12. Payment Terms

The payment to the contractor for the performance of the contract will be made by Account Officer, JBVNL, Ranchi as per the conditions specified hereunder. The final payment will be

made on completion of all works and on fulfillment by the contractor of all his liabilities under the contract. The Bidder is required to submit all bills in triplicate as per the actual work done. Proper item wise accounting for material supply, erection and asset created has to be maintained.

12.1. Supply Price Component

12.1.1. Advance Payment (Optional) ^[2]

Payment of 10% (Ten percent) of the contract value of ex-works component of supply portion as mobilization advance (interest bearing) shall be made after Contract Agreement on submission of an irrevocable Bank Guarantee issued by any Nationalized Bank/ Scheduled bank covering the advance amount which shall be kept valid till 180 days (six month) after successful completion of the work. The BG submitted by the contractor against 10% of ex works material supply cost as mobilization advance, shall be released after ensuring that the contractor has received 95% (10% mobilization advance + 85% interim progressive payment) of the ex works material supply. After receipt of payment up to 50% of the interim payment against the ex-works component of total supply portion, the contractor can avail the facility of re-submitting the revise Bank guarantee corresponding to balance mobilization advance if required. The original bank guarantee shall be released to the contractor on submission of new unconditional and irrecoverable bank guarantee for amount corresponding to balance mobilization advance and valid till valid till 180 days (six month) after successful completion of the work and accepted by competent authority of JBVNL.

^[2] **Note:** This payment is an optional payment. The Contractor has the option of taking the advance or otherwise.

In case, the Contractor opts for this advance payment, the same shall be paid to the contractor on fulfillment of conditions specified in 12.7.1.1. The monthly outstanding amount shall be worked out at the end of each calendar month against the progressive payment for the work done as per the clause no.12.1.2 below.

In case, the Contractor opts not to take advance as above, it would be mandatory for him to submit the documents listed at para 12.7.1.1 (2) and 12.7.1.1 (3) below within fifteen (15) days of issuance of notification of Letter of Award.

12.1.2. Progressive Payment

An interim progressive payment of 85% (Eighty Five percent)¹ of the **ex-works component of total supply portion** shall be made on the basis of actual supply made as per the bill duly verified by Engineer-in-Charge in the shape of admitted bills **after deduction of outstanding mobilization advance** on **pro-rata basis** and also on submission of documents indicated in clause no. 12.7.1.2 subject to the conditions laid down in under noted sub-para-(i) to (iii):-

- i) Payment against para 12.1.2 shall be released progressively at the rate of 85% of the ex-works component in each supply invoice (against various units defined hereunder) till it reaches up to 50% of the interim payment against the ex-works component of total supply portion.

- ii) Thereafter payment against ex-works component of supply portion for a particular Unit becomes eligible upon completion of 40% erection work in that unit. However completion of 40% erection in a particular Unit does not qualify for payment of supply portion beyond 50% until the work also qualifies as a "Useful section".
- a) A 'Unit' is defined as combination of certain supply and erection schedules. The entire supply and erection schedules of the contract have been grouped into **twelve** units.
- b) A 'Useful Section' means that portion of the "Unit" which enhances the reliability of power supply or the capacity of distribution system or enables reduction in AT&C losses.
- c) Designed for this project, following 'Scope of Work' have been constituted:

	Item Details	Unit	Qty.
1	66/11 or 33/11 KV SS : New/Augmentation		
	Augmentation of Power Transformer:		
	Augmentation of 5MVA Power Transformer to 10MVA of 33KV PSS @ Simdega	No	1
2	11 kV Line : New Feeder/ Feeder Bifurcation		
	Augmentation of Conductor:-		
	Augmentation of Conductor of 11KV Simdega Feeder from Weasel to DOG to ACSR	km	4
	Augmentation of Conductor of 11KV Simdega Feeder from Weasel to Rabbit ACSR	km	5.4
3	New 11KV Line for proposed PSS & New DTRs		
	New 11KV Line for proposed New DTRs with Rabbit ACSR	km	8.552
4	Replacement/New of 11kV VCB:		
	Replacement of Existing 11kV VCB/OCB with 11kV Motorized VCB (Feeders;2)	Nos.	2
5	11 kV : Fixed Capacitor Bank		
	HT Fixed Capacitor Bank of 3.6 MVAR	No	0
6	Distribution Transformer: Capacity Augmentation/ New Transformer		
	Installation of New Distribution Transformer:		
	DT 25 KVA	Nos.	29
	DT 63 KVA	Nos.	14
	DT 100 KVA	Nos.	4
7	HVDS		
	LVDS is proposed to increase the length of HT Line by drawing new 11KV line using RABBIT ACSR for new DTRs for the network which will automatically results in the reduction of T & D losses and, increases the reliability and quality of power supply. Existing 11 kV - 16.03 km, LT -30.9 km. Existing HT: LT Ratio 0.52 Modified 11 kV-24.57 km (ext-16.03+New HT- 8.552 km 11 kv OH line, LT-28.562 km Modified HT: LT Ratio is 0.86	As per Proposal	

8	Consumer Metering		
	Meters which are not functioning properly due to sluggish in mechanism. Some of the meters are Jamed & not recording, Due to this there is no proper accounting of Energy. In order to achieve correct billing for the utilization made by the Consumers it is necessary to replace these existing Non Electronic/Electromechanical and Jamed single phase & 3 phase Energy Meters by accurate single phase & 3 phase Electronic Energy Meters of appropriate capacity. As the Energy Meters are provided deep inside of the Consumer premises, there is all possibility of meter Tampering which reduces billing Energy. In order to account this unaccounted energy it is proposed to shift the meters to the place which is assessable to Utility Staff.		
	Type of Installation	No. of Installations	
	Domestic	3924	
	Commercial	702	
	LT Industrial	27	
	HT Industrial		
	Agriculture	27	
	Others	9	
	Total	4689	
	Replacement of Consumer Meters With Box (Single phase)	Nos.	463
	Replacement of Consumer Meters With Box (Three phase)	Nos.	124
	Shifting of Service Mains	Nos.	196
9	R & M of Distribution Transformers		
	The Distribution Transformers in the network do not have effective Earthing, LT Wiring and do not possess Lightning Arrestors. Hence it is proposed to provide, new Earthing , LAs and Wiring materials to these DTR's to reduce the supply Interruption due to HT & LT fuse blowing. Wedge Connectors & Lugs are used to reduce Energy Loss due to contact resistance & perfect Earthing system to bring down the EARTH RESISTANCE.	200kVA-5Nos. 100kVA-0Nos.	25
10	R & M of existing 33KV PSS of Simdega Town:-		
	It is proposed for Renovation & modernisation of existing 1nos of PSS which need overhauling of power Transformers & replacement of existing 33KV & 11KV PROTECTION & SWITCHING EQUIPMENTS	No	1

The concept of scope of work and useful section for eligibility towards payment beyond 50% of ex works of material cost is elaborated as under:

d) Erection means installation of all the components mentioned in 'Unit'.

The payment shall be restricted up to 80% of interim payment.

iii) Further, payment for remaining 20% of interim payment for a particular unit shall be released on completion of 75% of total erection of that particular unit. The concept of 75% erection shall conform to as considered for 40% erection as explained above.

12.1.3. Balance Payment

The balance 5% of the **ex-works component of total supply portion** shall be paid on submission of the certificate by the employer representative that the balance material has been received and on submission of an unconditional and irrecoverable bank guarantee for full 5 % amount valid up to two months beyond completion of the work and its taking over

Erection Conditions

by the employer and shall be extended from time to time till the actual date of successful completion of testing and commissioning of works under the scope of contract and its taking over by the employer after which, same shall be released to the contractor. Bills shall be submitted for such payments only once in three months commencing from the date of receipt of first lot of materials/ items. The bank guarantee shall be furnished along with the first invoice of final payment.

The Sample calculation for payment towards supply (illustration purpose only) is given in following table:

Illustration: Payment against supply component							
Let the ex-works component of supply portion be 100 Crs							
S. No.	Description	With Advance				Without Advance	
		% Payment	Payment eligibility	Mobilization advance to be adjusted on Prorata basis	Actual Payment*	% Payment	Actual Payment*
a)	Advance Payment (Against bank guarantee of equivalent amount)	10%	10 Crs		10 Crs		0
b)	Progressive interim Payment	85%				95%	
i)	Up to 50% of interim payment against total Ex-works cost of supply		47.5 Crs (95% of 50 Crs)	5 Crs	47.5 Crs less prorata mobilization advance =42.5Cr (85% of 50 Crs)	95% of 50 Crs	47.5 Crs
ii)	Up to 80% of interim payment against total Ex-works cost of supply (after completion of 40% of erection work)		28.5 Crs (95% of 30 Crs)	3 Crs	28.5 Crs less prorata mobilization advance =25.5 Cr (85% of 50 Crs)	95% of 30 Crs	28.5 Crs
iii)	Up to 100% of interim payment against total Ex-works cost of supply (after completion of 75% of erection work)		19 Crs (95% of 20 Crs)	2 Crs	19 Crs less prorata mobilization advance =17 Crs (85% of 50 Crs)	95% of 20 Crs	19 Crs
c)	Balance Payment (Against bank guarantee of equivalent amount)	5%	5 Crs		5 Crs	5%	19 Crs
*Amount towards 5% CPG shall be deducted from running account bill on prorata basis in case bidder submits CPG of 5% instead of 10%.							

For Example:

In case the contractor submits a bill of Rs. 10 Crores against the supply of material

a. When a 10% mobilization advance has been taken by the contractor, an interim payment of the **ex-works component of supply portion** shall be made as under;

Deductions:

- | | | |
|----|----------------------------|-----------------|
| 1. | Mobilization advance @ 10% | : Rs 1.0 Crores |
| 2. | Retention of 5% | : Rs 0.5 Crores |
| | Total (1+2) | : Rs 1.5 Crores |

Eligible payment (Rs. 10.0 Crores - 1.50 Crores) =8.5 Crores (85% of 10 Crores)

b. When no mobilization advance has been taken by the contractor, an interim payment of the **ex-works component of supply portion** shall be made as under;

Deductions:

1. Retention of 05% : Rs 0.5 Crores

Eligible payment (Rs. 10.0 Crores – 0.5 Crores) =9.5 Crores (95% of 10 Crores)

Penalty (If any) shall be deducted from the eligible payment.

12.2. Inland Freight & Insurance Charges

Inland Freight & Insurance Charges (inclusive all applicable taxes and duties) shall be paid to the Contractor as per the unit rates indicated in the letters of Award, after receipt of materials/items at site and on presentation of the invoices along with supporting documents by the Contractor. However, these charges will be subject to a limitation that the aggregate of all invoices does not exceed the total amount indicated in the Letter of Award.

12.3. Erection Price Component (including civil works)

12.3.1. Advance Payment (Optional) ^[4]

i) Advance Payment (Optional): The advance of 10% (ten) of the total erection price shall be paid as mobilization advance on submission of documents indicated in 12.7.2.1. The BG submitted by the contractor against 10% of total erection cost as mobilization advance Payment, shall be released after ensuring that the contractor has received payment up to 90% (10% mobilization advance + 80% interim progressive payment) of the erection price component.

^[4] **Note:** This payment is an optional payment. The Contractor has the option of taking the advance or otherwise.

In case, the Contractor opts for this advance payment, the same shall be paid to the contractor on fulfillment of conditions specified in 12.7.2.1. The monthly outstanding amount shall be worked out at the end of each calendar month against the progressive payment for the work done as per **para 12.3.2** below.

12.3.2. Progressive Payment ^[5]

Interim progressive payment up to 80% (eighty percent) of the erection price component will be paid on progressive basis depending on the actual work done as detailed in para 12.1.2. Against each completed erection activity and as per the bill duly verified by Engineer-in-charge admitted by General Manager (R-APDRP) and **after deduction of outstanding mobilization advance** on **pro-rata basis**. The assets register is mandatorily to be submitted along with the bill for capitalization of assets.

^[5] **Note:** In case, the contractor opts not to take advance then this payment shall be 90% instead of 80%.

12.3.3. Balance Payment

The balance 10% (ten percent) of the erection price component shall be paid after successful completion of testing & commissioning of all the works under scope of tender and issuance of taking over certificate by Engineer-in-charge.

12.4. Commissioning, for the purpose of payments shall mean satisfactory completion of all supplies, erection, commissioning checks and successful completion of all site tests and continuous energisation of the equipment/materials at rated voltage as per the Contract and to the satisfaction/ approval of JBVNL.

12.5. Payment towards Taxes and Duties

Taxes and duties, applicable as per Indian Tax laws, in respect of direct transaction between JBVNL and the contractor and to be reimbursed by JBVNL as per the contract, will be reimbursed on receipt of materials and equipments in good condition against documentary evidence. All taxes and duties including Entry tax / octroi, will be reimbursed by JBVNL as per actual on production of documentary evidence.

12.6. Mode of Payment

12.6.1. Payments shall be made promptly by JBVNL after receipt of Contractor's invoice complete in all respects and supported by the requisite documents and fulfillment of stipulated conditions, if any. All the payments made during the contract shall be on account payment only.

12.6.2. In case the Contract is awarded to a joint venture, the Advance Bank Guarantees as well as Contract Performance Guarantees referred above shall be in the name of the Joint Venture covering all the partners of the Joint Venture and not in the name of the Lead Partner or any partner(s) of the Joint Venture alone.

12.7. Payment Process:

12.7.1. Supply Component of the contract

12.7.1.1. Advance Payment:

The contractor shall submit its detailed invoice for seeking advance payment in triplicate to the Engineer-In-Charge along with following documents.

1. Irrevocable Bank Guarantee
2. Contract Agreement between the JBVNL and the Contractor
3. Detailed PERT Network/Bar chart and its approval by JBVNL.

The Engineer-In-Charge shall verify the invoice and forward the same to General Manager (R-APDRP) for approval and onward submission to Account Officer, JBVNL, for payment

12.7.1.2. Progressive Payments:

The contractor shall submit its detailed invoices against progressive payment, in triplicate along with following documents,

- Evidence of dispatch (R/R or L/R)
- Packing list identifying contents of each shipment.
- Tax Invoice
- MRC/ MRCIC Certificate
- Insurance policy/certificate
- Manufacturer's/Contractor's guarantee certificate of Quality.
- Material Inspection Clearance Certificate (MICC) for dispatch issued by the JBVNL's authorized agency and the Contractor's factory inspection report.
- Test Certificate

- Bidder's bill, duly certified and verified by team of EEE (S), EEE (MRT) & AEE (Tech.) & duly counter signed by Engineer-in-Charge/ESE of concerned town, will be required for payment of erection bill through Measurement Book (MB) and regularization of utilised materials from the concern stores through devolution report.
- The Engineer-in-Charge will submit the bill duly counter signed to the General Manager, R-APDRP, JBVNL HQ for further needful.

12.7.1.3. Balance Payment:

The contractor shall submit its detailed invoices in triplicate along with requisite documents and irrevocable bank guarantee to Nodal Officer (R-APDRP). The duly certified and verified by team of EEE (S), EEE (MRT) & AEE (Tech.) & duly counter signed by Engineer-in-Charge/ESE of concerned town, will be required for payment of erection bill through Measurement Book (MB) and regularization of utilised materials from the concern stores. The Engineer-in-Charge will submit the bill duly counter signed to the General Manager, R-APDRP, JBVNL HQ for further needful. After examination by the General Manager (R-APDRP), it will be forwarded to Account Officer, JBVNL, Ranchi for payment after deduction / adjustment of the Mobilization Advance on pro-rata basis.

12.7.2. Erection Component of the contract:

12.7.2.1. Advance Payment:

The contractor shall submit its detailed invoice against advance payment in triplicate to the Nodal Officer (R-APDRP) along with following documents.

1. Contract Agreement between the JBVNL and the Contractor
2. Establishment of Contractor's site offices and certification by JBVNL's Engineer-in-charge that satisfactory mobilization for erection exists.
3. Submission of an unconditional & irrevocable Bank Guarantee in favour of Account Officer, JBVNL, Ranchi for the equivalent amount of advance and as per proforma attached.

The Nodal Officer (R-APDRP) shall verify the invoice and forward the same to GM,RAPDRP for approval and onward submission to Account Officer, JBVNL, Ranchi for payment.

Progressive Payment

- Bidder's bill, duly certified and verified by team of EEE (S), EEE (MRT) & AEE (Tech.) & duly counter signed by Engineer-in-Charge/ESE of concerned town, will be required for payment of erection bill through Measurement Book (MB) and regularization of utilised materials from the concern stores.
- The Engineer-in-Charge will submit the bill duly counter signed to the General Manager, R-APDRP, JBVNL HQ for further needful.

12.7.2.2. Balance Payment:

The contractor shall submit its detailed invoices in triplicate along with requisite documents and irrevocable bank guarantee to Nodal Officer (R-APDRP). The duly certified and verified by team of EEE (S), EEE (MRT) & AEE (Tech.) & duly counter

signed by Engineer-in-Charge/ESE of concerned town, will be required for payment of erection bill through Measurement Book (MB) and regularization of utilised materials from the concern stores. The Engineer-in-Charge will submit the bill duly counter signed to the General Manager, R-APDRP, JBVNL HQ for further needful. After examination by the General Manager (R-APDRP), it will be forwarded to Account Officer, JBVNL, Ranchi for payment after deduction / adjustment of the Mobilization Advance on pro-rata basis.

12.8. Type Test Charges

Only type-tested equipments shall be acceptable by JBVNL. In case the type test of any equipment will be required to be repeated as per instructions of JBVNL against already type tested equipments, then charges towards successful type test shall be paid by JBVNL as per actual. The contractor shall bear expenses in case the product fails the type test.

12.9. Insurance of supplied material and erection thereof

In addition to conditions specified in the tender specification in various other clauses following shall also apply.

12.9.1. All the equipments and materials being supplied by the Contractor shall be kept completely insured by the Contractor at his cost from the time of dispatch from the Contractor's/Sub vendor's works, up to the completion of erection and final checking, testing and commissioning, at site and taking over of the project by JBVNL. The Contractor has to submit proof of insurance of all equipment and materials along with the bills. The insurance value cannot be less than that of payment already made / proposed to be made to the Contractor.

12.9.2. Further, all the equipments and materials being supplied by the JBVNL (herein after to be referred as JBVNL supplied items) for the performance of the works shall be kept insured by the Contractor against any loss, damage, theft, pilferage, fire etc for the complete period of storage, erection and commissioning up to the time of taking over of the works by JBVNL. The insurance cost caused by the JBVNL supplied items, if any, shall be borne by the Contractor.

It will be the responsibility of the Contractor to lodge, pursue and settle all claims with the Insurance Company in case of any damage, loss, theft, pilferage or fire. The contractor shall replace the lost/damaged materials promptly irrespective of the settlement of claim by the underwriters and ensure that the work progress is as per agreed schedule. The losses, if any, in such replacement will have to be borne by the Contractor.

13. Reconciliation of Accounts

The Contractor shall prepare and submit every three months, a statement covering payments claimed and the payments received vis-à-vis the works executed, for reconciliation of accounts with JBVNL. The Contractor shall also prepare and submit a detailed account of JBVNL issued materials received and utilized by him for reconciliation purpose in a format to be discussed and finalized with JBVNL before the award of contract.

14. Validity of Tender/ Bids

- 14.1. The tenders/bids submitted shall remain open for acceptance by JBVNL for a period of 180 days from the date of submission of the tenders during which period the Bidder shall not withdraw his offer or amend, impair or derogate there from.
- 14.2. A bid valid for a shorter period will be rejected by JBVNL as non-responsive.
- 14.3. In exceptional circumstances JBVNL may solicit the Bidder's consent for extension of the validity period. The Bank Guarantee submitted against Earnest Money as bid security shall also be extended by the same period.
- 14.4. A Bidder granting the request will not be required or permitted to modify its bid.

15. Defect Liability

- 15.1. The contractor shall guarantee in respect of the complete power sub-stations, distribution sub-stations, lines and service connections including all plants, equipments and materials to be supplied by him and the works executed by him as following:
 - Complete power sub-stations, distribution sub-stations, lines and service connections including all equipments shall be free from any defect due to faulty design, defective materials and/or work man-ship.
 - The power sub-stations, distribution sub-stations, lines and service connections including all equipments shall operate satisfactorily and the performance and efficiency of the equipments shall not be less than the respective guaranteed particulars.
 - The efficiency, temperature rise, transformation losses and other performance data furnished for the equipment.
- 15.2. The contractor shall warrant that the equipments will be new, unused and in accordance with the contract documents and free from defects in material and work man-ship for a defect liability period of twenty four (24) calendar months commencing immediately from the date of completion of project. The contractor's liability shall be limited to the replacement of any defective parts in the equipment of his own manufacture or those of his sub contractors, under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at the site and are not in meantime essential in the commercial use of the equipment. Such replaced/defective parts shall be returned to the contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by the Engineer-in-charge, when the equipment is under the supervision of the contractor's Supervising Engineer.
- 15.3. In the event of any emergency where, in the judgment of the Engineer-in-charge, delay would cause serious loss or damages, repairs or adjustment may be made by the Engineer-in-charge or a third party chosen by the Engineer-in-charge without advance notice to the Contractor and the cost of such works shall be paid by the Contractor. In the event such action is taken by the Engineer-in-charge, the Contractor will be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve the contractor of his liabilities under the terms and conditions of the contract.
- 15.4. If it becomes necessary for the Contractor to replace or renew any defective portions of the works, the provision of this clause shall apply to portion of the works so replaced or renewed

until the expiry of twenty four (24) months from the date of such replacement or renewal. If any defects are not remedied within a reasonable time, the Engineer-in-charge may proceed to do the work at the Contractor's risk and cost, but without prejudice to any other rights which JBVNL may have against the contractor in respect of such defects.

- 15.5. The repaired or new parts will be furnished and erected free of cost by the Contractor. If any repair is carried out on his behalf at the site, the Contractor shall bear the cost of such repairs.
- 15.6. The cost of any special or general overhaul rendered necessary during the maintenance period due to defects in the equipment or defective work carried out by the Contractor shall be borne by the contractor.
- 15.7. The acceptance of the equipments, power sub-stations, distribution sub-stations, lines and service connections including all equipments and associated lines by the Engineer-in-charge shall in no way relieve the Contractor of his obligations under this clause.
- 15.8. In case of those defective parts which are not repairable at site but are essential for commercial operation of the equipment, the contractor and the Engineer-in-charge shall mutually agree to a programme of replacement or renewal which will minimize interruption to the maximum extent, in the operation of the equipment.
- 15.9. At the end of the Guarantee period, the Contractor's liability ceases except for latent defects. For latent defects, the contractor's liability as mentioned in above clauses shall remain till the end of 5 years from the date of completion of Guarantee period.
In respect of goods supplied by sub contractor's to the contractor, where a longer guarantee (more than 24 months) is provided by such sub contractor, JBVNL shall be entitled to the benefit of such longer guarantees.
- 15.10. The provisions contained in this clause will be restricted to proper use of the equipments as per prudent/ industrial practices.

16. Taxes, Permits and Licenses

- 16.1. The contractor shall be liable and pay all non-Indian taxes, duties, levies, lawfully assessed against JBVNL or the Contractor in pursuance of the Contract. In addition, the Contractor shall be responsible for payment of all Indian duties, levies and taxes lawfully assessed against the Contractor for his personal income and property only. This clause will be read in conjunction with other relevant clause of the tender specifications.
- 16.2. JBVNL shall be deducting applicable Direct & Indirect taxes, e.g. Tax Deducted Source under Income Tax Act, 1961; Works Contract Tax under state VAT Act etc. from the payment to Contractor. The JBVNL shall provide appropriate certificates for the same, if required by Contractor.
- 16.3. The Contractor shall abide by all the prevailing labour laws applicable in India e.g. EPF, ESI etc. The appropriate license, certificates, clearance etc. should be provided by the Contractor to JBVNL. Further, the Contractor should periodically submit to JBVNL, compliance certificates along with challans and details of deposition of taxes to relevant Government Authorities.

17. Replacement of Defective Parts and Materials

- 17.1. If during the performance of the contract, the JBVNL shall decide and inform in writing to the Contractor that the Contractor has supplied & installed any material any equipment or part of the equipment/material unsound and imperfect or has furnished any equipment inferior to the quality specified, the contractor on receiving details of such defects or deficiencies shall at his own expense, within 7 (Seven) days of his receiving the notice, or otherwise, within such time as may be reasonably necessary for making it good, proceed to alter, reconstruct or remove such works and furnish fresh equipment/materials up to the standards of the specifications. In case, the contractor fails to do so, the Engineer-in-charge may on giving the contractor seven (7) days notice in writing of his intentions to do so, proceed to remove the portion of the works so complained of and at the cost of the Contractor, perform all such work or furnish all such equipment/material provided that nothing in this clause shall be deemed to deprive JBVNL of or affect any right under the Contract which JBVNL may otherwise have in respect of defects and deficiencies. The amount so incurred by JBVNL on above whatsoever, will be deducted from the Contractor's subsequent bill/ performance guarantee, as applicable.
- 17.2. The Contractor's full and extreme liability under this clause shall be satisfied by the payment to JBVNL of the extra cost, of such replacement procured including erection as provided for in the contract, such extra cost being the ascertained difference between the price paid by JBVNL for such replacements and the Contract price by portion for such defective equipment/materials/work and repayment of any sum paid by JBVNL to the Contractor in respect of such defective equipment/material. Should JBVNL not so replace the defective equipments/materials, the Contractor's extreme liability under this clause shall be limited to repayment of all sums paid by JBVNL under the contract for such defective equipment/materials.

18. Import License and Foreign Exchange

No foreign exchange or import license will be provided to the Contractor in connection with this contract.

19. Contractor's Documents, Drawings and Instructions Manual

The Contractor shall be responsible for developing detailed drawing for power sub-stations, distribution sub-stations, lines and service connections including all equipments & materials to the requirement as indicated. The Contractor may adopt drawings as already approved by JBVNL.

20. Mistakes in Drawings

The Contractor shall be responsible for and shall pay for any alterations of the work due to any discrepancies, errors or omissions in the drawings or other particulars supplied by him whether such drawings or particulars have been approved by JBVNL or not.

If any dimensions figured upon a drawing or a plan differ from those obtained by scaling the drawing or plan, the dimensions as figured upon the original drawing of plant shall be taken as correct.

21. Materials and Workmanship

All materials used shall be selected from the best available for the purpose, considering strength, durability and best available engineering practice. Liberal factors of safety shall be used throughout the design and especially in the design of all parts subject to alternating stressed or shocks.

All the works shall be performed and completed in thorough workmanship like manner and shall follow the best modern practice notwithstanding any omissions in the specifications. Casting shall be free from blowholes, flaws, cracks or other defects and shall be smooth, close grained and true forms and dimensions.

No plugged or filled-up holes or other defects will ordinarily be allowed. Such castings are liable to be rejected.

However, the Contractor may rectify minor castings defects by welding or other methods in accordance with the standard manufacturing practice provided such rectification does not affect the strength of the casting or impair the efficient working of the plant and prior approval of JBVNL is obtained for the same.

22. Completeness of Equipment

The equipment shall be complete in every respect with all mountings, fixtures and standard accessories, which are normally supplied even though not specifically detailed in the specification. The Contractor shall not be eligible for any extra payment in respect of such mountings, fittings, fixtures and accessories which are needed for safe operation of the equipment as required by applicable codes of the country though these might not have been included in the contract.

All similar components parts of similar equipments supplied shall be interchangeable with one another. The various equipments to be supplied under this contract shall be subject to JBVNL's Engineer-in-charge.

23. Inspection and Testing at Contractor's Premises

23.1. Level-1 Inspection

The following equipments/ materials shall be inspected by JBVNL at manufacturer/ supplier premises before its dispatch. A prior notice of 15 days from the inspection date(s) shall be required from the Contractor.

- a) Energy meter & CMRI
- b) Transformer, CT, PT
- c) Insulator (HV type)
- d) UG Cables & AB cables (HT and LT)
- e) Conductor
- f) VCB

- g) A.B. Switch/ Isolator
- h) RMU

If possible, JBVNL or its Authorized Agency may arrange for inspection of imported goods also, like FPI, etc.

23.2. Level-2 Inspection

The following equipments / materials shall be offered for inspection at manufacturer /supplier premises with prior notice of fifteen days. In case, the inspection is not conducted by JBVNL within stipulated time, the contractor shall have option to dispatch equipment / materials to site without further confirmation and associated Customer Hold Points (CHP) will be read as Test Certificates (TCS) for equipment acceptability. This condition will in no way absolve the responsibility of Contractor to provide equipment / materials as per the requirement of the contract. The dispatch document shall include test reports and other documents as stipulated in the contract.

- a) Pole
- b) HG Fuse / DO Fuse
- c) Distribution Box
- d) Lightning Arrestor
- e) Control and Relay panel
- f) Numeric Relays
- g) Battery charger
- h) Battery set

23.3. Level-3 Inspection

The following equipments / materials shall be supplied to site without pre-dispatch inspection by JBVNL. The equipment / materials shall be supplied as per technical specification and standard drawing / approved drawing. Such waiver of inspection shall in no way absolve the responsibility of contractor to provide equipment / material as per requirement of contract. The dispatch document shall include test reports and other documents as stipulated in the contract.

- a) Earthing materials
- b) G.I. Items
- c) M.S. fabricated items
- d) Danger Board / Sign Board
- e) Nuts & Bolts
- f) PVC spacers
- g) Preformed Jointing sleeves
- h) ABC accessories
- i) Guy & Shackle insulator
- j) Al. binding wire/ barbed wire
- k) Preformed insulator binding
- l) Lamp holder & switch (5A), Light fittings
- m) PVC pipe (all sizes)

JBVNL reserves the right to add / delete any item listed above in level-1, level-2 & level-3 inspections

- 23.4. During the course of manufacturing, JBVNL or its authorized representative shall have access to Contractor's supplier/ sub-supplier's works at all reasonable times for the purpose of witnessing the manufacturing, inspection & testing of all components' sub-assembly and assembly.
- 23.5. Before using the inspection call, such supplier shall ensure that all the materials for the lot to be inspected are ready in all respects. If at the time of visit of inspector the supplier fails to offer the material as per lot of the supply order or some of the tests are not conducted or any items/ equipment is found defective and would need reoffering at a later date thereby requiring additional visit of the inspector, the expenditure incurred by JBVNL towards the visit of the inspector shall be charged to the Contractor as per JBVNL rules and same shall be recovered from his bills.
- 23.6. All the materials furnished shall be of tested quality and subject to rigid inspection and testing as specified in the Technical Specification and international standard. No material shall be dispatched until all tests, analysis and shop inspection have been completed and certified copies of results of tests, analysis have been accepted and dispatch instruction issued by the GM,RAPDRP, JBVNL.
- 23.7. JBVNL reserves the right to outsource the pre-dispatch inspection of materials wholly or partly and also for waiver of inspection, if so needed.
- 23.8. Quality assurance shall be undertaken in the following areas of the project implementation as per norms:-
- Quality of material/equipment being supplied
 - Quality of works in the field.

24. Tests on Completion and Commissioning at Site

- 24.1. All tests on equipments at works shall be carried out before dispatch as per technical specifications & standards like I.E.C., B.I.S.S. etc
- 24.2. All pre-commissioning test of all equipments and plants shall be carried out at site as per the specifications & standard, I.E.C. specifications, Indian Electricity rule, I.E.C. specifications etc.
- 24.3. Inspection and tests at site during erection and on completion of erection shall be carried out under the supervision of Contractor's engineer in presence of the JBVNL's representative on any plant and/or equipments to satisfy the guaranteed performance of each equipment and the whole installation. Immediately after the plant & equipment is ready for commissioning, it shall be put on trial load for two weeks to furnish proof of satisfactory working and performance.
- 24.4. The Contractor shall give to the JBVNL's Engineer-in-charge 21 days notice of the date after which he will be ready to make the Tests on completion (herein after called as the Tests). Unless otherwise agreed, the tests shall take place within 14 days after the said date on such day or days as the JBVNL's Engineer-in-charge shall notify to the Contractor.
- 24.5. If the tests are unduly delayed by the Contractor, the JBVNL's Engineer-in-charge may by notice require the contractor to make the tests within 21 days after the receipt of such notice.

The Contractor shall make the tests on such days within that period as the Contractor may fix and of which he shall give notice to the JBVNL's Engineer-in-charge.

If the Contractor fails to make the Tests within 21 days, the JBVNL's Engineer-in-charge may himself proceed with the tests. All tests so made by the JBVNL's Engineer-in-charge shall be at the risk and cost of the Contractor and the cost there of shall be deducted from the contract price. The tests shall then be deemed to have been made in the presence of the Contractor and result of the tests shall be accepted as accurate.

- 24.6. If the works or any section fails to pass the tests, the JBVNL's Engineer-in-charge or the Contractor may require such tests to be repeated on the same terms and conditions. All costs to which JBVNL may be put by the repetition of the tests under this sub clause or under other relevant clause shall be deducted from the contract price.
- 24.7. If the JBVNL's Engineer-in-Charge and the Contractor disagree on the interpretation of the test results, each shall give a statement of his views to the other within 14 days after such disagreement arises. The statement shall be accompanied by such evidence.
- 24.8. If the works or any section fails to pass the tests on the repetition there of, the JBVNL's Engineer-in-Charge, after due consultation with JBVNL's competent authority and the contractor, shall be entitled to
- (a) Order one further repetition of the tests; Or
 - (b) Reject the works or section in which event the JBVNL shall have the same remedies against the Contractor as are provided under sub clause regarding failure to remedy defects; Or
 - (c) Issue a Taking Over certificate, if the JBVNL so wishes, notwithstanding the works are not complete. The Contract price shall then be reduced by such amount as may be agreed by the JBVNL and the Contractor or, failing agreement, as may be determined by arbitration.
- 24.9. As soon as the works or any section thereof has passed the tests, the JBVNL's Engineer-in-charge shall issue a certificate to the Contractor and JBVNL to that effect.

25. Taking Over

- 25.1. The work shall be taken over by JBVNL when they have been completed in accordance with the contract terms. The taking over process will be said to be complete, when the contractor submits all the following things, along with the invoice:
- As-built Drawings
 - Joint Measurement Sheet
 - HOTO (Handing Over Taking Over) Report
 - Material Account
 - Report clearly indicating completion of any outstanding/ remedial work that needs to be carried out.
 - Any other Mandatory certificate
- 25.2. When all performance tests and acceptance tests have been successfully carried out for the power sub-stations and lines for satisfactory performance for the period of 2 weeks from the date of commissioning, the concerned JBVNL's Engineer-in-charge shall issue an acceptance

certificate and take over the complete project. Issue of taking over certificate shall not absolve the Contractor of their/his/her contractual obligation of completing the work of power sub-stations & associated lines for guaranteed operation & performance of the same as per the specifications.

- 25.3. If the works are divided into different supply sections of JBVNL, the Contractor may apply for separate taking over certificates for each such supply section.

26. Rejection of Defective Plant and Equipment

If the completed plant and equipment or any portion thereof, before it is taken over under clause "Taking Over" be found defective or fails to fulfill the requirements of the Contract, JBVNL's Engineer-in-charge shall give the Contractor notice setting forth particulars of such defects of failure and the Contractor shall forthwith make good the defective plant/equipment or alter the same to comply with the requirements of the contract at his cost. Should he fail to do so within a reasonable time, JBVNL may reject and replace at the cost of the Contractor the whole or any portion of the plant/equipment as the case may be, which is defective or fails to fulfill the requirements of the contract. Such replacement shall be carried out by JBVNL within a reasonable time and at a reasonable price during the period and where reasonably possible to the same specifications and under competitive condition. The Contractor's full and extreme liability under this clause shall be satisfied by the payment to JBVNL of the original contract price including charges for erection and/or supervision of erection plus the difference, if any, between the replacement price of the equipment including charges and/or supervision of erection and the original contract price including charges for erection and/or supervision of erection in respect of such defective plant/equipment. Should JBVNL not so replace the rejected plant/equipment within a reasonable time the Contractor's full and extreme liability under this clause will be satisfied by the repayment of all money paid by JBVNL to him in respect of such plant.

In the event of such rejection, JBVNL shall have the right to operate any or all equipments as soon as and as long as it is in operating conditions, to enable him to obtain necessary replacement except that this shall not be construed to permit operation of any equipment which may become damaged by such operation before any required alterations or replacement has been made by the Contractor at such times as directed and in such manner as will cause the minimum interruption in the use of the equipment by JBVNL. Nothing in this clause shall be deemed to deprive JBVNL or effect any right under the Contract which it may otherwise have in respect of such defects or deficiencies or in any way relieve, the Contractor of his obligations under the Contract.

27. Engineer-In-Charge's Decision

In respect of all matters which are left to the decision of the JBVNL, including the granting or withholding of certificates, the JBVNL's Engineer-in-Charge shall, if so required, to do so by the Contractor, give in writing, decision thereon. The Engineer-in-charge shall be the electrical Executive engineer or any officer designated by JBVNL.

28. Certificate not to affect the Rights of JBVNL or the Contractor

No certificate of the JBVNL's Engineer nor any account of payment made by JBVNL, nor any extension of time for the execution of the works by the Contractor, shall affect or prejudice the right of JBVNL against the Contractor or relieve the Contractor of his obligations for the due performance of the contract or be interpreted as approval of the work done or of the materials supplied and no certificate shall create liability on JBVNL to pay for alterations, amendments, variations or additional work, not ordered in writing by JBVNL or discharge the liability of the Contractor for payment of damages, losses etc. nor shall any such certificate nor the acceptance by him of any sum paid on account or otherwise, affect or prejudice the rights of JBVNL against the Contractor.

29. Negligence

- 29.1. If the Contractor shall not be executing the works in accordance with the contract or neglect to execute the works with due diligence and expertise or shall refuse or neglect to comply with any reasonable order given to him in by the JBVNL's Engineer-in-charge in connection with works or shall contravene the provisions of the contract, JBVNL may give notice in writing to the contractor to make good the failure, neglect or contravention complained of.
- 29.2. If the contractor shall fail to comply with the notice within 30 (thirty) days from the date of serving the notice, then and in such case JBVNL shall be at liberty to employ other workmen and forthwith execute such part of the works as the Contractor may have neglected to do or if JBVNL shall think fit, without prejudice to any other right he may have under the Contract to take the work wholly or in part out of the Contractor's hands and re-contract with any other person or persons to complete the works or any part thereof and in that event JBVNL shall have free use of all Contractor's equipment that may have been at the time on the site in connection with the works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same.
- 29.3. JBVNL shall not be liable to make any further payments to the Contractor until the works referred to above have been completed.
- 29.4. When the works are so complete, JBVNL shall be entitled to recover from the contractor the extra costs, if any, of completing the works as per the contract and for this purpose, JBVNL shall be entitled to retain and apply any balance which may otherwise be due on the contract by him to the Contractor, or such part thereof, as may be necessary, to the payment of the cost of executing the said part of the Works or of completing the Works as the case may be. If there is no such extra cost, JBVNL shall pay any balance due to the Contractor.
- 29.5. If the cost of completing the works or executing a part there of as aforesaid shall exceed the balance due to the Contractor, the Contractor shall pay such excess.
- 29.6. If JBVNL is unable to obtain payment of extra costs from the Contractor, JBVNL shall be entitled (and is hereby authorized by the Contractor) to sell any of the Contractor's equipment owned by the Contractor or by any firm or corporation in which the Contractor has a controlling interest and apply the net proceeds in or towards the satisfaction of such extra cost; but when all expenses, cost and charges incurred in the completion of the work are paid by the Contractor, all such materials, tools, tackles, construction plant or other things not

used up in the completion of the work and remaining unsold shall be removed by the Contractor.

- 29.7. In addition, such action by JBVNL as aforesaid shall not relieve the contractor of his liability to pay the liquidated damages for delay in completion of Works as specified. Such payment of excess amount shall be independent of the liquidated damages for delay which the contractor shall have to pay if the completion of works is delayed.
- 29.8. Such action by JBVNL as aforesaid shall not entitle the Contractor to reduce the value of the Contract Performance Bank Guarantee nor the time thereof. The Contract Performance Bank Guarantee shall be valid for the full value and for the full period of the Contract including guarantee period.
- 29.9. Any action by JBVNL as aforesaid shall be without prejudice to JBVNL's right to terminate the contract as described in 'Termination' Clause.

30. Power to vary or omit Work

No alterations, under the contract shall be made by the Contractor except as directed in writing by JBVNL, but JBVNL shall have full power subject to the provision hereinafter contained from time to time during the execution of the contract by notice in writing, to instruct the Contractor to make such variation without prejudice to the contract and the Contractor shall carry out such variations and be bound by the same conditions as far as applicable, as though the same variation occurred in the contract.

If any suggested variations would, in the opinion of the Contractor, if carried out, prevent him from fulfilling any of his obligations, or guarantees under the contract, he shall notify JBVNL thereof in writing and the JBVNL shall decide forthwith whether or not the same shall be carried out and if JBVNL confirms his instructions, the Contractor's obligations and guarantees shall be modified to such an extent as may be justified.

31. Termination of Contract

31.1. Termination for Default:

JBVNL may, without prejudice to any other remedy for breach of Contract, by notice of default of 30 days sent to the Contractor, terminate the Contract in whole or in part:

- a) If the Contractor fails to deliver any or all of the Goods or Related Services within the period specified in the Contract, or within any extension thereof granted by JBVNL; or
- b) If the Contractor assigns the contract or subcontracts the whole or part of the works without JBVNL's written consent, or
- c) If the Contractor dissolves or becomes bankrupt or insolvent, has a receiving order made against him or compounds with creditors, or carries on business under a receiver, trustee or manager for the benefit for his creditors or goes into liquidation or is wound up except for reconstruction purposes subject to Clauses 31.7, 31.8 & 31.9
- d) If the Contractor, in the judgment of JBVNL has engaged in corrupt, fraudulent, collusive, or coercive practices, in competing for or in executing the Contract; or
- e) Any representation made by the Bidder in the proposal is found to be false or misleading; or

- f) If the Contractor commits any breach of the Contract and fails to remedy or rectify the same within the period of two weeks (or such longer period as JBVNL in its absolute discretion decide) provided in a notice in this behalf from JBVNL.

31.2. Termination due to Death:

If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies then unless JBVNL is satisfied that the legal representatives of the individual Contractor or the proprietor of the property concern and in case of partnership the surviving partners are capable of carrying out and completing the contract, JBVNL shall be entitled to terminate the contract as to its incomplete part by issuing notice of 30 days to such legal representatives or surviving partners, as the case may be, to that effect.

31.3. Termination due to Change in Policy:

At any time during the term of the contract, JBVNL may terminate the contract due to change in policies of Government of India and/or the State Government or for any other reason, by issuing notice of 30 days to the Contractor to that effect.

31.4. Termination of Contract on JBVNL's Initiative:

JBVNL reserves the right to terminate the contract either in part or in full due to the reasons other than those mentioned under the Clauses 31.1, 31.2 and 31.3 above. JBVNL shall, in such an event give 30 days notice in writing to the contractor of its decision to do so.

31.5. Consequences of Termination:

Upon Termination of the Contract, the Contractor shall:

- a) Prepare and present a detailed exit plan within 15 calendar days of termination notice receipt to JBVNL ("Exit Plan").
- b) JBVNL will review the Exit plan. If approved, the Contractor shall start working on the same immediately. If the plan is rejected, the Contractor shall prepare an alternate plan within 5 calendar days. If the second plan is also rejected, JBVNL will provide a plan for the Contractor and it should be adhered to in totality.
- c) The Exit Plan should cover at least the following, (along with relevant parts covered in 'Taking Over' clause):-
 - Execute all documentation, drawing, manuals, etc. that may be necessary to effectively transfer the ownership and title, including OEM warranties in respect of all equipment;
 - Handover all related documentation and other Configurable Items, if any in his possession;
 - Handover a list of all the materials and equipments installed under the contract
- d) The Contractor and JBVNL will sign a completion certificate at the end of successful completion (all points tracked to closure) of the Exit Plan.

- 31.6. In case of termination of contract as provided for in Clause 31.4, the Contractor on receipt of such notice shall discontinue the work on the date and to the extent specified in the notice, make all reasonable efforts to obtain conciliation of all orders and contracts to the extent those are related to the work terminated and terms satisfactory to JBVNL, stop all further

sub-contracting or purchasing activity related to the work terminated, and assist JBVNL in maintenance, protection and disposition of the works under the contract by JBVNL.

31.7. Further provisions relating to termination due to Insolvency:

The executors, successors or other representatives in law of the state of the Contractor or any such receiver, liquidator, or any person in whom the contract may become vested, shall forthwith give notice thereof in writing to JBVNL and shall for one month, during which it shall take all responsible steps to prevent stoppage of the work, have the option of carrying out the contract subject to his or their providing the value of works for the time being remaining unexecuted, provided however that nothing above said shall be deemed to relieve the Contractor or its successors of its / their obligations under any circumstances.

31.7.1. In the event of stoppage of the works, the period of the option under this clause shall be fourteen (14) days only provided that, should the above option be not exercised, the contract may be terminated by JBVNL by notice in writing to the Contractor, and the same power and provisions reserved to JBVNL in clause "Negligence" in the event of taking the work out of the Contractor's hands shall immediately become operative.

31.7.2. In such event, termination will be without compensation to the Contractor provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to JBVNL.

31.8. Further provisions relating to termination due to Death:

JBVNL right to terminate the contract as to its incomplete part shall be without being in anyway liable to payment of any compensation to the estate of deceased Contractor and/or to the serving partners of the Contractor's firm on account of the termination of the Contract.

31.8.1. The decision of JBVNL that the legal representatives of the deceased Contractor or serving partners of the Contractor's firm cannot carry out and complete the contract shall be final, and binding on the parties.

31.8.2. In the event of such termination, JBVNL shall not hold the estate of the deceased contractor and/or the serving partners of the estate of the deceased contractor and/or the surviving partners of the contractor's firm liable to damages for not completing the contract.

Other provisions

31.9. As soon as possible after the termination, JBVNL's Authorized Representative shall certify the value of works and all sums then due to the contractor, if any, as at the date of termination in accordance with the payment terms.

31.10. In respect of such materials that are complete and ready for transportation within thirty (30) day after notice, JBVNL may or may not agree to accept delivery thereof at the contract price and terms.

31.11. In the event JBVNL terminates the Contract in whole or in part as provided in Clause 31.1, JBVNL may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Contractor shall be liable to JBVNL for any additional costs for such same or similar Goods or Related Services. However, the Contractor shall continue performance of the Contract to the extent not terminated.

- 31.12. In the event of termination of contract as provided in Clause 31.1, JBVNL shall have the absolute right to en-cash & appropriate all sums pledged by the Contractor to JBVNL for the due fulfillment of the contract.
- 31.13. In the event of termination of contract, all cost, damages or expenses which JBVNL might have paid for which under the contract the Contractor is liable, may be deducted by JBVNL from any money due or becoming due to the Contractor under the contract, or may be recovered by action of law or otherwise from the Contractor. In the event of recovery to the necessary extent becoming impossible owing to insufficiency of the performance guarantee and amount withheld, the balance due to JBVNL, may be recovered in any way, JBVNL may deem fit.
- 31.14. In addition, in the event of termination of contract as provided in Clause 31.1, liquidated damages will be paid by the Contractor as per the provisions of this contract for which, the contract performance guarantee will remain valid for full value and full period after termination.

32. Deduction from Contract Price

Deductions from the contract prices shall be made for the items, which are executed less than the quantity specified in tender/specifications/order.

33. Subletting of Contract

- 33.1. The Contractor shall not without the consent in writing of JBVNL sublet any substantial part of the contract other than for minor details, or for any part of the works of which the makers are named in the contract, provided that any such, content shall not relieve the Contractor from any obligation, duty or responsibility under the contract.
- 33.2. The Contractor shall not sub-contract whole of the works.
- 33.3. The Contractor shall be responsible for the acts, defaults and neglects of any sub contractor, his agents or employees as fully as if they were the acts, defaults or neglects of the contractor, his agents or employees.

34. Patent Rights

The Contractor shall be fully responsible for and wholly indemnify JBVNL for all cost, damages and losses caused to it for infringement of patent Rights of any other manufacturer in respect of materials, equipment, design etc manufactured or supplied by the Contractor.

35. Agreement

The successful Bidder upon notice from JBVNL shall have to execute a Contract Agreement with the JBVNL in the form appended with this specification within 30 days of issue of LOA. The PERT Chart indicating various activities and timelines for their completion as approved by the JBVNL shall form part of the agreement. The agreement shall be submitted in 6 copies of which three will be on pie paper affixed with special adhesive stamp worth Rs. 500.00 (Five Hundred Rupees) only or as applicable at the time of execution duly embossed by the treasury office. These documents/agreements shall have to be prepared and produced by the Bidder free of cost. The Agreement shall be executed after submission of the Contract Performance Bank Guarantee acceptable to JBVNL within 30 days of LOA. If the Bidder fails to submit the Contract Performance Bank Guarantee and execute Agreement within the stipulated period, 15 days notice will be given after which the LOA may be cancelled.

36. Reports and Photographs

During the various stages of work progress, the Contractor shall at its own cost submit computer generated periodic progress reports/ MIS reports as may be reasonably required by the Engineer-in-Charge/ JBVNL's Authorized Representative/ Project Management Agency with such materials as charts, networks, photographs containing dates, test certificates etc. Such reports shall be in format and size as may be required by Engineer-in-Charge/ JBVNL's Authorized Representative/ Project Management Agency and shall be submitted in at least three copies, or as required. Report for assets capitalization shall also be submitted in appropriate format to be decided in consent with the Engineer-in-Charge/ JBVNL's Authorized Representative/ Project Management Agency.

Such reports must also include:

- a) Weekly Progress Report (every Monday evening)
- b) Monthly Progress Report (no later than 7th day of each month), covering:
 - i) Activity wise progress vis-à-vis targets.
 - ii) Current status of manpower, balance/in-hand material.
 - iii) Problems encountered (administrative, technical, financial, etc.)
 - iv) Next month's work plan along with plan for other consumables - ordered/in-transit material and manpower.

37. Closure of Projects

Closure proposal will be prepared by the Contractor after completion of the project or as per decision of JBVNL for closure of the project. The details of supplied materials & works executed as per the contract will be prepared by the Contractor and reconciled with the Engineer-in-Charge/JBVNL's Authorised Representative to their satisfaction.

38. Left over Balance Materials

During closure, the unused left over materials will be taken back by the Contractor at their cost on permission by JBVNL. In case the material is taken back by the contractor against which the payment has already been made, the amount shall be deducted from the pending bills / final bills / performance guarantee. It will be at the discretion of JBVNL to take over unused / leftover material in part or in full.

39. Route Identification

The 33 & 11 kV network route identification will be carried out by the Contractor in consultation with field officers. A detailed route diagram will be prepared by the Contractor indicating the existing infrastructure, proposed infrastructure under State Plan. The Contractor will segregate the physical & financial part of the assets proposed to be created under State Plan which is required for separate accountability of works. As detailed above, diagrams indicating HT/LT network, distribution transformer, connection to be energized will be prepared by the Contractor. The drawings/ reports, duly recommended by the Engineer-in-charge/ JBVNL's Authorized Representative/ Project Management Agency will be got

approved from the Superintending Engineer of the concerned circle or the officer so authorized by JBVNL for this purpose, prior to execution of the work within the scope of LOA. Any deviation, beyond the prescribed scope of work will be got approved from the Chief Engineer (Projects).

In course of execution, any deviation within the scope, will be done in consent with the Engineer-in-charge/ JBVNL's Authorized Representative/ Project Management Agency for which revised drawing will be got approved.

40. Correspondence

- 40.1. Neither any Correspondence shall be entertained with the Bidders after the opening of the Price part of the tender, nor any letters which imply any change in the equipment or in the price thereof shall be entertained after opening of the price part of the tender. Any approach from the Bidder's representative or its agents trying to influence the decision of the tender officially or otherwise shall render the tender liable to be summarily rejected. Queries which are raised from this office regarding materials offered or works should be replied in triplicate within fifteen (15) days of the date of dispatch of such letters from this office failing which tenders will be finalized on the basis of information received along with the tenders only. Hence, it will be in the interest of the Bidders to give complete technical particulars and to strictly adhere to the time schedule in sending replies.
- 40.2. Regarding tenders, all correspondence shall be addressed to General Manager (R-APDRP), JHARKHAND BIJLI VITRAN NIGAM LIMITED, Engineer Building, HEC, Dhurwa, Ranchi-834004.

41. Compliance with Act

All equipments and materials supplied and all works carried out shall comply in all respects with the requirements of the Electricity Act 2003, Indian Electricity Rules, 1956, CEA Safety Regulations, 2010 or any revision thereof which may be issued during the currency of the order, specifications and with the requirements of any other regulations and Act in India to which JBVNL may be subjected as well as JBVNL's general specifications and practices.

42. Completeness of the Tender

Any fittings and accessories which might not have been in the specifications but which are usual or necessary in the power sub-stations, distribution sub-stations, lines and service connections including all equipments of similar nature are to be provided without extra cost. All equipments, power sub-stations and lines etc. must be complete in all respects whether mentioned in the specification or not.

43. Insurance

- 43.1. Insurance for all works, equipments and materials covered under this tender specification shall be arranged by the Contractor.
- 43.2. All the equipments and materials to be supplied by the Contractor shall be kept completely insured by the Contractor from the time of dispatch from the manufacturer's works up to the

completion of erection, testing, commissioning at site and taking over of the sub-stations & lines by JBVNL in accordance with the contract.

- 43.3. All the materials, equipments, installations etc. covered under the scope of this tender specifications shall be kept insured by the Contractor against any loss, damage, pilferage, theft, fire etc. from the point of unloading up to the time of taking over by the JBVNL including handling, transportation, storage, erection, testing & commissioning etc. Any premium payable to the insurance company shall be paid by the Contractor. However, details of insurance policy shall be submitted separately. The insurance value in any case shall not be less than that of payment already made or proposed to be made to the Contractor.
- 43.4. It will be the responsibility of the Contractor to lodge, pursue and settle all claims with the insurance company in case of any damage, loss theft, pilferage, fire etc. and JBVNL will be kept informed about it. The Contractor shall be responsible for the replacement of losses, damages etc. in the execution of the contract to any equipment/materials either supplied by it or received by it from JBVNL irrespective of the time of receipt of amount on insurance claim. Any loss on this shall be to the Contractor's account. The Contractor shall be totally responsible with regard to maintenance of all insurance cover.
- 43.5. Insurance of the employees & workers of the Contractor, wherever required, shall be arranged by the Contractor as per the applicable labour laws.

44. Jurisdiction of Court

All disputes/claims/counter claims for and/or against JBVNL arising out of agreement contracts/orders between the JBVNL and the firms shall be subject to the exclusive jurisdiction of Courts at Ranchi and no other Court or Arbitrator.

45. Force Majeure

- 45.1. Force majeure is here in defined as any cause which is beyond the control of the Contractor or JBVNL as the case may be, which they could not foresee or with a reasonable amount of diligence could not have been foreseen and which substantially affects the performance of the contract, such as:
- Natural phenomena, including but not limited to floods, droughts, earthquakes and epidemics.
 - Acts of any Government, domestic or foreign, including but not limited to war, declared or undeclared, act of foreign enemies, priorities, guaranties, embargoes.
 - Ionizing radiation or contamination by radio-activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosives or other hazardous properties of any explosive nuclear assembly or nuclear component thereof.
 - Rebellion, revolution, insurrection, military or usurped power and civil war,
 - Riot, commotion or disorder, except where solely restricted to the employees of the contractor.

45.2. The contractor or JBVNL shall not be liable for delays in performing his obligations resulting from any force majeure cause as referred to and/or defined above.

The date of completion will, subject to hereinafter provided, be extended by a reasonable time even though such cause may occur after the Contractor's performance of obligation has been delayed due to other causes.

45.3. If either party considers that any circumstances of force majeure have occurred which may affect the performance of his obligations, the concerned party shall promptly notify the other party and the JBVNL's Authorized Representative thereof.

46. Safety Precautions

The Contractor shall observe all applicable regulations regarding safety on the site. Unless otherwise agreed upon, the Contractor shall from the commencement of work on site until taking over provide:

- Fencing, lighting, guarding and watching of the works.
- Temporary road ways, footways, guards and fences which may be necessary for the accommodation and protection of Owners and Occupiers of adjacent property, Public and others.

47. Compliance with Statutes, Regulations and Laws

47.1. The Contractor shall, in all matters arising in the performance of the contract, comply in all respects with, give all notices and pay all fees required by the provisions of any National or State statute, ordinance or other law or any regulation or bye-law of any duly constituted authority.

47.2. The contractor shall comply with the laws of the country of manufacture of the plant, and the laws of the country where the plant is to be erected so far as such laws concern the manufacture, erection and operation of the works.

48. Obtaining Clearances, Consents and Licenses

The contractor shall be responsible for obtaining all necessary clearances, consents, licenses and permissions. These shall be obtained in time to ensure that the construction and commissioning programme can be achieved within the time for completion. The Authorized representative of JBVNL will extend necessary support in this regards.

49. Liability Due to Labour Wages, Laws, etc.

In case, JBVNL becomes liable to pay any wages or dues to the labour or any Government Agency under any of the provisions of the Minimum Wages Act, Workmen Compensation Act, Contract Labour Regulation Abolition Act or any other law due to act of omission and commission of the Contractor, JBVNL shall recover the same from the Contractor's bills or performance guarantee.

50. Manner of Execution

50.1. All equipments to be supplied shall be manufactured/ constructed and all works to be done shall be executed in the manner set out in the contract.

Where the manner of manufacture and erection is not set out in the contract the work shall be executed using the degree of skill, diligence and care which would be reasonably and ordinarily expected from a skilled and experienced National contractor or equipment manufacturer engaged in the same type of undertaking under the same or similar circumstances.

In either case, all plants to be supplied shall be manufactured/ constructed and all works to be done shall be executed to the satisfaction of the Engineer-in-Charge.

- 50.2. JBVNL's existing redundant infrastructure wherever available will be used in the project after proper accounting.

51. Frustration of Contract

- 51.1. In the event of frustration of the contract because of supervening impossibility in item of section 56 of the Indian Contract Act, the parties shall be absolved of their responsibility to perform the balance portion of the contract, subject to provisions contained in sub clause 51.3 below.
- 51.2. In the event of non-availability or suspension of funds for any reasons whatsoever (except for reason of willful or flagrant breach by JBVNL and/or Contractor), the works under the contract shall be suspended. Also, if JBVNL is unable to make Satisfactory alternative arrangements for financing to the Contractor in accordance with the terms of Contract within (3) three months of the event, the parties here to shall be relieved from carrying out further obligation under the contract treating it as frustration of the contract.
- 51.3. In the event referred under clauses 51.1 & 51.2 above, the parties shall mutually discuss to arrive at reasonable settlement on all issues including amount due to either party for the work already done on "quantum merit" basis which shall be determined by mutual agreement between the parties.

52. Documents establishing Good Eligibility and Conformity

- 52.1. The Bidders are requested to furnish a compliance statement along with the technical bid. This statement shall indicate degree of compliance (Fully compliant, partially compliant or non compliant) to all clauses and sub clauses of both Technical specifications and General Terms and Conditions and a cross reference with relevant details to their bid shall also be given by the Bidder.

53. Contractor to Inform Himself Fully

The Contractor shall be deemed to have carefully examined the general conditions, supplemental conditions, specifications, schedules and drawings and also to have satisfied himself as in the nature and character of the work to be executed and, where necessary of the site conditions and other relevant matters and details. Any information thus obtained from JBVNL or JBVNL's Authorized Representative shall not, in any way relieve the Contractor from his responsibility for supplying the equipment and executing the work in terms of the specification including all details and incidental works and supply of all accessories or apparatus which might not have been specifically mentioned in the specification or drawings, but otherwise necessary for ensuring complete erection and safe and efficient commercial working of the equipment.

54. Design Requirement

54.1. All equipment and materials shall be designed and manufactured in conformity with Standards stated hereinafter. All provisions of Indian electricity Rules concerned, I.S.S. specifications JBVNL's standard practices have to be complied with.

54.2. WIND LOAD

Structure and outdoor equipment shall be designed to withstand a wind load as set forth in the latest revision of IS: 875.

54.3. EARTHQUAKE

The equipment shall be designed to resist lateral inertial forces developed in each corresponding mass centre due to seismic ground motion. The structural parts and their anchorages shall be designed to withstand earthquake range of the Zone.

54.4. SAFETY FEATURES

The Contractor shall provide adequate guards for the equipment to prevent all sorts of hazard and to safeguard personnel and property.

All Safety devices shall be in accordance with the applicability of the Government regulations and statutory requirements in force.

54.5. MEASUREMENT SYSTEM

All instrument/recorders etc. will be calibrated in the metric (C.G.S./MKS) system of units. In drawings or specifications wherever both Metric and British units are indicated; the Contractor shall indicate the equipment dimensions in both the units. Location marking of the equipments shall be in C.G.S. (Metric) units.

54.6. ACCESSIBILITY

Special attention shall be given to the design, arrangement and assembly of all equipment to ensure ease of maintenance and renewal of parts.

54.7. STANDARD EQUIPMENT & MATERIALS AND ALTERNATES

- i) Equipment, material and erection supervision and other services shall be complete in all respects and in strict accordance with the specification, except that alternative proposals may be submitted where stipulated provisions depart from the Contractor's standards, provided that the substitutions are approved as equivalent by the JBVNL and the reasons therefore are stated by the Contractor in his proposal together with the amount of money to be added or deducted in the proposal as a result of such substitutions.
- ii) Any request for substitution after the contract is awarded shall be accompanied with the difference in price and such substitution does not cause any addition to the contract price.
- iii) All work shall comply in all respects with the requirements of the latest edition of the relevant Indian Standards, International Electro Technical Commission (IEC) Standards, specifications or any other equivalent better Standards and JBVNL's Standard practices.

- iv) Where conflicts occur between any of the Laws, rules, regulations standards, and so forth, specified herein, the more stringent requirements shall govern the work.

55. Excise Duty and Sales Tax

- 55.1. The tenderers shall quote their price structures mentioning all taxes & duties, freight & insurance separately except State and local taxes as per bid proposal. State Entry Tax or local taxes e.g. Entry tax/ octroi etc shall be borne by the state / JBVNL.
- 55.2. Concessional Sales Tax declaration forms, as admissible, would be issued to the Contractor on request, for all items (as identified in the price schedule of the bid) to be supplied directly by the Contractor as well as for the items to be supplied by the Sub-suppliers as sale in transit.

56. Construction of the Contract

- 56.1. Notwithstanding anything stated elsewhere in the bid documents, the contract to be entered into will be treated as a divisible Supply and Erection Contract. Award shall be placed on the successful Bidder as follows:
- (i) First Contract: For supply of all equipment and materials.
 - (ii) Second Contract: For erection including civil works, testing and commissioning including performance testing in respect of all the equipment supplied under the "First Contract" and any other services specified in the Bid Documents.
 - (iii) Both these contract will contain interlinking cross fall breach clause specifying that breach of one contract will constitute breach of the other contract.
- 56.2. In case of divisible supply and erection contract, or where JBVNL hands over his equipment to the Contractor for executing, then the Contractor shall, at the time of taking delivery of the equipment/dispatch documents, be required to execute an Indemnity Bond in favour of JBVNL in the form acceptable to JBVNL for keeping the equipment in safe custody and to utilize the same exclusively for the purposes of the said Contract. Sample of proforma for the Indemnity Bond is enclosed in the tender specification.
- 56.3. The contract shall in all respect be construed and governed according to laws.
- 56.4. It is clearly understood that the total consideration for the contract (s) has been broken up into components for the convenience of payment of advance under the contract (s) and for the measurement of deviations or modifications under the contract (s).
- 56.5. The total contract price shall be the sum of the prices for the supply of all equipments as well as materials and the prices for all other services like inland transportations, insurance, installation, testing and commissioning etc. inclusive of all the duties and the taxes.
- 56.6. Bidders are required not to fabricate the contract price of supply and erection portion of the contract and should quote actual value.

57. Right of General Manager (R-APDRP)

- 57.1. The General Manager (R-APDRP) reserves the right to accept or reject part or whole of any or all of the tenders without assigning any reason.
- 57.2. The G.M. (R-APDRP) reserves the right to cancel whole or part of the awarded contract without assigning any reason of those firms which are found defaulters of delayed work.

58. Information required with the Proposal

The Bidders must indicate the name of the manufacturer, the type or model of each principal item of equipments and/or materials proposed to be supplied. The tender shall also contain drawings and descriptive materials, indicating general dimensions and the material from which the parts are manufactured and principles of operation.

- 58.1. The above information shall be provided by the Bidder in the form of separate sheets, drawing, catalogues etc. in triplicate.
- 58.2. Any tender not containing sufficient descriptive material to describe accurately the equipment and/or materials proposed may be treated as incomplete and hence may not be considered. Such descriptive materials and drawings submitted by the Bidder will be retained by JBVNL. Any major departure from these drawings and descriptive materials submitted will not be permitted during the execution of the contract without specific written permission of JBVNL.
- 58.3. Oral statements made by the Bidder at any time regarding quality, quantity or arrangement of the equipment and/or materials or any other matter will not be considered.
- 58.4. Standard catalogue and other documents may be used in the tender to provide additional information and data as deemed necessary by the Bidder.
- 58.5. The Bidder shall strictly adhere to the work schedule. It will develop and furnish a detailed schedule in the form of a master PERT network clearly identifying key phases in various areas of the work like designs, drawing approval, manufacture, testing at works and ex-works delivery of the equipment and materials as covered under this tender specifications based on the total time allowed for completion of complete work as specified in the specification.

59. Understanding and Clarifications

- 59.1. The Bidder is required to carefully examine the specifications and documents and fully inform itself of all conditions and matters which may in any way affect the performance of the contract or cost thereof. If any Bidder finds discrepancies or omissions in the specifications and documents or is in doubt as to the true meaning of any part, it shall at once request in writing for an interpretation/clarifications on or before the date as specified in tender document before pre-bid conference to JBVNL. JBVNL will make sincere efforts to address all such issues during pre-bid conference and provide necessary clarifications. All such interpretations and clarifications shall form part of the RFP documents and accompany the Bidder's proposal.
- 59.2. Verbal queries and subsequent information given by JBVNL or its representatives shall not in any way be binding on JBVNL.
- 59.3. JBVNL shall organize pre-bid meeting with the prospective Bidders for understanding and clarification of the RFP document. The purpose of the pre bid conference is to allow potential bidders to ask questions and request clarifications about scope of work for bringing clarifications & elimination of ambiguity about RFP document. It will be in the interest of the bidder to seek clarifications in writing on and before date of Receipt of queries for Pre-bid meeting as mentioned in RFP document. Based on the interaction during the pre-bid

conference, necessary modifications/ changes in the RFP document as deem fit will be carried out for providing clarity and addition/deletion of items for successful completion of the work.

60. Local Conditions

- 60.1. It will be imperative on each Bidder to fully inform itself of all local conditions and factors which shall have any effect on the performance of the contract or cost thereof. JBVNL shall not entertain any request for clarifications from Bidder regarding such local conditions.
- 60.2. It is understood and agreed that such factors have properly been investigated and considered while submitting the proposals. No claim for financial adjustments to any contract awarded under these specifications and documents will be entertained by JBVNL and no change in the time schedule of the contract or any financial adjustments arising thereof shall be permitted to the contractor.

61. Quantity

- 61.1. The requirement/quantity mentioned in the tender notice and general conditions is tentative and is subject to increase or decrease. No claim will be entertained for the decrease in quantity or elimination of items tendered. Any other work required for completion of the job and not mentioned in the tender specifications shall be done by the Contractor.
- The quantity of all equipment/materials given in the Price Schedule of the bidding documents is provisional. The variation in quantity shall be limited to fifty percent (50%) for the individual items and the total variation in all such items under the contract shall be limited to twenty percent (20%) of the contract price. For quantity variation of the individual items beyond fifty percent (50%), having impact of more than 20% of the contract price, item rates and erection rates shall be decided judiciously by a committee consisting of nominated officers of JBVNL. The Contractor shall be responsible for supply and execution of such work for successful completion of the project.
- 61.2. If any non schedule item is required due to field requirement during execution of work for successful completion of project which is not covered in Letter of Award, it may be decided judiciously by a committee consisting of nominated officers of JBVNL after proper rate analysis of similar work in special circumstances.

62. Qualification Criteria for selection of Sub-Contractor/Vendor

- 62.1. General:** If the Contractor propose any Sub-contractor/Vendor before award of works, such sub-contractor should fulfill the below mentioned criteria as on the date of bid opening and if proposed after award of works, then the Sub-Contractor should fulfill the criteria as on the date of proposal.
- For Sub-contractors/Vendor (manufacturers/Suppliers) of Transformers, Energy Meters, VCB, Conductors, Cables, Insulators, Lighting Arrestors, DO Fuse, AB Switch, HG Fuse, Distribution Box:
 - i) The firm should be registered with the statutory body for manufacturing of items covered in the Bidding/Contract Documents. (Copy of the Registration Certificate to be enclosed)

- ii) The firm should be in business for at least five years and its annual manufacturing capacity should be at least five times the ordered quantity. (Copies of the Documentary evidence to this effect to be furnished)
 - iii) The firm should have supplied similar equipments/item to Central/State Power utilities in last five years and which are in commercial operation for at least one (1) year & two (2) years for transformers & energy meter respectively. (evidence to be submitted)
 - iv) The firm should have valid type test certificates (as per relevant BIS) for similar products to be supplied of specified rating /higher rating duly issued by accredited, Government of India approved standard laboratory.
 - v) The firm should have testing laboratories equipped with all testing equipments/instruments along with calibration certificates from statutory/Regulatory body to carry out all the routine tests in house.
 - vi) The firm should have established Quality Control organization.
- For Sub-contractors (manufacturers/ Suppliers) of Poles, Hardware etc.:
 - i) The firm should be registered with the statutory body for manufacturing of items covered in the Bidding/Contract Documents. (Copy of the Registration Certificate to be enclosed)
 - ii) The firm should be in business for at least two years and its annual manufacturing capacity should be at least five times the ordered quantity. (Copies of the Documentary evidence to this effect to be furnished)
 - iii) The firm should have supplied similar equipments/item to Central/State Power utilities in last two years. (evidence to be submitted)
 - iv) The firm should have valid type test certificates (as per relevant BIS) for similar products to be supplied of specified rating /higher rating duly issued by accredited, Government of India approved standard laboratory.
 - v) The firm should have testing laboratories equipped with all testing equipments/instruments along with calibration certificates from statutory/Regulatory body to carry out all the routine tests in house.
 - vi) The firm should have established Quality Control organization.
- 62.2. For The contractor for obtaining vendor approval is required to submit documents as hereunder:
- a) 3 sets of drawings and GTP for approval
 - b) The type test report and approved drawings of plants/ material should confirm to technical specification given in the volume II: Technical Specifications. The type test certificate should be valid and should not be older than 3 years as on the date of bid opening. The contractor is required to present the original type test report for verification/ attestation, which may be taken back after verification.
 - c) The details of supplies made to power Utilities during previous years (as applicable in clause 62.1 above) with appropriate documentary evidence, so as to assess the performance of the vendor
 - d) Other documents as mentioned above in clause 62.1

62.3. A committee of JBVNL nominated officers shall be constituted for the purpose of vendor approval for this RFP. JBVNL reserves the right to reject any proposed Sub-contractors / Vendors, in case they do not meet the Qualification Criteria/Technical specifications as mentioned in RFP. Recommendation of field shall be reviewed by the committee for final approval by the MD, JBVNL.

63. Preparation of Tender

63.1. Before submission of the tender, the Bidders are requested to make themselves fully conversant with conditions of contract, site conditions, specifications, schedules, drawings and other relevant information so that no ambiguity may arise in these respects subsequent to the submission of the tender.

Quantity and schedule of items of work for civil, structural and architectural works required for successful completion of the project up to commissioning are to be assessed by the Bidder through site inspection and discussion with the JBVNL personnel.

63.2. Tenders must be submitted on the attached prescribed forms and/ or copies thereof. The schedule shall be filled in, item-wise in accordance with the instructions and notes supplementary thereof.

64. Schedules

64.1. The Bidder shall submit its tender strictly in accordance with the tender specifications and terms and conditions laid down in the tender documents including the schedule:

- i. The schedule of prices and delivery/erection schedule shall supplement his tender.
- ii. All information to be supplied by the Bidder to supplement his tender shall be furnished.
- iii. Deviation sheets for any deviations, made either in the provisions of the general conditions of the specifications shall be furnished
- iv. All other information asked for in the specification shall be furnished

64.2. Each Bidder must submit his tender in triplicate (hard and soft copy) together with the schedule duly filled up in ink or by typing in English, with the rate and amount in Indian Rupees (both in figures and words) of the prices and giving all the information and particulars asked for in the schedule. Each copy of the tender shall be complete in all respects.

64.3. By the act of submitting a tender for the work, a Bidder will be deemed to have satisfied himself by actual inspection of the site and locality of the work if so required, and that the rates quoted by him in the tender will be adequate to complete the work in all respects according to the specifications and other conditions and that it has taken into account all conditions and constraints that may be encountered during its progress whether or not specially provided in the tender document but necessary for the completion of this work to the entire satisfaction of JBVNL.

64.4. Canvassing in any form is strictly prohibited and Bidder found to have resorted to canvassing shall be liable to have its tender rejected summarily.

64.5. If the Bidder furnishes any wrong information in its tender to create circumstances for the acceptance of its tender, JBVNL reserves the right to reject such tender.

- 64.6. Not more than one tender for a work shall be submitted by one Bidder or one Firm of contractors or one incorporated company.
- 64.7. No member of the Joint Venture is eligible to quote separately or to associate with any other Joint Venture.
- 64.8. Tender documents, in which tender is submitted by a Bidder, shall become the property of JBVNL and JBVNL shall have no obligation to return the same to the Bidder.
- 64.9. JBVNL shall not be liable for any expense incurred by the Bidder in the preparation of tender whether his/her tender is accepted or not.

65. Qualification of Tenders

The conditions for participation and qualification of tenders shall be as per terms stipulated under this tender specification. The Bidders must furnish the proof of work experience presenting certified copies of letter of award with period and value of contract, completion certificate etc. The tenders of only prima facie qualified Bidders shall be considered.

66. Tendering

- 66.1. Tendered prices in the "schedule of prices" and where ever they appear in the Tender shall be written both in unit price and amount in case of any discrepancy between unit prices and amount, the unit price will govern. In any discrepancy between words and figures, words shall prevail. The prices shall be quoted in Indian Rupee.
- 66.2. In the "Schedule of Prices" and also wherever prices appear, no erasing and/ or over writing shall be made. Every correction shall be made by crossing the pen across the incorrect or un-required portion. Any correction shall bear the dated signature of the Bidder with official seal. No alteration or modification shall be made in the various schedules and enclosures, which form part of the contract. Any tender that is not accompanied by the date and information specified herein or that does not include rates for all the items, shall be considered incomplete and is liable for rejection.
- 66.3. The Bidder may state in the letter forwarding the tender any point it may wish but JBVNL reserves the right to reject the same or the tender itself if the same becomes a conditional tender thereby.
- 66.4. JBVNL reserves the right to award this contract on the basis of unit price of items to be supplied/ erected and also for a lump-sum price.
- 66.5. The Bidders, whose tender has been accepted and so notified, shall become the "Successful Bidder".

67. Award of Contract

The acceptance of a tender and awards of contract to one or more than one Bidder, if considered necessary, rests with JBVNL. It shall not be obligatory on the part of JBVNL to accept the lowest or otherwise, in whole or in part and to reject any or all the tenders received, without assigning any reason and no explanation can be demanded from it by any Bidder in respect thereto.

68. Alliances

The Bidder may arrange alliances with qualified partners and should furnish papers conforming alliances in the tenders. The Bidder should furnish the copy of agreement of association on stamp paper as detailed in these specifications.

SECTION-II: GENERAL TECHNICAL & ERECTION CONDITIONS

GENERAL TECHNICAL CONDITIONS

1.0 General Information

- 1.1 The material/ equipments covered in this specification shall be used for R-APDRP (Part-B) works in Simdega Town of Jharkhand.

2.0 Scope

- 2.1 The material/ equipment to be supplied on final destination at site basis as covered in this volume shall be designed, manufactured and tested as per the requirements specified. Final Destination shall mean the rail heads or depots or stores established by the Contract in the above mentioned area.
- 2.2 The materials/ equipments covered hereunder this package shall be supplied complete in all respects, including all components, fittings and accessories which are necessary or are usual for their efficient performance and satisfactory maintenance under the various operating and atmospheric conditions. Such parts shall be deemed to be within the scope of the Contract, whether specifically included or not in the specification or in the contract schedules. The contractor shall not be eligible for any extra charges for such fittings, etc.

The details of the materials/ equipment required for the project have been elaborated in the respective volumes of specification. The quantities of the same are mentioned in Bid Proposal Sheets (BPS).

3.0 Weights and Measures

All weights and measures shall be in System International (S.I.) units. All fasteners shall be of Metric size only.

4.0 General Technical Conditions

- 4.1 The following provisions shall supplement all the detailed technical specifications and requirements brought out in the accompanying Technical specification. The Bidder's proposal shall be based on the use of equipment and materials complying fully with the requirements, specified herein.

The Bidder shall furnish clause-by-clause commentary (with detailed technical data as required) on the Technical specifications demonstrating the goods substantial responsiveness to the specifications or deviation and exceptions to the provisions of the Technical Specification unless and until advised contrary to this in the bidding document.

4.2 Equipment performance Guarantee

- 4.2.1 The performance requirements of the items are detailed separately in this Specification. These guarantees shall supplement the general performance guarantee provisions covered under General Terms and Conditions of Contract in clause entitled 'Guarantee'.
- 4.2.2 Liquidated damages for not meeting specified performance should be assessed and recovered from the Contractor. Such liquidated damages shall be without any limitation whatsoever and shall be in addition to damages, if any, payable under any clause of conditions of contract.

4.3 Engineering Data

- 4.3.1 The furnishing of engineering data by the Contractor shall be in accordance with the appropriate Schedule appended to this document. The review of these data by the Owner will cover only general performance of the data to the specifications and drawings. This review by the owner may not indicate a thorough review of all dimensions, quantities and details of the equipment, materials any devices or items indicated or the accuracy of the information submitted. This review and/ or approval by the owner shall not be considered by the Contractor as limiting any of his responsibilities and liabilities for mistakes and deviation from the requirements, specified under these Specifications and documents.
- 4.3.2 All engineering data submitted by the contractor after-final process including review and approval by the owner shall form part of the contractor document and the entire works performed under these specifications shall be performed in strict conformity, unless otherwise expressly requested by the owner in writing.

4.4 Drawings

- 4.4.1 All drawings submitted by the contractor including those submitted at the time of bid, shall be in sufficient detail to indicate the type, size, arrangement dimensions, material description, Bill of Materials, weight of each component break up for packing and shipment, fixing arrangement required, the dimension required for installation and any other information specifically requested in the specifications.
- 4.4.2 Each drawing submitted by the Contractor shall be clearly marked with the name of the Purchaser, the unit designation, the specifications title, the specification number and the name of the Project. All titles, nothing, markings and in writing on the drawing shall be in English. All the dimensions should be to the scale on in metric units.
- 4.4.3 The drawings submitted by the Contractor shall be reviewed by the Owner as far as practicable within four (4) weeks and shall be modified by the Contractor if any modifications and/or corrections are required by the Owner in compliance with the specifications. The contractor shall incorporate such modifications and the corrections and submit the final drawings for approval. Any delays arising out of failure by the contractor to rectify the drawings in good time shall not alter in contract completion date.
- 4.4.4 The drawings submitted for approval to the Owner shall be in quadruplicate. One print of such drawings shall be returned to the Contractor by the Owner marked "approved/approved with corrections". The Contractor shall thereupon furnish the owner additional print as stipulated in Technical specification along with one reproducible in original of the drawings after incorporating all corrections.
- 4.4.5 Further, work by the contractor shall be strictly in accordance with these drawings and no deviation shall be permitted without the written approval of the JBVNL, if so required.
- 4.4.6 All manufacturing and fabrication work in connection with the equipment/material prior to the approval of the drawings shall be at the contractor's risk. The contractor may make any changes in the design, which are necessary to make the equipment conform to the provisions

and intent of the contract and such changes will again be subject to approval by the owner. Approval of contractor's drawing or work by the owner shall not relieve the contractor of any of his responsibilities and liabilities under the contract.

4.4.7 All rights of the design/drawing shall be strictly reserved with the owner only and any designs/drawings/data sheets submitted by the contractor from time to time shall become the property of the owner. Under no circumstances, the contractor shall be allowed to use/offer above designs/drawings/data sheets to any other authority without prior written permission of the owner. Any deviation to above is not acceptable and may be a cause of rejection of the bid.

4.4.8 Design Co-ordination

Wherever, the design is in the scope of contractor, the contractor shall be responsible for the selection and design of appropriate material/item to provide the best-coordinated performance of the entire system. The basic design components, sub-assemblies and assemblies shall be so done that it facilitates easy field assembly and maintenance.

4.5 Manufacturing Schedule

The contractor shall submit to the owner his manufacturing testing and delivery schedules of various items within thirty (30 days) from the date of the Letter of Award in accordance with the delivery requirements stipulated. Schedules shall also include the materials and items purchased from outside contractors, if any.

4.6 Reference Standards

4.6.1 The codes and/or standards referred to in specifications shall govern, in all cases wherever such references are made. In case of a conflict between such codes and/or standards and the specifications, latter shall govern. Such codes and/or standards referred to shall mean the latest revisions, amendments/changes adopted and published by the relevant agencies.

4.6.2 Other internationally acceptable standards, which ensure equivalent or better performance than those specified shall also accepted.

4.7 Design Improvements

4.7.1 The owner or the contractor may propose changes in the specifications of the equipment or quality thereof and if the parties agree upon any such changes, the specifications shall be modified accordingly.

4.7.2 If any such agreed upon change is such that it affects the price and schedule of completion, the parties shall agree in writings as to the extent of any change in the price and/or schedule of completion before the contractor proceeds with the changes. Following such agreement, the provision thereof, shall be deemed to have been attended accordingly.

4.8 Quality Assurance

4.8.1 To ensure that the equipment under the scope of this contract whether manufactured within the contractor's works or at his Sub-contractor's premises is in accordance with the specifications, the contractor shall adopt suitable quality assurance programme to control such activities at all points necessary.

4.8.2 Such programme shall be outlined by the contractor and shall be finally accepted by the owner after discussion before the awarded of contract. A quality assurance programme of the contractor shall generally cover but not limited to the following:-

- Organization structure for the management and implementation of the proposed quality assurance programme:
- Documentation control system;
- Qualification data for key personnel;
- The procedure for purchases of materials, parts components and selection of sub-contractor's services including vendor analysis, source inspection, incoming raw material inspection, verification of material purchases etc.
- System for shop manufacturing including process controls.
- Control of non-conforming items and system for corrective action;
- Control of calibration and testing equipments
- Inspection and test procedure for manufacture
- System for indication and appraisal of inspection status;
- System for quality audits;
- System for authorizing release of manufactured product to the Purchaser
- System for maintenance of record;
- System for handling storage and delivery; and
- A quality plan detailing out the specific quality control procedure adopted for controlling the quality characteristics of the product.
- The quality plan shall be mutually discussed and approved by the owner after incorporating necessary correction by the contractor as may be required.

4.8.3 Quality Assurance Documents

The Contractor would be required to submit all the Quality Assurance documents as stipulated in the quality Plan at the time of Owner's Inspection of equipment/material.

4.8.4 The Owner or his duly authorized representatives reserves the right to carry out Quality Audit and Quality Surveillance of the system and procedures of the contractor's/his vendor's quality management and control activities.

4.9 Owner's Supervision

4.9.1 To eliminate delays and avoid disputes and litigation it is agreed between the parties to the contract that all matters and questions shall be resolved in accordance with the provisions of this document.

- The manufacturing of the product shall be carried out in accordance with the specifications. The scope of the duties of the owner, pursuant to the contract, will include but not be limited to the following: -
 - Interpretation of all the terms and conditions of these documents and specifications.
 - Review and interpretation of all the contractor's drawings, engineering data etc.

- Witness or authorize his representative to witness tests at the manufacturer's works or at site, or at any place where work is performed under the contract.
- Inspect, accept or reject any equipment, material and work under the contract, in accordance with the specifications.
- Issue certificate of acceptance and/or progressive payment and final payment certificate.
- Review and suggest modification and improvement in completion schedules from time to time; and
- Supervise the Quality Assurance Programme implementation at all stages of the works.

4.10 Inspection, Testing & Inspection Certificate

- 4.10.1 The Owner, his duly authorized representative and/or outside inspection agency acting on behalf of the owner shall have at all reasonable times access to the contractor's premises or works shall have the power at all reasonable times to inspect and examine the materials and workmanship of the product during its manufacture and if part of the product is being manufactured or assembled at other premises or works, the contractor shall obtain from the owner and/ or his duly authorized representative permission to inspect as if the equipment/ materials were manufactured or assembled on the contractor's own premises or works.
- 4.10.2 The contractor shall give the Owner/ Inspector fifteen (15) days written notice of any material being ready for testing. Such tests shall be to the contractor's account except for the expenses of the inspector. The Owner/Inspector unless witnessing of the tests is virtually waived will attend such tests within fifteen (15) days of the date of which the equipment is notified as being ready for test/inspection or on a mutually agreed date, failing which the contractor may proceed with the test which shall be deemed to have been made in the inspector's presence and he shall forthwith forward to the inspector duly certified copies of tests in triplicate.
- 4.10.3 The owner/inspector shall within fifteen (15) days from the date of inspection as defined herein give notice in writing to the Contractor, of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Contractor shall give due consideration to such objections and shall make the modifications that may be necessary to meet the said objections.
- 4.10.4 When the factory tests have been completed at the contractor's or Sub-contractor's works, the Purchaser Inspector shall issue a certificate to this effect with in fifteen (15) days after completion of tests but if the tests are not witnessed by the Owner/Inspector, the certificate shall be issued within fifteen (15) days of receipt of the contractor's test certificate by the Owner/ Inspector. The completion of these tests or the issues of the certificate shall not bind the Owner to accept the equipment should it, on further tests after erection, be found not to comply with the contract.
- 4.10.5 In all cases where the contract provides for tests whether at the premises or works of he contractor or of any Sub-Contractor, the Contractor except where otherwise specified shall provide free of charge such item as labour, materials, electricity, fuel, water, stores,

apparatus and instruments as may be reasonably demanded by the owner/ inspector or his authorized representative to carry out effectively such tests of the equipment in accordance with the contract and shall give facilities to the Owner/ Inspector or to his authorized representative to accomplish testing.

- 4.10.6 The Inspection by Owner and issue of inspection certificate thereon shall in no way limit the liabilities and responsibilities of the Contract in respect of the agreed Quality Assurance Programme forming a part of the Contract.

5.0 Technical Description

The technical description of various materials/equipment has been specified in the respective volumes of technical specification.

6.0 Tests and Standards

6.1 Tests

The following type, acceptance and routine tests and tests during manufacture shall be carried out on the materials. For the purpose of this clause:

- 6.1.1 Type tests shall mean those tests, which are to be carried out to prove the process of manufacture and general conformity of the material to this specification. These tests shall be carried out on samples prior to commencement of commercial production against the order. The Bidder shall indicate his schedule for carrying out these tests.
- 6.1.2 Acceptance Tests shall mean those tests, which are to be carried out on samples taken from each lot offered for pre-dispatch inspection, for the purpose of acceptance of that lot.
- 6.1.3 Routine tests shall mean those tests, which are to be carried out on the material to check requirements, which are likely to vary during production.
- 6.1.4 Tests during manufacture shall mean those tests, which are to be carried out during the process of manufacture and end inspection by the Contractor to ensure the desired quality of the end product to be supplied by him.
- 6.1.5 The norms and procedure of sampling for these tests will be as per the Quality Assurance Programme to be mutually agreed to by the Contractor and the Owner.
- 6.1.6 The Standards and norms to which these tests will be carried out are listed against them. Where a particular test is a specific requirement of this Specification, the norms and procedure of the test shall be as specified or as mutually agreed to between the Contractor and the Owner in the Quality Assurance Programme.
- 6.1.7 For all type and acceptance tests, the acceptance values shall be the values specified in this Specification or guaranteed by the Bidder, as applicable. The tests and standards for various materials/equipment has been specified in the respective volumes of technical specifications.

6.2 Testing Expenses

- 6.2.1 The breakup of the testing charges for the type tests specified in the respective technical specifications shall be quoted separately as per the BPS.

- 6.2.2 Bidders shall indicate the laboratories in which they propose to conduct the type tests. They shall ensure that the tests can be completed in these laboratories within the time schedule and as per the requirement of specifications guaranteed by them.
- 6.2.3 In case of failure in any type test, the Contractor is either required to manufacture fresh sample lot and repeat all the test successfully once or repeat that particular type test three times successfully on the sample selected from the already testing then the lot already manufactured shall be rejected. The decision of the Owner in this regard shall be final and binding on the Contractor.
- 6.2.4 The entire cost of testing for the acceptance test and routine tests and tests during manufacture specified in the technical specifications for materials/equipment shall be treated as included in the quoted unit price except for the expenses of the Inspector/ Owner's representative.
- 6.2.5** In case of failure in any type test, repeat type tests are required to be conducted then all the expenses for deputation of Inspector/ Owner's representative shall be deducted from the contract price. Also if on receipt of the Contractor's notice of testing the owner's representative/inspector does not find 'plant and equipment' to be ready for testing. The expenses incurred by the Owner for-deputation shall be deducted from the contract price.
- 6.3 Additional Tests**
- 6.3.1 The Owner reserves the right of having at his own expenses any other test (s) of reasonable nature carried out at contractor's premises at site, or in any other place in addition to the specified type, acceptance and routine tests to satisfy himself that the materials/ equipment comply with the Specifications.
- 6.3.2 The Owner also reserves the right to conduct all the tests mentioned in this specification at his own expense on the samples drawn from the site at Contractor's premises or at any other test center. In case of evidence of non compliance, it shall be binding on the part of contractor to prove the compliance of the items to the technical specifications by repeat tests or correction of deficiencies, or replacement of defective item all without any extra cost to the Owner.
- 6.4 Sample Batch for Type Testing**
- 6.4.1 The Contractor shall offer material/equipment for selection of samples for type testing only after getting Quality Assurance Plan approved as directed by the Owner. The sample shall be manufactured strictly in accordance with the Quality Assurance Plan approved by Owner.
- 6.4.2 The contractor shall offer the minimum no. of samples as indicated in the Approved Quality Assurance plan or the specifications as the case may be, for selection of sample required for conducting all the type test.
- 6.4.3** The contractor is required to carry out all the Acceptance tests successfully in presence of Owner's representative before sample selection.
- 7.0 Guaranteed Technical Particulars**
- 7.1 The Guaranteed Technical Particulars of the various items shall be furnished by the Bidders in the prescribed schedules of the Specifications. The Bidder shall also furnish any other

schedule information as in their opinion is needed to give full description and details to judge the item(s) offered by them.

- 7.2 The data furnished in Guaranteed Technical Particulars should be the minimum or maximum value (as per the requirement of the specification) required. A Bidder may guarantee a value more stringent than the specification requirement. However, for testing purpose or from performance point of view, the materials shall be considered performed successfully if it achieves the minimum/maximum value required as per the technical specification. No preference whatsoever shall be given to the bidder offering better more stringent values than those required as per specification.

ERECTION CONDITIONS

1.1 General

The following shall supplement the conditions already contained in the other parts of these specifications and documents and shall govern that portion of the work on this Contract to be performed at site.

1.2 Regulation of Local Authorities and Statutes

- 1.2.1 The Contractor shall comply with all the rules and regulations of local authorities during the performance of his field activities. He shall also comply with the Minimum Wages Act 1948 and the payment of Wages Act (both of the Government of India) and the rules made there under in respect of any employee or workman employed engaged by him or his Sub-Contractor.

- 1.2.2 All registration and statutory inspection fees, if any, in respect of his work pursuant to this Contract shall be to the account of the Contractor. However, any registration, statutory inspection fees lawfully payable under the provisions of the statutory laws and its amendments from time to time during erection in respect of the equipment/materials, ultimately to be owned by the owner shall be to the account of the owner. Should any such inspection or registration need to be re-arranged due to the fault of the contractor or his sub-contractor, the additional fees to such inspection and/or registration shall be born by the contractor.

1.3 Contractor's Field Operation

- 1.3.1 The Contractor shall keep the Owner informed in advance regarding his field activity plans and schedules for carrying out each part of the works. Any review of such plan or schedule or method of work by the Owner shall not relieve the Contractor of any of his responsibilities towards the field activities. Such reviews shall also not be considered as an assumption of any risk or liability by the Employer or any of his representatives and no claim of the Contractor will be entertained because of the failure or inefficiency of any such plan or schedule or method of work reviewed. The contractor shall be solely responsible for the safety, adequacy and efficiency of tools and plants and his erection methods.

1.4 Progress Report

- 1.4.1 Appropriate visual charts shall accompany the monthly progress report detailing out the progress achieved on all erection activities as compared to the schedules.

The report shall also indicate the reasons for the variance between the scheduled and actual progress and the action proposed for corrective measures wherever necessary.

1.5 Man Power Deployment Report

1.5.1 The Contractor shall submit to the owner, on the first day of every month, a manpower deployment schedule for each activity.

1.5.2 The contractor shall also submit to the owner on the first day of every month, a manpower deployment report of the previous month detailing the number of persons scheduled to have been employed and actually employed.

1.5.3 Facilities to be Provided by the Contractor

1.5.3.1 Tools, Tackle and Scaffoldings

The Contractor shall provide all the construction equipment tools, tackle and scaffoldings required for construction, erection, testing and commissioning of the projects covered under the contract. He shall submit a list of all such materials to the owner before the commencement of work at site. These tools and tackle shall not be removed from the site without the written permission of the owner.

1.5.3.2 First-Aid and General Hygiene

The Contractor shall provide necessary first-aid facilities for all his employees, representative and workmen working at the site. Enough number of Contractor's personnel shall be trained in administering first aid.

Similarly, the labour colony, the offices and the residential areas of the Contractor's employees and workmen shall be kept clean and neat to the entire satisfaction of the owner. Proper sanitary arrangements shall be provided by the contractor, in the work-areas, office and residential areas of the contractor.

1.6 Fire Protection

1.6.1 The work procedures that are to be used during the erection shall be those, which minimize fire hazards to the extent practicable. Combustible materials, combustible waste and rubbish shall be collected and removed from the site at least once each day. Fuels, oils and volatile or inflammable materials shall be stored away from the construction site and equipment and material stores in safe containers.

1.6.2 All the Contractor's supervisory personnel and sufficient number of workers shall be trained for firefighting and shall be assigned specific fire protection duties.

Enough of such trained personnel must be available at the site during the entire period of the contract.

1.6.3 The Contractor shall provide enough fire protection equipment of the types and number for the ware-house, office temporary structures, labour colony area etc. Access to such fire protection equipment shall be easy and kept open at all time.

1.7 Security

The Contractor shall have total responsibility for all equipment and materials in his custody, stored, loose, semi-assembled and/or erected by him at site. The contractor shall make suitable security arrangements including employment of security personnel to ensure the protection of all materials equipment and works from theft, fire, pilferage and any other damages and loss.

1.8 Materials Handling and Storage

- 1.8.1 All the supplies under the Contractor as well as Owner supplied items arriving at site shall be promptly received, unloaded and transported and stored in the stores by he contractor.
- 1.8.2 Contractor shall be responsible for examining all the shipment and notify the owner immediately of any damage, shortage, discrepancy etc. for the purpose of owner's information only. The contractor shall submit to the owner every week a report detailing all the receipts during the week. However, the contractor shall be solely responsible for any shortage or damages in transit, handling and/or in storage and erection at site. Any demurrage/wharf age and other such charges claimed by the transporters, railways etc. shall be to the account of the contractor.
- 1.8.3 The Contractor shall maintain an accurate and exhaustive record detailing out the list of all items received by him for the purpose of erection and keep such record open for the inspection of the Owner.
- 1.8.4 All items shall be handled very carefully to prevent any damage or loss. The materials from the store shall be moved to the actual location at the appropriate time so as to avoid damage of such materials at site.
- 1.8.5 All the materials stored in the open or dusty location must be covered with suitable weatherproof and flameproof covering material wherever applicable.
- 1.8.6 The Contractor shall be responsible for making suitable indoor storage facilities to store all items/ materials, which required indoor storage.

1.9 Construction Management

- 1.9.1 Time is the essence of the Contract and the Contractor shall be responsible for performance of his works in accordance with the specified construction schedule. If, at any time, the Contractor is failing behind the schedule for reasons attributable to him, he shall take necessary action to make good for such delays by increasing his work force or by working overtime or otherwise to accelerate the progress of the work and to comply with schedule and shall communicate such actions in writing to the Owner, satisfying that his action will compensate for the delay. The contractor shall not be allowed any extra compensation for such action.

1.10 Field Officers Records

The contractor shall maintain offices different levels with all upto date official gazettes like computers, printers, fax machines, communication facilities and all other required commodities for extending timely support to the executing team including coordination at all levels. The Contractor shall maintain at his office up-to-date copies of all drawings, specifications and other supplementary data complete with all the latest revisions thereto. The Contractor shall also maintain, in addition, the continuous record of all changes to the above contract documents, drawings, specifications, supplementary data, etc. effected at the field and on completion of his total assignment under the Contract shall incorporate data to indicate as installed conditions of the material supplied and erected under the contract. Such drawings and engineering data shall be submitted to the Owner in required number of copies.

1.11 Protection of Property and Contractor's Liability

- 1.11.1 The Contractor shall ensure provision of necessary safety equipment such as barriers, signboards, warning lights and alarm, etc. to provide adequate protection to persons and property. The Contractor shall be responsible to give reasonable notice to the Owner and the

Owners of public or private property and utilities when such property and utilities are likely to get damaged or injured during the performance of his works and shall make all necessary arrangements with such Owner, related to removal and/or replacement or protection of such property and utilities.

1.12 Insurance

1.12.1 In addition to the conditions covered under the title "Insurance" in GCC/SCC, the following provisions will also apply to the portion of works to be done beyond the Contractor's own or his sub-contractor's manufacturing works.

1.12.2 Workmen's Compensation Insurance

This insurance shall protect the Contractor against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Contractor against claims for injury, disability disease or death of his sub-contractor's employees, which for any reason are not covered under the workmen's compensation act, 1948. the liabilities shall not be less than:

Workmen's Compensation	As per Statutory Provisions
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Employee's Liability	As per Statutory Provisions
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1.12.3 Comprehensive General Liability Insurance

1.12.3.1 The Insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Contractor, its agents, its employees its representatives and Sub-contractors or from riots, strikes and civil commotion.

1.12.3.2 The hazards to be covered will pertain to all the works and areas where the contractor, its sub-contractors, its agents and employees have to perform work pursuant to the contract.

1.12.3.3 The above are only illustrative list of insurance covers normally required and it will be the responsibility of the contractor to maintain all necessary insurance coverage to the extent both in time and amount to take care of all its liabilities either direct or indirect in pursuance of the contract.

1.13 Work and Safety Regulations

1.13.1 The Contractor shall ensure safety of all the workmen, materials, plants and equipments belonging to him or to the others, working at the site. The Contractor shall also provide for all safety notices and safety equipment required by the relevant legislation's and deemed necessary by the owner.