



NAYA RAIPUR DEVELOPMENT AUTHORITY

**Tender Document For Design, Supply, Installation, Testing,
Commissioning and Maintenance of DG Sets for Office
Complex, Commercial Complex and Retail Complex at
Sector 24 and Sector 21 of Naya Raipur
(Following Three-Envelope Tender Procedure)**

**Schedule – A
Price Tender
To be submitted in ENVELOPE-3**

NIT No. : 89/DG/VB/ELECT /CE(E)/NRDA/2016-17, Raipur

Dated: 03.08.2016

Issued by: Chief Executive Officer,
Naya Raipur Development Authority (NRDA)
4th Floor,,Paryavas bhawan, North block
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Tender Document Contains

- (a) Only schedule "A" and Section-I of schedule "D" are to be filled & signed by the tenderer
- (b) All the certificates as per pre qualification criteria shall be appended with relevant forms of schedule "D"

1. PART ONE (NRDA F-1)-(Attached herewith, to be submit along the tender)

Part (A)

- a) Press Notice
- b) Detailed NIT

Part (B)

a) Schedule-A

- (i) Cost Abstract
- (ii) Bill of Quantities

- b) Schedule-B –NIL
- c) Schedule-C –NIL
- d) Schedule-D

Section-I..... Technical tender forms

- (i) Letter of Technical Tender
- (ii) Tenderer's Information Sheet
- (iii) Annual Turnover
- (iv) Specific Construction Experience
- (v) Declaration
- (vi) Check list for Technical tender evaluation

Section –IIScope of work

Section –III..... Technical specifications of work

Section –IV..... Special Conditions of Contract

Section –V..... List of approved makes

Section –VI..... Drawings

- e) Schedule-E
- f) Schedule-F

2. PART TWO (NRDA F-2/3)-Standard form (Not Attached herewith, and not to be submitted along the tender)

Important note: - Link site <http://nayaipur.com/documents/gcc.pdf>

1. General Guidelines
2. Tender
3. General rules and directions
4. Conditions of contract
5. Clauses of contract
6. Model rules relating to labour, water supply and sanitation in labour camps safety code
7. Contract forms
 - (a) Draft Format for Performance Security
 - (b) Earnest Money Deposit Form (Bank Guarantee)
 - (c) Format of Contract Agreement
 - (d) Draft Format for Performance Guarantee for Water Proofing and Anti-termite Works
 - (e) Indemnity Bond
 - (f) Indenture Bond
 - (g) Notice for Appointment of Arbitrator
8. Proforma of schedules (Schedule 'A' to Schedule 'F')

Naya Raipur Development Authority (NRDA) Raipur, Chhattisgarh

Document details

Name of work : “Design, Supply, Installation, Testing, Commissioning and Maintenance of DG Sets for Office Complex, Commercial Complex and Retail Complex at Sector 24 and Sector 21 of Naya Raipur”.

Name of Tenderer:

Details

- a) Cost of Tender Document : Rs
- b) EMD : Rs

Signature of Tenderer

Date:_____

Cost Abstract of Supply , Erection , Testing and Commissioning of D.G Set's Including Annual Maintenance Contract (AMC) for 3 years.			
Sr. No.	Description of Works	Total Amount in Rs.	Total Amount in Words (Rs)
A	Design, Supply, Installation, Testing, Commissioning & annual Maintenance for 3 year of D.G Set's for office complex building ,retail complex building and Commercial building at Sector -21 & 24 of Naya Raipur		
	Total Amount in INR		

BILL OF QUANTITIES

Project name :- Complex building ,Retail complex building and Commercial building at Sector -21&24 of Naya Raipur

Sr. No.	Item Description	Unit	Qty	Rate (Rs.) in		Amount (Rs.)
				Rate(In INR) (In Figure)	Rate(In INR) (In Words)	
1	D.G. SETS (AIR COOLED TYPE)					
1.1	Supplying, installation, testing & commissioning of CPCB approved, outdoor acoustic enclosed silent, 3 phase 415V, 50Hz P.F. 0.8 , complete with alternator, diesel engine, silencer, standard accessories, protection equipments all mounted on channel iron base frame, antivibration pads, RCC foundation, 990 ltrs day fuel tank, battery set of required rating, First fill of diesel & Lube oil, all required fuel piping as detailed in technical specifications and drawings.complete with required labour, materials, meeting IE Rules, Regulations, standards and local supply authority requirements.etc. Including Local ACB for isolation, AMF Control Panel, panel board with all power and control contactors, switches, meters, Communication port for BMS connectivity and other accessories, internal wiring, connection, inter-connection, etc. for trouble free smooth function for following Ratings DG Sets complete with battery charger and leads as required.					
	Diesel Engine 4 Strok, electric start of suitable BHP at 1500 RPM suitable for the required output of alternator at 40 Degree C, 50% RH & at 1000 Meter MSL and conforming to BS 5514, BS 649, IS 10000, capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories.					
	DG Sets shall be manufactured and installed strictly in accordance with the Noise limits and Emmission limits as mentioned in the latest Gazette of Govt. of India, Ministry of Environment and Forest notification.					
	The Cost of DG Set installtion shall be inclusive of following ans to be read in conjunction with specification					
	Supply of DG set,					
	Supply of DG AMF panel, Controller, 16 Way Annunciator panel					
	Initial fill of diesel & lube oil					
	Acoustic Enclosure					
	Exhaust Piping with insulation & SS expansion joints with self- supporting stack along with steel structure for support.					
	Scaffolding for Exhaust piping					
	Fuel Piping from DG to Day Tank outside the enclosure					
	Terminal Box on Alternator					
	Factory Testing for 4 hours on load					
	Site Testing & Commissioning on load					
	Site Testing & Commissioning with arrangement of Load Bank by DG Vendor including Fuel First Fill of Diesel					
	Control Cabling with Termination					
	Supplying, Unloading & Shifting , Installing, Testing and commissioning of DG set & materials at site					

BILL OF QUANTITIES						
Project name :- Complex building ,Retail complex building and Commercial building at Sector -21&24 of Naya Raipur						
Sr. No.	Item Description	Unit	Qty	Rate (Rs.) in		Amount (Rs.)
				Rate(In INR) (In Figure)	Rate(In INR) (In Words)	
	Transportation/ Transit Insurance					
	Third Party Liability Insurance during Erection/Commissioning					
	Liaisoning for Statutory Approvals for CEIG					
	Liaisoning for Statutory Approvals for Pollution Control Board					
	Third Party Inspection Charges at manufacturer's works					
	Third Party Inspection Charges at project site					
	Security & Storage of Equipment at Site					
	Consumables during warranty period					
1.1.1	2000 kVA	Each	2			-
1.1.2	600 kVA	Each	2			-
1.2	Exhaust Piping fo above					
	Providing, fixing & installing MS class-B exhaust pipe of following dia including all fixing accessories and hardwares, Bends, elbows, Joints, Reducers ans other accessories required to complete the Installtion. The exhaust pipes shall be insulated with 50 mm thick rock wool with thermal insulation & aluminium cladding with including all MS Steel , Self supporting structure with Aviation Lamp Per Dg Exhaust)and Lightning Arrestor as required. All insulation of silencers shall be from 50mm thick Rockwool AL Sheet.					
1.2.1	450 mm	Mtr	150			-
1.2.2	350 mm	Mtr	100			-
2	D.G. SETS (WATER COOLED TYPE)					
2.1	2000 KVA DIESEL GENERATING SET					
	Providing, installing, testing and commissioning of 'Silent Type' Diesel Generating Set alongwith having Prime Power Rating of 2000 KVA, 415 Volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz, 3 phase system & for 0.85 load and consistine of the followines :					
a)	Diesel Engine :					
	Diesel Engine 4 Stroke (water cooled), electric start of suitable BHP at 1500 RPM suitable for the above output of alternator at 40 Degree C, 50% RH & at 1000 Meter MSL and conforming to BS 5514, BS 649, IS 10000, capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories.					
b)	Engine mounted Instrument Panel fitted with and having digital display for following :					
i)	Start-stop switch with key					
ii)	Water temperature indication					
iii)	Lubrication oil pressure indication					
iv)	Lubrication oil temperature indication					

BILL OF QUANTITIES

Project name :- Complex building ,Retail complex building and Commercial building at Sector -21&24 of Naya Raipur

Sr. No.	Item Description	Unit	Qty	Rate (Rs.) in		Amount (Rs.)
				Rate(In INR) (In Figure)	Rate(In INR) (In Words)	
v)	Battery charging indication					
vi)	RPM indication					
vii)	Over speed indication					
viii)	Low lub. Oil trip indication					
ix)	Engine Hours indication					
c)	Alternator :					
	Synchronous alternator rated at 2000 KVA, 415 Volts at 1500 RPM, 3 Phase, 50 Hz, AC supply with 0.8 lagging power factor at 40 degree C, 50% RH & 1000 Meter MSL. The alternator shall be having SPDP enclosure, brushless, continuous duty, self-excited and self-regulated through AVR conforming to IS: 4722/BS 2613 suitable for tropical conditions and with Class-F/H insulation					
d)	Base Frame & Foundation :					
	Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendations of manufacturer.					
e)	Fuel Tank :					
	Daily service fuel tank of 900 litres capacity, fabricated out of 3mm thick M.S. sheet complete with all standard accessories and fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. Complete with valves level indication & accessories as required as per specifications.					
f)	Exhaust System :					
	Dry exhaust manifold with residential exhaust silencer, SS expansion joints and catalytic convertor.					
g)	Starting System :					
	12V/24V DC starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable Nos. of batteries (25 plates, 180 Amp. Hour capacity lead acid type) as required as per specifications.					
h)	Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air into the atmosphere as per specifications.	Set	3			-
	The Cost of DG Set installtion shall be inclusive of following ans to be read in conjunction with specification					
	Supply of DG set,					
	Supply of DG AMF panel, Controller, 16 Way Annunciator panel					
	Initial fill of diesel & lube oil					
	Acoustic Enclosure					
	Exhaust Piping with insulation & SS expansion joints with self- supporting stack along with steel structure for support.					
	Scaffolding for Exhaust piping					
	Fuel Piping from DG to Day Tank outside the enclosure					
	Terminal Box on Alternator					
	Control Cabling with Termination					
	LT Cable Termination on DG side					
	Note-					

BILL OF QUANTITIES						
Project name :- Complex building ,Retail complex building and Commercial building at Sector -21&24 of Naya Raipur						
Sr. No.	Item Description	Unit	Qty	Rate (Rs.) in		Amount (Rs.)
				Rate(In INR) (In Figure)	Rate(In INR) (In Words)	
a)	DG Sets shall be manufactured and installed strictly in accordance with the Noise limits and Emmission limits as mentioned in the latest Gazette of Govt. of India, Ministry of Environment and Forest notification.					
b)	Nothing extra will be paid on account of this.					
2.2	EXHAUST PIPING & SUPPORTING STRUCTURE					
2.2.1	Supplying and fixing of exhaust gas piping of suitable dia welded black MS 'B' Class pipe conforming to IS:3589 cut to required lengths and installed with necessary bends, supports and clamps, anti-vibration mountings, 75mm dia insulation of exhaust system with mineral wool/ Rockwool, 50mm thick wiremesh & aluminum cladding etc. as required as per specifications.					
a)	500 mm dia NB	Mtrs.	50			-
b)	450 mm dia NB	Mtrs.	200			-
c)	300 mm dia NB	Mtrs.	50			-
2.2.2	Supporting Structure					
	Supply and fixing of MS steel structure with MS angle/ channel with all accessories as required.	Tons	2			-
2.3	CABLE					
2.3.1	Control Cable:					
	Supplying, installation, testing and commissioning of the following sizes of 1.1 KV grade PVC insulated and PVC sheathed copper conductor armoured stranded control cable including termination conforming latest IS complete as required.					
a)	2 Core x 2.5 Sq.mm Cable	Mtrs.	100			-
b)	4 Core x 2.5 Sq.mm Cable	Mtrs.	200			-
c)	10 Core x 2.5 Sq.mm Cable	Mtrs.	50			-
2.4	COOLING TOWERS, PUMPS & ACCESSORIES					
2.4.1	Cooling Towers:					
	Supply, installation, testing and commissioning of induced draft cooling tower complete in all respects. The cooling tower shall complete with fan, motor, MCC Pipe isolator, surface and spray sections, eliminators, side casing, water basin, distribution system, filling and mechanical equipment/ components, float valve, quick fill and makeup connections, foundations/structures/ fasteners GI ladder etc. as required. Motor shall be TEFC proof and suitable for 415 ±10% volts, 50 cycles, 3 phase power supply. Quoted price to include cost of thermometer (dial type) at inlet and outlet of cooling tower.					
a)	200 TR Cooling tower suitable for 1 No. 2000 KVA having flow rate of 1X625 LPM @ 20 delta T and 77 deg.F WB Temperature.	No.	3			-
2.4.2	Cooling Tower Pumps:					
	Supply, installation, testing and commissioning of monoblock centrifugal pumps, mounted on a common base with electric motor for circulation of Engine cooling water between engine and cooling tower. The pump motor shall be suitable for 415±10% volts, 50 cycles, 3 phase power supply. The quoted price shall include cost of vibration isolation pads at each cooling tower. Each pump performance characteristics shall be as follows					
	Head : 90 Meters					
	Water Head Flow Rate : 1300 LPM for DG RATING					
	Max. Motor HP : As per Manufacturer					
a)	Cooling Tower Pumps as described above (for 2000 KVA DG set) (1W+1S)	Set	3			-

