

PRASAR BHARATI
(Broadcasting Corporation of India)
OFFICE OF THE CHIEF ENGINEER (SOUTH ZONE)
ALL INDIA RADIO & DOORDARSHAN
Swamy Sivananda Salai, Chennai - 600 005

NO. CESZ/PUR/08/PSEA/2011-12/

Date:- 23.08.2011

**SUB: Replacement of 15KVA DG with 20KVA DG (SITC) at
ALL INDIA RADIO, ANANTAPUR, Andhra Pradesh - 1 No.**

Sir,

Kindly find enclosed the tender enquiry for the Supply, Installation, Testing and Commissioning (SITC) of 20kVA AIR-COOLED DIESEL GENERATOR with acoustic enclosure, including in-built control panel and Remote Control Panel suitable for installation at *All India Radio, Anantapur.*

Tender documents can be downloaded from the following web sites on free of cost:

www.ceszaidd.org.in/tenders.html

www.allindiaradio.org/tender.html

www.tenders.gov.in.

The tenders will be received at the Office of The Chief Engineer (SZ), AIR & DD, Swamy Sivananda Salai, Chennai-5, up to **1230 Hrs** on **08.09.2011**. The technical bid and E.M.D. will be opened on the same day at **1500 Hrs**. The commercial bid will be notified after recommendation of technical committee.

Yours faithfully,

(M.SUJATHA)
Assistant Engineer
for Chief Engineer (SZ)

PRASAR BHARATI
(BROADCASTING CORPORATION OF INDIA)
OFFICE OF THE CHIEF ENGINEER (SOUTH ZONE)
ALL INDIA RADIO & DOORDARSHAN
SWAMI SIVANANDA SALAI, CHENNAI-600 005.

NO. CESZ/PUR /08/PSEA/2011-12/

Date:-23.08.2011

SUB: SITC FOR 20kVA AIR-COOLED DIESEL GENERATOR WITH ACCOUSTIC ENCLOSURE INCLUDING IN-BUILT CONTROL PANEL AND REMOTE CONTROL PANEL (Replacement of 15KVA DG) for ALL INDIA RADIO, Anantapur - 1 No.

1. DESCRIPTION:-

SEALED TENDERS ARE HEREBY INVITED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA, FROM REPUTED FIRMS FOR THE SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 20kVA AIR-COOLED DIESEL GENERATOR WITH ACCOUSTIC ENCLOSURE INCLUDING IN-BUILT CONTROL PANEL AND REMOTE CONTROL PANEL (Replacement of 15KVA DG) for ALL INDIA RADIO, Anantapur - 1 No.

The tender shall consists of three parts (bids) namely:

(a) EMD:- Earnest Money amounting Rs.6000 /- (Rupees Six thousand Only) in the form of Demand Draft on Nationalized Bank drawn in favor of Chief Engineer(SZ), AIR & DD, Chennai-5 should accompany the tender'. EMD by means of Bank guarantee or any other mode of payment other than DD shall not be accepted. Tenders without EMD shall be summarily rejected and their technical cum commercial bid will not be opened at the time of tender opening. (No exemption for payment of EMD is accepted by this office.)

(b) TECHNICAL BID:

Technical bid should contain the confirmation to the enclosed technical specifications. This should be submitted in a separate sealed envelope with "TECHNICAL BID" written on it.

(c) COMMERCIAL BID:

The commercial bid should contain the price bid and acceptance of the commercial terms and conditions of this tender document. The price should be quoted for free delivery of materials at respective destinations. This should be submitted in a separate sealed envelope with "COMMERCIAL BID" written on the envelope.

The tenders will be submitted in sealed envelopes with the name of work, date of opening and the bid enclosed written on the envelopes.

The above mentioned envelopes should be enclosed and submitted in another large size envelope duly sealed and superscribed with "SITC for 20kVA DG and date of opening. The envelope will be received at this office of The Chief Engineer (SZ), AIR & TV, Swamy Sivananda Salai, Chennai-5 up to 1230 hrs. on 08.09.2011. The technical bid and E.M.D. will be opened on the same day at 1500 hrs. The commercial bid will be notified after recommendation of technical committee.

In case tender opening date falls on a holiday, the bids will be received and opened at the same specified time on next working day. Bids

received late or submitted after the scheduled specified time on scheduled date will not be entertained and will be returned back unopened.

3. Tenderer should quote for all the required items. Partial tenders will be rejected.

4. **VALIDITY:-** The tender shall be kept valid for three months **(90 days)** from the date of opening.

5. **PRICES:-** The prices quoted should be firm and for free delivery at site inclusive of transit insurance, excise duty and entry tax and other tax if any should be quoted separately. Tenderers should quote in figures as well as in words the amounts tendered by them. In the case of illiterates, the rates or the amounts tendered should be attested by a witness. Breakup of prices for individual/ whole units should be specified wherever possible instead of bunching all units together. Similarly supply price and works price (Like installation, testing, Commissioning) should be quoted separately.

6. DUTIES AND TAXES:-

(a) **EXCISE DUTY:-** The prices should contain an element of Excise Duty which should be indicated separately. Any statutory variation in the Excise Duty taking place after acceptance of tender within the delivery date will be adjusted by the purchaser on Production of documentary proof.

(b) **SALES TAX / VAT:-** The prices should be exclusive of ST/CST/VAT. The prevailing rate of ST/CST/VAT should be clearly mentioned in the tender.. The following certificates are to be submitted by the supplier along with the bills.

"Certified that the goods on which the sales tax has been charged have not been exempted under central sales tax act of the rules made thereunder. The amount charged on account of Sales Tax/VAT on these goods is not more than what is payable under provision of the relevant act or the rules made thereunder".

"Certified that we are registered as dealers in the State under registration No. for the purpose of Sales Tax. Any Statutory variation in ST/VAT taking place after acceptance of tender within the delivery date will be adjusted by the purchaser. For this purpose, Government order should be produced".

(c) **WORKS CONTRACT:-** If work contract tax is leviable by the concerned State Government on works contracts, the same shall be clearly mentioned in the Tender. The contractor should furnish the service tax number in the quotation.

7. **TERMS OF DELIVERY:-** F.O.R. Destination.

8. **DELIVERY PERIOD:-** Tenderer may note that the entire work shall be completed within **2 months** from the date of the work order. The lay out wirings and other drawings wherever applicable shall be **got approved** within **10 days** from the date of Work order.

EMD of all but the last three tenderer will be returned back within 10 days opening of tenders. EMD of the remaining two tenderer other than that of the successful tenderer will be returned after finalising the

contract. EMD of the successful tenderer will be returned after expiry of Guarantee period.

9. IT CLEARANCE CERTIFICATE:- Income tax clearance certificate shall be submitted along with the tender, without which the tender is liable to be rejected.

10. EXPERIENCE: The tenderer should give documentary proof for having successfully designed. Fabricated, installed and commissioned similar type of equipment/work. They should also submit list of works which are in hand at the time of submission of tender. The list shall contain the name of work, cost of work and present position of work.

11. AFTER SALES SERVICE:- The Tenderer should give full details of after sales service capability. The locations of service centers across the country shall be indicated. If there is no service centers at/ near the location of the site the tender is likely to be rejected.

12. TECHNICAL SPECIFICATION AND GENERAL TERMS AND CONDITIONS:-
For technical specification for other general terms and conditions see the Annexures. The tenderer should submit necessary pamphlets description of items being offered along with technical bid and also the firms to which similar items were supplied in the near past and completion report.

13. ACCEPTANCE/REJECTION OF TENDER:- The acceptance of a tender will rest with the Chief Engineer(South Zone), AIR & TV, Chennai-5 who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all of the tenders received without assigning any reason.

14. GENERAL:- Canvassing in connection with tender is strictly prohibited and the tenders submitted by tenderness who resort to canvassing will be rejected.

(M.SUJATHA)
Assistant Engineer
for Chief Engineer (SZ)

Encl:-

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SPECIFICATIONS FOR 20 KVA CANOPY TYPE AIR- COOLED DIESEL GENERATOR SET WITHOUT AMF PANEL

GENERAL

20 kVA, 415 V, 3-Phase, 4 wire, 50 Hz Air-Cooled Diesel Generator set without AMF Control Panel parallel to the inbuilt control panel with acoustic enclosure for All India Radio, Anantapur in Andhra Pradesh as a standby power source for the Broadcasting Transmitter equipments. The equipment to be supplied should therefore be rugged, highly reliable, very efficient and suitable for trouble free operation for continuous use with proven field performance record.

SECTION - I

GENERAL

This section covers the general conditions governing the Design, Manufacture, Factory Inspection, Transportation to site, Supply, Installation, Testing, Commissioning and satisfactory operation at site of the DG set without AMF Unit. Each point of the specification is to be filled by the tenderer in column 3 for compliance / conformation and should be supported by printed literature / leaflets.

Sl. No.	Technical parameters	Compliance / Confirmation by the Tenderer
1	The air-cooled, stand alone, 20 kVA, 415 V, 3-Phase, DG set with acoustic enclosure will be installed on a platform which already exists in the DG room and shall be modified according to the requirement by the firm.	
2	The DG set shall be designed for efficient and trouble free service for minimum 6 hrs of continuous operation. The tenderer should fill up adequate diesel for the continuous operation of 24 hrs. All materials used in the construction shall be as per IS: 10002 - 1981 (performance requirement for constant speed compression ignition diesel engine for general purpose (above 20 kW) Reaffirmed 1991; and 13364 (part 2) 1992 AC generators driven by reciprocating internal combustion engine part 2; alternators rated above 20 kVA and up to 1250 kVA (amended to date).	
3	All works shall be carried out in accordance with standard mechanical & electrical practice. The units shall be designed for easy maintenance and complete safety to operating personnel.	
4	The tenderers should undertake to make available spares and replacement parts as and when required for a period of ten years, after the initial guarantee period is over.	
5	All fittings and accessories which may not have been specifically mentioned or which the tenderer may not mention explicitly in his tender but all are necessary for the operation of the DG set shall be deemed to be included in the contract and be provided by the contractor without any extra charge.	
6	The tenderer shall submit the Technical pamphlets & Leaflets with illustrations of DG alternator, with schematic circuit/wiring diagram relevant to the components offered in duplicate with the tender.	
7	Two copies of the drawings showing the dimensions, location accessories etc. of the DG set should be sent to indenter along with the tender documents.	

7. a	<p>Following documents/details will be supplied to each consignee along with the DG set at the time of delivery:</p> <p>i. Two copies of the book of instructions for the installation, operation and maintenance of DG set</p> <p>ii. Factory test certificates on the engine, alternator, control panel & accessories as per the relevant IS.</p> <p>iii. Two set of documents as above should be directly sent to indenter.</p>	
8	Delivery, installation, testing commissioning & handing over of the DG set shall be completed within three months from the placement of Order.	
9	The DG Set should be guaranteed in all respects for satisfactory operation under full load condition for 24 months from the date of taking it into service. The firm will attend to the fault within 2 days of the fault is reported to him.	
10	SUPPLY INSTALLATION TESTING COMMISSIONING (SITC) The Tenderer/supplier is required to Supply, Installation, Testing & Commissioning above DG set at site with MCCB's, relays and contactors etc. (rating suitable for 100 Amp with current setting 50 Amp) along with necessary indicating lamps & energy meters.	
11	SPARES: Along with the diesel generator, the tenderer shall also quote separately for recommended spares for two years operation of DG set giving list of all spares.	
12	The Earthing of the DG set shall be done by the Tenderer in accordance with provision of IS 3043: 1987 (code of practice for earthing) with latest amendments (4 Nos.: 2 Nos. for neutral earth and 2 Nos. for chassis/body earth). Value of earth resistance should be less than 1 ohm.	
13	The stand alone silent type air cooled DG set will be fixed on self contained rust proof chassis complete with sound proof, weather proof enclosure with built in exhaust & ventilation system and will be fixed on the existing platform (The size of the existing platform at Anantapur is 2750 x 1250 mm) in the Diesel Generator room and shall be modified according to the requirement by the firm itself. The diesel tank should be part of the chassis.	
14	The heat generated in the radiator is to be blown out of the D/G room using suitable duct arrangement and exhaust fan.	
15	The tenderer shall supply the data on fuel & lubricating oil consumption (lt/hr) of the engine at the following loadings of the alternator at site conditions (taking into consideration the various derating factors) a) 25% load; b) 50 % load; c) 75 % load b) 100 % load; e) 110 % load.	
16	The performance of the DG set should be as per Indian standard IS: 10002: 1981 (Performance requirements for constant speed compression ignition (diesel) engines for general purposes. Above 20 kW reaffirmed 1991).	
17	Protection of the machine shall be as per IS 4691 : 1968 with latest amendments.	
18	The tenderer should be an Original Equipment Manufacturer for the offered Engine and Alternator make/MODEL (authorized by the Manufacturer of Engine & Alternator to supply their Equipments). Also tenderer should have ISO certification for his manufacturing works. Documentary proof for these are to be enclosed along with the tender.	

19	A standard list of tools including special tools required for maintenance and repair of Diesel Generator is to be quoted with the tender. The cost of these tools is to be quoted separately.	
20	The successful Tenderer will have to get the above diesel generator sets inspected by a person authorized by Indenter in his workshop/factory before dispatch as per IS. Original Type Test Certificates (as per IS applicable) of Engine, Alternator, accessories etc. shall be handed over to the Indenter's Inspector and routine tests as per IS shall be arranged by the Tenderer. Immediately after Inspection, the Inspection report/Certificates shall be issued by Inspector as per performance of the machine.	

SECTION II

SCHEDULE (A)

TECHNICAL PARAMETERS FOR ALTERNATOR

Sl. No.	Technical parameters	Indenter's requirement	Compliance / Confirmation by the Tenderer
1	Type of Alternator	Brush less, self excited, self regulated.	
2	Electrical Output (continuous)	20 kVA at site mentioned in Section III.	
3	Make	Kriloskar Electrical Company (KEC) / STAMFORD / AVKC Crompton Greaves.	
4	No. of phases & interconnection between phases, if any	3 phase with Neutral, Star connected.	
5	Rated voltage	415 Volts (nominal).	
6	Power factor	Better than 0.80 (lagging).	
7	Frequency in Hz	50 Hz \pm 3 %	
8	Speed in RPM at rated load	1500 RPM	
9	Type of coupling direct or by belt	Engine is to be coupled directly to alternator. Coupling through chain or belt drive is not acceptable.	
10	Type of enclosure	Screen protected drip proof type as per IS 4691 IP 21/IP 22.	
11	Exciter	i).The alternator shall be brushless self regulated self excited and rated for continuous operation from no load to full load under all working conditions. ii).The alternator shall be able to supply unbalanced load as specified in IS 13364 (Part 2) 1992 with latest amendments.	
12	Exciter rating	It shall be rated for 1.25 times the full load conditions.	
13	Type of field	Rotating field salient pole brush less alternator.	
14	Output waveform	The output waveform should be of pure sine wave, free from any harmonic interference. Total harmonic distortion should be below 3 % and it should be shown during factory test.	
15	Earthing	As per IS 3043 : 1987	
16	Type of duty	Continuous duty.	
17	Phase Sequence	RYB	
18	Ambient Temperature	50 Degree Cent, R / H 90%	
19	Class of Insulation	Class " F " (Rotor) Class " F " (Stator)	
20	Mounting	Horizontal, foot mounted.	
21	Voltage regulation	\pm 1.0 % from no load to full load.	
22	Whether neutral point is to be brought down to terminal	Yes. Neutral point is to be made inside the Stator and 4 terminals to be brought to terminal box.	
23	Cooling	Air cooling.	
24	Temperature rise	As per IS 12802 and IS 4722 : 1992	
25	Overload capacity	1.5 times the rated FLC for 30 seconds	

		or 10 % overload for one hour in every 6 hours.	
26	Over speed	To withstand the speed of 1.2 times of the rated speed.	
27	Voltage, current & frequency measurement	Display through separate meters. Make: Preferably by AE make.	
28	Electrical Protection	Over current / short circuit / Earth fault /under voltage / under frequency.	
29	Vibration	As per IS 12075 : 1987 amended to date.	
30	Noise	As per IS 12065 : 1987 amended to date.	
31	i). Terminal ii). Output Terminals iii). Terminal Marking	Three phase with Neutral. Terminal box shall be mounted on top of stator body and shall be suitable for connecting up to 70 sq. mm, 3 ½ core PVC insulated, PVC sheathed, Aluminium conductor armoured cable. As per IS 4728 : 1975 amended to date.	
32	Whether rated output is required at NTP or site conditions	At site conditions taking into account the de-rating as per relevant IS 1601 : 1960 (amended up to date).	
33	De-rating Parameters	To be given by the Tenderer.	
34	Rated FLC	To be given by the Tenderer.	
35	IS Code	4722: 1992 Rotating Electric Machine.	

SCHEDULE (B):

TECHNICAL PARAMETERS FOR DIESEL ENGINE

Sl. No.	Technical parameters	Intender's requirement	Compliance / Confirmation by the Tenderer
1	Type of Engine	Self start Air Cooled Turbo Charged ISO 9001 approved Diesel Engine.	
2	Make	Kirloskar / Greaves / Ashok Leyland.	
3	Capacity	i).To be rated for driving the alternator to deliver the rated full load output mentioned in Para 24 of Section II (A) and at respective site mentioned in Para B of Section III. ii).The Tenderer shall specify the capacity of the Diesel Engine offered by him along with the computations of various de-rating applied as per relevant IS.	
4	Type of fuel	H.S Diesel Oil.	
5	Method of Cooling	Air cooled.	
6	Compression Ratio	To be defined.	
7	IS Code	Diesel Engine shall conform to IS 10002: 1981 (Reaffirmed) with latest amendments.	
8	Method of starting	i).ON/OFF through Remote Control Panel / local control Panel. ii).The engine shall be cold starting type.	

		<p>iii).It should have battery starting from 24 volt battery.</p> <p>iv).Starting switch with key should be provided on engine control panel.</p> <p>v). Battery charging ammeter shall be provided for starting battery.</p> <p>vi).Battery offered should be maintenance free of good quality and reputed make complete with ignition charging connecting leads & terminals. The Make/Model of the offered battery, and its Amp – hour rating to be mentioned.</p> <p>vii).Manual starting facility is also to be provided. DG Set offered with compressed air starting will not be accepted.</p>	
9	Capacity of fuel tank in litres required	A service tank of minimum 24 hrs running capacity along with suitable fuel gauge is to be provided. The tank should be as per IS amended up to date. Quantity of Diesel in litres.	
10	Speed of Engine (Direct Coupling to Alternator)	1500 RPM with class A 1 governing as laid down in IS 10000 / BS 5514.	
11	Type of Exhaust system	A heavy duty residential type exhaust silencer to be provided. The silencer should be of minimum 5 feet height. The heat of the radiator shall be blown out of D/G room using exhaust pipe line and exhaust fan.	
12	Engine protection	<p>i).Over speed protection through hour meter cum RPM indicator with audio and visual alarm.</p> <p>ii).Low Lubricating Oil Pressure Protection with audio and visual alarms.</p> <p>iv).Emergency Stop Provision.</p>	
13	Site conditions	As per Section III.	
14	IS Code	Conforming to IS 10002 : 1981 with latest amendments.	
15	Base frame	Common MS channel fabricated, rigid, rust proof & with suitable anti - vibration Pads mounting.	
16	Testing	As per IS 10000 (Part I to Part XII).	
17	Accessories.	To be supplied with complete accessories and as per standard practice.	

SCHEDULE (C)

TECHNICAL PARAMETERS FOR COMPLETE DIESEL GENERATOR SET

Sl. No	Technical parameters	Intender's requirement	Compliance / Confirmation by the Tenderer
1	Type of DG set	Air cooled, silent. Self contained with Remote control panel.	
2	Dimensions of DG set including acoustics enclosure which is suitable for accommodating inbuilt control panel.	a).Length should not be more than 3400 mm; b).Width should not be more than 1200 mm; c).Height should not be more than 2200 mm;	
3	Total Weight of DG set	To be furnished by the Tenderer.	
4	Type of enclosure	DG set shall be housed in an Acoustic Enclosure consisting of Acoustic insulation, Non inflammable, ventilation system, doors & suitable for outdoor use requiring no building or construction.	
5	Noise level	Complete DG set including engine should be super silent type & should achieve a noise level of 75 dBA at a distance of 3 mtrs from the set against reasonably quiet background and should meet the Pollution Board norms for Environment protection at the time of delivery of DG set.	
6	Smoke Level	Harmful Gaseous emission shall be as low as possible and should meet the Pollution Board norms for Environment protection at the time of delivery of DG set.	
7	Earthing	The Earthing of the chassis of the machine with 25 mm x 3 mm copper strips will be done by the Tenderer in accordance with provision of IS 3043 : 1987 with latest amendments. The main Earth pits (4 Nos.) shall also be provided outside the DG room by the tenderer for this purpose (2 for neutral, 2 for body / chassis earth). Specified earth parts and type of materials to be used.	
8	Inspection	The successful Tenderer will have to get the Diesel generator sets inspected by a person authorized by the Indenter in his workshop / factory before dispatch.	
9	Testing of DG set	The testing of DG set will be demonstrated on no load, partial load and full load (in steps of 20 % from no load to full load) at site.	

SCHEDULE (D)

ENGINE , ALTERNATOR AND CONTROL PANEL

Control panel for 20Kva 415 V, 3-phase, 50 Hz AC supply should have the following features & accessories.

Sl. No.	Technical parameters	Compliance / Confirmation by the Tenderer
1	It should be mounted on the enclosure with hinged panel and will be wired up as per standard practice & approved by CPRL	
2	It should be fabricated out of CRCA sheet duly processed in 7 stages, dust proof, vermin proof & powder coated.	
3	The Alternator panel is to be provided with necessary MCCB's/contactors & adequate space for connecting outgoing & incoming cables up to 70 sq mm, 3 ½ core Al. conductor armoured cables. The rating of MCCB's/contactors/relays will be suitable for 100 Amp with current setting 50 Amp and rating of interconnecting copper cables shall be suitable for taking at least 1.5 times the rated current.	
4	The panel shall comprise of following Instruments : (a) Start / stop switch with key, (b) Local/remote control switch, (c) Frequency meter, (d) DC Voltmeter & Ammeter for battery charging, (e) AC Voltmeter with selector switch (f) kW meter, power factor meter (g) MCCB of suitable rating (h) Instrument fuses (i) Low oil pressure audio alarm (j) Priming pump starter (k) Hour meter (l) RPM meter (Tachometer) (m) kWh meter.	
5	The panel shall comprise the following Indicators: (a) Set ON (b) Load ON (c) Remote control (d) Low lubricating oil pressure (e) Over speed (f) High enclosure temperature.	
6	Suitable flush mounted AC ammeter with selector switch shall be provided. The ammeter scale shall be more than 20% above the full load current.	
7	Suitable flush mounted AC voltmeter with selector switch shall be provided.	
8	Protection for Generator : (a) Earth fault protection through relay (b) Under voltage protection through relay (c) Under frequency protection through relay (d) Over current protection(through MCCB/ACB release) (e) One set of fuses shall be provided for instruments & control circuit.	

9	<p>The engine local control panel should have the following features :</p> <p>(a) Start/stop push button with key for local starting</p> <p>(b) Special switch on the local control panel providing locking in any of the three positions :</p> <p style="padding-left: 20px;">i) Local</p> <p style="padding-left: 20px;">ii) Remote</p> <p style="padding-left: 20px;">iii) Off –No rotation at all.</p> <p>(c) A timer to ensure that the starter is not pressed for a long time.</p> <p>(d) A pressure switch to ensure that the starting motor is not energized when the generator is running.</p> <p>(e) Lubricant oil Temp. gauge.</p> <p>(f) Hour cum tachometer.</p> <p>(g) Protection against the following :</p> <p style="padding-left: 20px;">i) Engine over speed</p> <p style="padding-left: 20px;">ii) Low lub oil pressure</p> <p style="padding-left: 20px;">iii) High cylinder head temperature</p> <p style="padding-left: 20px;">iv) One set of audio and visual alarm for above.</p>	
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SCHEDULE (E):

REMOTE CONTROL PANEL:

Sl. No	Indentor's requirement	Compliance / Confirmation by the Tenderer
1	The Diesel Generator will be provided with a remote control panel. This control panel will be wired up as per standard practice and approved by CPRI and shall be installed at a remote location (in the Control Room). It should be fabricated out of CRCA SHEET duly processed in 7 stages, dust proof, Vermin proof & powder coated. The panel shall comprise of following instruments & indications.	
a.	Instruments : a) Start / Stop switch.	
b.	Indications : a) Set ON b) Load ON	
2.	The Remote starting facility shall have following features: a) Start / stop push button with key for Remote starting. b) Special switch on the Remote control panel providing locking in any of the three positions : 1. Remote, 2. Local, 3. Off - No rotation at all	
3	Tenderer will supply and lay suitable multi - core conductor cable (PVC insulated, PVC sheathed, Armoured cables) in ground for remote operation and for visual indications of parameters.	
4	Rates for supply of suitable control cables will be submitted by the tenderer in per meter length.	
5	The cable box / panels to be supplied by the tenderer will terminate all these cables.	
6	The cables will be laid as per CPWD specification / ISI code amended up to date.	

NOTE: Remote control panel should be installed in the Control Room.

SECTION III

A. SCHEDULE OF REQUIREMENTS(PRICE BID)

Sl. No.	Description	Quantity	Price Rs.
1	Supply of 20 kVA Diesel Generator set, 415 V, 3-phase, 4 wire, 50 Hz as per AIR Specification complete with accessories including remote control panel.	1 set	
2	Installation, Testing & Commissioning of the above DG set, including transportation and unloading at sites, by dismantling the existing 15KVA DG.	1 Lot.	
3	Supply and laying of suitable multi core copper conductor, control cable in ground for remote operation and for visual indications in transmitter hall of AIR. (NB: Rate per mtr length to be quoted).	30 mtrs	
4	Cu strips for Earthing (NB: Rate per mtr length to be quoted).	50 mtrs	
5	Providing Earth Pits with man hole covers outside the building for chassis and panel earthing.	4 Nos.	

OPTIONAL ITEMS

Sl. No.	Description	Quantity	Price Rs.
1	Spares required for operation of the DG set for 2 years (list of spares to be enclosed).	01 set	
2	Standard Tools including special tools required for maintenance and repair of Diesel Generator (list of tools to be enclosed).	01 set	
3	Supply & laying of cables of 3 ½ core, 70 sq. mm aluminum cable from DG set to main LT panel of AIR. (NB : Rate per mtr length to be quoted).		

Rate to be quoted for the Buy-back Item:

Sl. No	DESCRIPTION	QUANTITY	Price Rs.
1	AIR, Anantapur: Make: Ruston, Type: Mark IV 2YWAK, Capacity: 15 kVA Year of Installation: 1986	01 set	

S.NO	DETAILS OF DG SET AVAILABLE AT AIR ANANTAPUR	
1	ALTERNATOR	Make: Crompton & Greaves Ltd. , Capacity : 15KVA, 3 Ø 415V AC Amps: 80.9A Freq: 50 HZ RPM: 1500 Insulation: Class F BS2613 M/C No : NB 180S-13-86 Rating : CMR
2	ENGINE	Make: Ruston & Hornsby Type: 2YWA Engine No: 1430290286 Rated Speed : 1500 RPM Rated Power : 25.85BHP Rating: Const

B. SITE CONDITIONS.

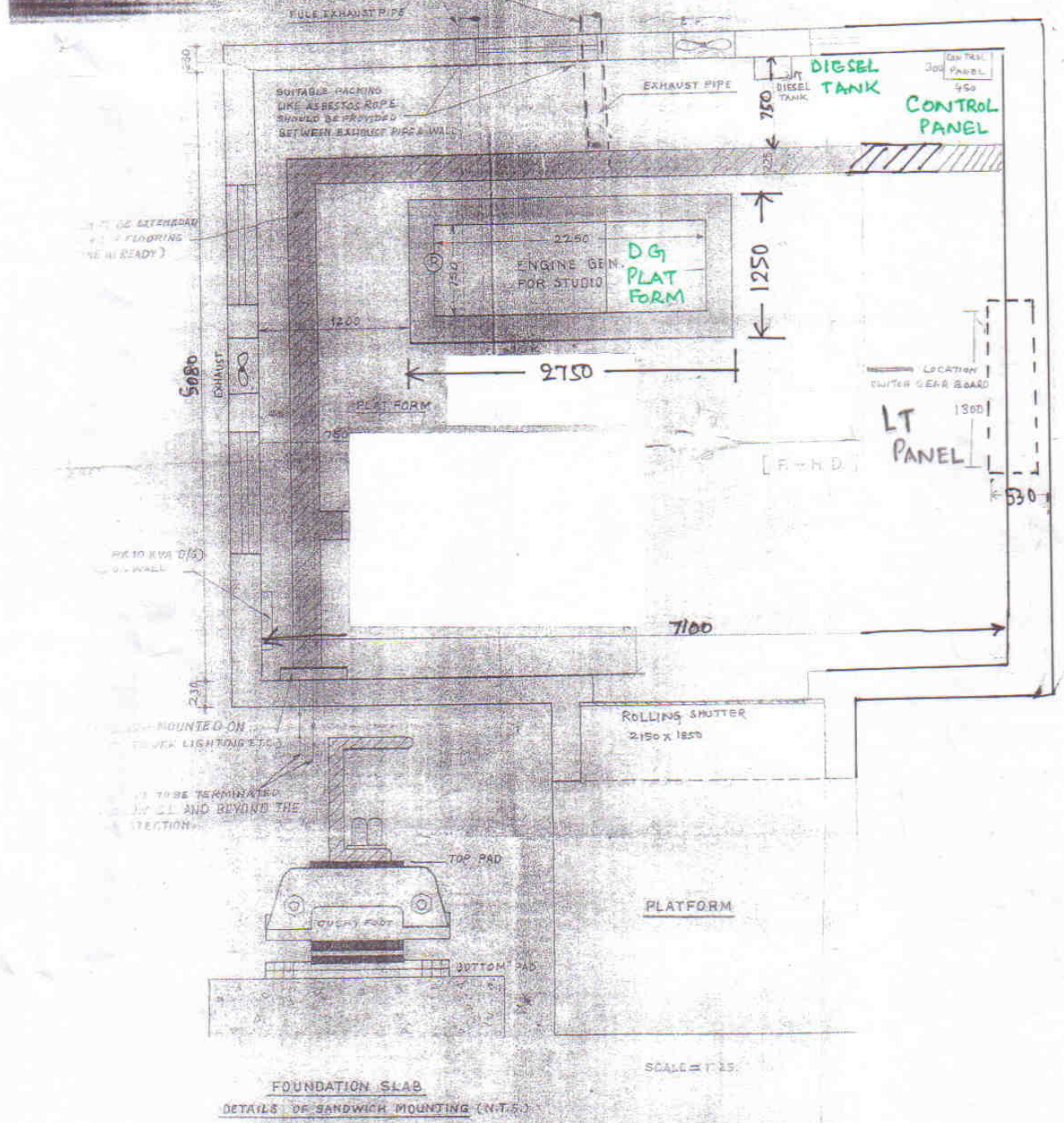
Sl. No.	Particulars	Anantapur
1	Maximum Ambient Temperature	35° C
2	Maximum Humidity & corresponding Temperature	60 % & 20° C
3	Relative Humidity	51%
4	Altitude above Mean Sea Level in meters	350 mtrs.
5	Temperature range	22° C to 42° C
6	Size of opening of the main entrance of DG room	2150 (h) x 1850 (w) mm Rolling shutter
7	The size of the existing Plat form in the DG room	2750 x 1250 mm
8	Size of DG room	7000 x 5250 mm

SECTION IV

TECHNICAL SPECIFICATION FOR CANOPY FOR 20 KVA DG SET (ACOUSTICALLY TREATED ENCLOSURE)

Sl. No.	Technical parameters	Compliance / Confirmation by the Tenderer
1	The Diesel Generator will be provided with a suitable acoustic enclosure. The self contained, weather proof acoustic enclosure should be robust in design so that there is no need of civil work to be carried out for installation of DG set. Only high quality components and accessories should be used in fabrication of enclosures such as locking systems, neoprene bulb type gasketing, dial type fuel gauge etc. Easy start and stop facility should be provided. External drain plug for diesel and lubricating oil for ease of routine maintenance should also be provided.	
2	The enclosure should be made out of cold rolled steel sheets which are duly surface treated for corrosion resistance. High quality painting should be done for weather proof and long lasting finish.	
3	Base frame shall be made of 5 mm thick sheet and bend to special section for maximum rigidity.	
4	Side wall shall be fabricated from 1.6 mm CRC sheet and filled with 100 mm thick acoustic material having 96 gauge per cubic meter density which is then covered with fiber cloth / tissue paper and finally with perforated MS sheets.	
5	The door shall be 75 mm thick, fabricated from 1.6 mm CRC sheets and packed with acoustic material. Sealing should be done with neoprene rubber gaskets. Heavy duty lockable handle should be provided for easy access and security.	
6	Roof shall be 65 mm thick made out of 2.5 mm thick CRC sheet welded to provide wrinkle free roof structure.	
7	The DG chamber shall be fitted with internal lighting system for ease of maintenance.	
8	The exhaust pipe shall be covered with glass wool and clad with aluminium sheet to avoid heating of DG chamber and to avoid excess heat in genset operational area. Air inlet and outlet space shall be provided with sound dampers.	
9	Complete DG set with enclosure including engine should achieve a noise level of 75 dBA at a distance of 3 mtrs. from this set against reasonably quiet background with the enclosure.	

AIR ANANTAPUR DG ROOM AT STUDIOS



SE1125/3

GENERAL TERMS AND CONDITIONS FOR WORK ORDER

1. **NAME OF PURCHASER** : The President of India
2. **PAYING AUTHORITY** : The Chief Engineer(SZ)
All India Radio & Television
Swami Sivananda Salai,
Chennai-600 005.

3. PAYMENT TERMS:

- (i) 80 % of the contract price for the equipments/materials inclusive of excise duty and Sales tax shall be paid on initial inspection and delivery of equipments at site in good condition.
- (ii) 20 % of the contract price for equipments and 100 % of installation charges on satisfactory completion of installation, commissioning and handing over.

4. BILLS:

All the supplies and works shall be in conformity with the order and all the part bill shall be prepared in quadruplicate in the same format as that of the order. All those part bills shall be submitted to the consignee for necessary certificates and onward transmission to the paying authority.

5. SECURITY DEPOSIT:

The contractor shall furnish the security deposit within 2 weeks of placement of order at the rate of 10 % of the contract value subject to a maximum of Rs. 5 Lakhs at the time of signing the contract.

The security deposit shall be furnished in favour of "The Chief Engineer (South Zone) AIR & TV, Chennai-5" in any one of the forms mentioned below.

- a) Cash in full (b) DD Payable at Chennai (c) Bank Guarantee from any Nationalized Bank valid upto the end of warranty period as per contract. The warranty period starts from the date after completion of the SITC work and taking over. (Not from the date of supply of DG and Standard Control Panel set).

The EMD received will be returned after receipt of S.D. The security Deposit shall be refunded in full on completion of successful guarantee/Warranty.

6. DESPATCH INSTRUCTIONS:

The packing and marking of goods shall be as laid down in clause-12 of general conditions of contract DGS & D 69 (Revised).

- a) The contractor shall arrange to dispatch the goods duly insured direct to the consignee after prior intimation for delivery at site by whichever mode of transport he may choose, to ensure safe delivery of goods at site. Unloading shall be done at site at the contractor's Expense. Only storage space will be provided by the consignee. The contractor will provide his own security like locking etc and store the materials at his own risk.

b) The contractor must submit his challans in triplicate to the consignee sufficiently in advance of the actual arrival of the stores at the destination failing which he will be held responsible for any subsequent discrepancies between the actual receipt and the material detailed in the challan received later. The challan must also contain the following informations:

1. Brief description of stores.
2. Railway/ Lorry Receipt No. & Date.
3. Supply order No. & Date.
4. Inspection note No. & Date

c) The consignment received at site shall be opened and checked for Shortages/damages by the contractor himself. He shall show all the Materials received at site to the consignee to enable him to certify Receipt of stores in good condition. However, in exceptional circumstances, the contractor may request the consignee to check the consignment on his behalf. In such cases the consignee shall notify the contractor of the shortage/damages immediately on receipt of consignment at site. Expenses incurred, if any, in any, in checking the consignments shall be debitible to the contractor's account.

7. INSPECTION:

a) SCOPE OF INSPECTION:

i) PRE INSPECTION:

Manufacturers / Contractors must satisfy themselves that the stores are in accordance with the terms of the contract and fully conform to the required specification by carrying out thorough pre-inspection of each lot before actually tendering the same for inspection to the inspecting officer nominated under the terms of the contract. A declaration by the contractor the necessary pre-inspection has been carried out on the stores tendered shall be submitting along with the challan. The declaration will also indicate the method followed in carrying out pre-inspection showing the features checked, tested and will have the certificates attached to the challan/declaration. If the Inspecting officer finds that pre-inspection of the consignment' as required above has not been carried out the consignment is liable for rejection.

ii) INITIAL INSPECTION:

All the supplies including fabricated items and bought out items shall be inspected before actual inspection. The place of inspection shall be as at below. Also the installation at the site shall be inspected periodically during installation. If the inspecting officer finds initial inspection that the supplies are not according to specification, the suppliers are liable for rejection. The purchaser may at his discretion waive initial inspection in respect of those supplies which bear ISI certificates or manufacturer's test certificates. The contract shall approach the inspecting officer for inspection at least two weeks in advance of the actual date of inspection. All arrangements for inspection shall be made by the contractor. Any deviation in stores after initial acceptance by the Inspector and their receipt by the consignee shall be to the account of the contractor. The contractor shall forward the relevant copies of the inspection certificates of the stores to the consignee along with delivery challan.

iii) FINAL INSPECTION:

The entire installation shall be inspected by the inspecting officer on completion of Installation, commissioning and Complete work at the project.

INSPECTING OFFICER: Consignee or Nominees of the Chief Engineers (SZ)/I.O. at Site.

8. INSURANCE:-

The contractor shall arrange for the insurance covering the risk during transit, Storage and installation till commissioning. All the charges for such insurance shall be borne by the contractor.

9. ADDITIONAL QUANTITIES:-

The purchaser reserves the right to place order for additional quantity upto 100% of the ordered quantity at the same rates and terms and condition during the currency of the contract.

10. PENALTY FOR DELAY:-

If the contractor is unable to complete the supply, installation, testing and commissioning within the stipulated time limit the purchaser may at his option allow such additional time as may considered justified with/without penalty and without altering terms and conditions of the order. In the event of failure of the contractor to complete the supply, installation testing and commissioning within the stipulated time or the extended time, the purchaser has the right to impose penalty of Rs.350/- per week or part thereof for every Rs.1,00,000/- of the total contract price. The contractor's liability for delay, however, shall not exceed 5% of the total contract price.

11. GUARANTEE / WARRANTY:-

The contractor shall accept clause-18 of the Form No. DGS & D-71 with exception that his obligation shall be limited for a period of 24 months from the date of taking over completion of the successful performance excluding down time during which the equipment was not working satisfactorily due to defective parts, faulty material/design/workmanship or fault erection. During the guarantee period the contractor shall repair or replace free of charge any parts that will become defective due to faulty material design, workmanship or erection.

12. CONDITIONS OF CONTRACT:-

DGS & D-68 (Revised and DGS & D-71 as amended upto date. However, Such of these conditions stipulated on this tender shall supercede corresponding conditions in DGS & D-71. The contractor shall sign a contract agreement form in triplicate in the prescribed Proforma and submit the same alongwith Security Deposit within 15 days. The complete form with the purchaser's signature shall be sent back to the contractor. No supplies will be made and no work shall start unless the agreement is signed by the contractor and the purchaser.

13. SPECIAL CONDITIONS:-

In addition to the terms and conditions contained in the general conditions of contract DGS & D-68 (Revised and DGS & D-71, the contract would also be governed by the following special conditions:-

- i) In case where only a portion of the stores ordered is tendered for inspection at the fag end of the delivery period the purchaser reserves the right to cancel the balance quantity not found acceptable after carrying out the inspection at the risk and expense of the contractor. If however, the stores tendered for inspection are found acceptable the purchaser may grant an extension of the delivery period subject to the following conditions:-

- (a) That no increase in price on account of any statutory increase in or fresh imposition of customs duty, excise duty, sales tax or on account of any other tax or duty leviable in respect of the stores specified in the acceptance of tender shall be admissible on such of the stores as are delivered after the expiry of the delivery period stipulated in the A/T.
 - (b) That notwithstanding any stipulation in the contract for increase in price or any other grounds no such increase which takes place after the date of delivery stipulated in the A/T. shall be admissible on such of the stores as are ordered after the expiry of the delivery period stipulated in the A/T.
 - (c) But, nevertheless the purchaser shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, excise duty, sales tax on account of any other ground stipulated in the price of variation clause which takes place after the expiry of the date of delivery stipulated in the A/T.
 - (d) The contractor shall not dispatch the stores till such time extension in delivery period is granted by the purchaser and accepted by the supplier before and extension letter as aforesaid is issued by the purchaser, the same are deemed to be subject to the conditions set out in preceding paragraph.
- ii) In case where the entire quantity has not been tendered for inspection within the delivery period stipulated in the A/T and the purchaser chooses to grant an extension of delivery period, the same would be subject to conditions mentioned in (i) above.
 - iii) The contractor shall refund any advance/part payment issued to him in respect of the rejected stores within 14 days of the receipt of intimation from the consignee about the rejection of such prices. This is strictly without prejudice and in addition to the rights provided in the clause-17 (8) of form DGS & D-67.
 - iv) The contractor is required to replace the rejected stores forthwith but in any event not later than a period of 14 days from the date of rejection and the contractor shall bear all the costs of such replacement including freight, if any but without being entitled to any extra payment or any other account.
 - v) Where under the contract, price payable is fixed F.O.R. dispatching station, the contractor shall, if the stores are rejected at destination by the Consignee, be able to, in addition to his other liabilities (including refund of price recoverable in respect of the stores rejected) to reimburse to the purchaser the freight and all other expenses.

14. ENFORCEMENT OF LABOUR LAWS:-

While engaging labour for carrying out obligations under the contract the contractor shall satisfy the conditions laid down under contract labour (Regulation and Audition) Act 1970 and (Central) Rules 1971 as amended from time to time and observe all formalities required as per said Act/Rules. The supplier shall also observe the provision under minimum wages act 1948 (Central) Rules 1950 amended from time to time while engaging labour.

15. FORCE MAJURE:-

If any time during the continuance of the contract the performance in whole or in part by the contractor shall be prevented or delayed by reason of any war, hostility acts of the public enemy. Civil commotion, Sabotage, fires, floods, explosions, epidemics, Quarantine restrictions, strikes, lock-outs or acts of God (therein after restrictions refer to as events and provided notice of happenings of any such eventuality is given by the contractor within 21 days from the date of occurrence thereof, the purchaser shall by reason of such event, neither he entitled to cancel this order nor shall have any claim for damages against the contractor in respect of such non-performance or delay in performance and delivery shall be resumed as soon and practicable after such events have come to an end or ceased to exist. Provided further that if the performance in whole or part or any obligation under this order is prevented or delayed by reasons of any such event for a period exceeding 180 days, the purchaser and the contractor shall meet to find a natural agreement to any effect resulting the reform or the purchaser may at his option cancel order provided also that if the order is cancel the order provided also that if the order is cancelled under this clause, the purchaser shall be at liberty to take over from the contractor at order prices all unused, un-damaged and acceptable material bought out components and stores in course of manufacture in the possession of the supplier at the time of such cancellation or such portion thereof as the purchaser may deem fit accepting such material, bought out components and stores as the supplier may with the concurrence of the purchaser elect to retain.

16. TECHNICAL MANUALS & DRAWINGS

Contractor shall furnish six copies of comprehensive technical manuals for use by the operation staff. Such manuals shall contain instructions from the preventive as well as routine maintenance of the plant. The contractor shall also furnish copies of approved wiring diagrams, schematics, etc., for various items equipment.

17. CANCELLATION:

The purchaser reserves the right to cancel the order in the event of non-performance or unsatisfactory performance by the contractor and recover payment already made if any, along with losses/damages incurred.

(M.SUJATHA)
Assistant Engineer
for Chief Engineer (SZ)