



NATIONAL BANK FOR AGRICULTURE AND
RURAL DEVELOPMENT
TAMILNADU REGIONAL OFFICE

TENDER DOCUMENT

PART-II

(PRICE BID)

**Supply, Installation, Testing and Commissioning
of 25 kVA DG Sets with Acoustic Enclosure and
other related works at NABARD Staff quarters of
Cenotaph road, Bazullah road and South Boag road,
Chennai**

ISSUED TO

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Last Date for Submission of Tender: 14:30 hrs on 27/03/2018

Date of Opening of tender : 15.:00 hrs on 27/03/2018

PART –II
BILL OF QUANTITY

Sr No	Description	Qty	Unit	Supply		Erection		Total Amount (Supply and Erection)
				Rate	Amount	Rate	Amount	
1	Supply, installation, testing and commissioning of 25 KVA DG set with auto stop panel, acoustic enclosure and other accessories as per technical specifications, cost should include freight and insurance charges from factory/OEM to site of installation, first filling of lube oil and diesel oil and battery charging as per specifications of techno commercial bid.	3	No					
	In Words (Rupees) :							
2	Preparation of civil foundation for installing DG set as per technical specifications and drawings (For Cenotaph road and Bazullah road staff quarters)	2	Set					
	In Words (Rupees) :							

3	Extending the exhaust pipe line with 100mm dia MS pipe including making a U- bend at one end and flange joint at the other end	45	Mt					
	In Words (Rupees) :							
4	Providing lagging for the exhaust pipe line with 50 mm lagging with glass wool and covering with GI sheet	45	Mt					
	In Words (Rupees) :							
5	Providing steel supporting structure made of MS angles and strips to support the extension pipe including anchoring etc as required and painting with 2 coats of red oxide primer and 2 coats of black enamel paint	2250	Kg					
	In Words (Rupees) :							
6	Providing tubular scaffolding for carrying out extension work of exhaust pipe line	3	Set					
	In Words (Rupees) :							
7	Supply and installation of 1.1 KV power cables, armoured with aluminium / copper conductor and XLPE insulation as per IS-7098 part-1							

7.1	3.5 x 35 Sqmm aluminium	55	Mt					
7.2	3 x 4 Sqmm copper	225	Mt					
7.3	4 x 6 Sqmm copper	130	Mt					
7.4	3 x 2.5 Sqmm copper	242	Mt					
7.5	4 x 4 Sqmm copper	20	Mt					
7.6	4 x 1.5 Sqmm copper	150	Mt					
7.7	4 x 10 Sqmm copper	15	Mt					
	Sub Total for (Items no 7.1 to 7.7)							
	Sub Total in Words (Rupees)							
8	End termination of above cables with single compression glands and copper/ aluminium crimping sockets, including earthing of glands with suitable copper ring brackets and connecting to earth grid with 14 SWG copper wire							
8.1	3.5x35Sqmm	12	No					
8.2	3x4 Sqmm	18	No					
8.3	4x6 Sqmm	6	No					
8.4	3x2.5 Sqmm	72	No					
8.5	4x4 Sqmm	24	No					
8.6	4x1.5 Sqmm	6	No					
8.7	4x10 Sqmm	2	No					
	Sub Total for (Items no 8.1 to 8.7)							
	Sub Total in Words (Rupees)							
9	Electrical control panels							
	Supply, installation, testing and commissioning of electrical control panels as per following specifications: Enclosure shall be IP-65 with double door supported							

	on MS channel supports grouted to the floor with RCC. The supports shall be painted with 2 coats of red oxide followed by 2 coats of black enamel paint, The bus bar shall be 100A copper supported on SMC for TP&N distribution, Incomer feeder fitted with 63A TPN MCB, 10 Ka							
9.1	Generator panel- Cenotaph road with: 1 no 63A TP, 2 nos 32A TP and 1 no 25A DP MCB, 10 Ka as outgoing feeders	1	NO					
9.2	Generator panel- Bazullah road with							
	3 nos 25A DP and 1 no 32A TP MCB, 10 ka as outgoing feeders	1	No					
9.3	Generator panel- South Boag Road with							
	3 nos 25A TP and 1 no 25A DP MCB, 10 ka as outgoing feeders	1	No					
	Sub Total in Words (Rupees)							
10	<u>CENOTAPH Road Quarters – A block (VOF)</u>							
10.1	<u>A block Panel</u>							

	Fabricated panel with IP-42 protection and with double door. The same will be equipped with following:							
	100A TPN copper bus bars, 1 no 63A TPN MCB, 10 Ka as incomer from Generator panel 2 no outgoing feeder each equipped with a. 1 No 32A TP MCB, 10 Ka, b. 2 nos 25A 4 NO contactor c. 2 nos 1 No + 1 NC auxiliary plug in contacts d. 1 no outgoing feeder equipped with e. 1 No 32A DP MCB, 10 Ka, f. 2 nos 25A 2 NO contactor g. 2 nos 1 NO + 1 NC auxiliary plug in contacts	1	No					
10.2	Supply, and installation, testing and commissioning of Vertical Distribution Boards (VDB-1 and VDB -2) and Emergency DB (EDB -1 and EDB-2) for VOF with the following specifications: Double door vertical DB with IP-42 enclosure and fitted with following 100A TPN copper bus bars							
10.2.1	VDB -1							

	1 no 32A 4P MCB, 10 Ka as incomer							
	2 no 32A TP MCB, 10 Ka as outgoing feeders	1	No					
10.2.2	VDB-2 (Cenotaph road)							
	1 no 32 4P MCB, 10 Ka as incomer							
	2 no 32A TP MCB, 10 Ka as outgoing feeders	1	No					
10.2.3	EDB- 1 (VOF) (Cenotaph road)							
	32A 4P RCBO, 30 ma as incomer							
	8 nos 6A, 2 nos 16A and 2 nos 25A SP MCB, 10 Ka as outgoing feeders	1	No					
10.2.4	EDB- 2 (VOF)(Cenotaph road)							
	32A 4P RCBO, 30 ma as incomer							
	10 nos 6A, and 2 nos 16A SP MCB, 10 Ka as outgoing feeders	1	No					
	Sub Total in Words (Rupees)							
11	<u>CENOTAPH Road Quarters – B & C block electrical panels</u>							

	Supply, installation, testing and commissioning of <u>Fabricated panel</u> with IP-42 protection and with double door. The same will be equipped with following							
11.1	B & C Block Common panel : Fitted with 100A SPN copper bus bars							
	1 no 25A DP MCB, 10 Ka as incomer from Generator panel							
	2 nos 25A 2NO contactor							
	2 nos 1 NO + 1 NC plug in auxiliary contacts	1	No					
11.2	B Block Gym panel :fitted with							
	100A TPN copper bus bars							
	1 no 32A TPN MCB, 10 Ka as incomer from Generator panel							
	2 nos 25A 4NO contactor							
	2 nos 1 NO + 1 NC plug in auxilliary contacts	1	No					
11.3	B & C block panel - fitted with							
	100A TPN copper bus bars							
	1 no 32A TPN MCB, 10 Ka as incomer from Generator panel							
	1 no outgoing feeder equipped with							
	1 No 16A TP MCB, 10 Ka,							
	2 nos 25A 4 NO contactor							
	2 nos 1 No + 1 NC auxilliary plug in contacts							

	1 no outgoing feeder equipped with							
	1 No 16A DP MCB, 10 Ka,							
	2 nos 25A 2 NO contactor							
	2 nos 1 No + 1 NC auxilliary plug in contacts	1	No					
	Sub Total in Words (Rupees)							
12.	<u>South Boag Road Electrical Panels</u> Supply, installation, testing and commissioning of Electrical panels with the specifications							
	Fabricated panel with IP-42 protection and with double door. The same will be equipped with following							
12.1	<u>D Block Electrical panel (South Boag Road)</u> fitted with 100A TPN copper bus bars, 1 no 25 A TPN MCB, 10 Ka as incomer from Generator panel 1 no outgoing feeder equipped with 1 No 16A TP MCB, 10 Ka, 2 nos 25A4 NO contactor 2 nos 1 No + 1 NC auxiliary plug in contacts 1 no outgoing feeder equipped with 1 No 16A DP MCB, 10 Ka, 2 nos 25A 2 NO contactor 2 nos 1 No + 1 NC auxiliary plug in	1	No.					

	contacts							
12.2	A- block panel (South Boag road) fitted with							
	100A SPN copper bus bars, 1 no 25A DP MCB, 10 Ka as incomer from Generator panel, 2 nos 25A 2NO contactor, 2 nos 1 NO + 1 NC plug in auxiliary contacts	1	No					
12.3	B- block panel (South Boag road)							
	100A TPN copper bus bars, 1 no 25A TPN MCB, 10 Ka as incomer from Generator panel, 2 nos. outgoing feeder each equipped with a. 1 No 16A TP MCB, 10 Ka, b. 2 nos 25A 4 NO contactor c. 2 nos 1 No + 1 NC auxiliary plug in contacts d. 1 No 16A DP MCB, 10 Ka, e. 2 nos 25A 2 NO contactor f. 2 nos 1 No + 1 NC auxiliary plug in contacts	1	No					
12.4	C- block panel (South Boag road)							
	Fabricated panel with IP-42 protection and with double door. The same will be equipped with following							
	100A TPN copper bus bars							
	1 no 25A TPN MCB, 10 Ka as incomer from Generator panel							

13.2	C- block panel (Bazullah road) fitted with :							
	100A SPN copper bus bars							
	1 no 25A DP MCB, 10 Ka as incomer from Generator panel							
	2 no outgoing feeder each equipped with							
	1 No 16A DP MCB, 10 Ka,							
	2 nos 25A 2NO contactor							
	2 nos 1 No + 1 NC auxiliary plug in contacts	1	No					
13.3	B- block panel (Bazullah road) fitted with							
	100A SPN copper bus bars							
	1 no 25A DP MCB, 10 Ka as incomer from Generator panel							
	2 no outgoing feeder each equipped with							
	1 No 16A DP MCB, 10 Ka,							
	2 nos 25A 2NO contactor							
	2 nos 1 No + 1 NC auxiliary plug in contacts	1	No					
13,4	A- block panel (Bazullah road) fitted with							
	100A SPN copper bus bars							
	1 no 32A TPN MCB, 10 Ka as incomer from Generator panel							
	2 no outgoing feeder each equipped with							
	1 No 16A DP MCB, 10 Ka,							

	2 nos 25A 2NO contactor							
	2 nos 1 No + 1 NC auxiliary plug in contacts							
	3 nos outgoing feeders each equipped with							
	1 No 16A TP MCB, 10 Ka,							
	2 nos 25A 4NO contactor							
	2 nos 1 No + 1 NC auxiliary plug in contacts	1	No					
	Sub Total in Words (Rupees)							
14	Earthing							
14.1	Supply and installation of 17.2mm dia 2 Mt long low carbon steel earth electrode bonded with 250 micron copper with GI clamp to be installed in a suitable bore and filled with 50 Lbs of carbon bond environment friendly back filling compound. An RCC trough of size 300x300mm shall be provided with RCC cover for protecting the electrode. (2 nos for DG body, 1 nos for DG neutral)	9	No					
14.2	Supply and installation of 8 SWG copper wire for interconnection of earth electrodes and earthing of DG set and DG panel body and DG set neutral	75	Mt					

14.3	Supply and installation of 10 SWG copper wire for earthing panels	60	Mt					
	Sub Total in Words (Rupees)							
15	Safety items							
15.1	Supply and fixing of danger boards for DG set, DG panel and block panels	18	No					
15.2	Supply and fixing of 2.5 KG CO2 fire extinguisher near the DG set (one fire extinguisher for each DG set)	3	No					
	Sub Total in Words (Rupees)							
16	Approvals from statutory bodies							
16.1	Preparation of as-built drawings, submission to CEA, getting the installation inspected and obtaining safety certificate	3	Job					
16.2	Submitting the documents and getting approval from Pollution control board	3	Job					
	Sub Total in Words (Rupees)							
17	GI perforated cable trays							

	Supply and installation of 300mm wide 50mm high GI perforated cable tray to be fixed on the wall for routing of power cables	20	Mt					
	Sub Total in Words (Rupees)							
18	South Boag Road Quarters only – Design, Fabrication, installation and painting of steel structural platform 3 Mt high from FGL including necessary RCC foundations, ladder etc suitable for installation of DG set- Design and drawing of the structure to be approved by NABARD/consultant	2000	Kg					
	Sub Total in Words (Rupees)							
19	Annual maintenance contract							
	Maintenance service contract charges for three years as specified in the tender (without spares*) per annum for Engine, Alternator & auto start/stop panel and all the related electrical panels, cables etc after initial Guarantee period/Defects Liability. The enhanced rate (if any) after that will be considered based on price index / market rate etc. <i>*Spares will be procured by the Bank separately.</i>	3	Job					

	Sub Total in Words (Rupees)							
	Grant total for 3 sites in Rs.							

Amount in words Rs.....
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Place

**Signature of Contractor
with seal**

Date