Reference Tender Notice No: NEIGR/S&P/01/03/2017-2018; Dated: 05.03.2018 pertaining to Tender Enquiry No: NEIGR/S&P/OT/E-67/2017 -18 for processing of Generator Set, Fogging /Fumigation Machine, Road Side Bins, Grass Cutter Machine, Earth Digging Machine, Jet Cleaner Machine, Spraying Machine for implementation of project under Swachhta Action Plan in the Institute.

The technical specification of the following items /stores has been revised as follows:-

1. **Diesel Generator Set:**
   May be read as '50 KVA Diesel Generator Set

**Revised Technical Specification:**

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**SPECIFICATIONS OF 50 KVA DG SET**

The DG set shall be silent type, electric start, CPCB approved comprising of Engine, Alternator, starting battery, acoustic enclosure, manual control panel, fuel tank, first fill of coolant & lubricating oil complete with all standard accessories and confirming to following specification & requirements:

1. **Engine**
   (a) Engine shall be water/air cooled, four stroke, multi-cylinder and capable of developing suitable BHP at 1500 rpm for given KVA rating.
   (b) Engine shall be provided with battery charging alternator, fuel filter, lub. oil filter, air cleaner, exhaust piping, electronic / mechanical governor, residential silencer, Control panel, Engine instruments panel, fuel tank, safety indicators & protections and all the standard accessories.
   (c) Engine instrument panel shall be comprising of starting switch & key, lub. oil temperature & pressure gauge, RPM indicator & hour meter.
   (d) Control panel inside the canopy should have Ammeter, voltmeter, frequency meter, MCCB, energy meter & hour meter etc. as per standard requirement.
   (e) Radiator shall be provided in water cooled engines.
   (f) The engine shall be capable of providing 10% overload for 1 hour for every 11 hours continuous running at full load.
   (g) The Engine shall confirm to IS : 10000, IS : 10001, IS : 10002 or equivalent specification.

2. **Alternator**
   (a) Alternator shall be brushless, self-excited, self-regulated, suitable for continuous operation and providing 3-phase output of specified KVA rating at 415V, 50 Hz, 1500 rpm & 0.8 p.f. (lagging).
   (b) It shall be housed in a screen protected drip-proof enclosure.
   (c) Class of insulation of alternator shall be 'F'.
   (d) It shall be provided with standard protection (over-voltage, over speed and under voltage).
   (e) Alternator shall confirm to IS : 13364 or equivalent standards.

3. **Acoustic Enclosure**
   (a) It should be fabricated from suitable combination of 1.6/2.0 mm CRCA sheet steel, powder coated, filled with insulating material of suitable thickness & density as per IS:8183.
   (b) All doors / opening should be sealed with neoprene / EPDM gaskets.
   (c) The noise level must be reduced upto 75 db at one meter distance from DG set as per norms of CPCB.
   (d) The enclosure should be integrated and should have the provision of lifting arrangement, point of body & neutral earthing, air breather, fuel drain, lub. oil drainage, hood for rain protection, easy stop push button, panel meter viewing window, exhaust fan (if required), diesel filling arrangement (lockable type) etc. as per requirement.
   (e) Suitable locks shall be provided on the doors of the canopy.

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Signatures:
Technical Specification for Earth Digging Machine

1. Should be fuel efficient. Low operation cost, designed for small areas compact job,
2. Should be suitable for digging pits and managing Municipal solid waste, cleaning of sewage, loading in 6-in-1 bucket
3. Bucket should be included in the package
4. Should have service outlets in Shillong, service should be provided within 24hours.
5. Should have cabin mounted and 6-in-1 shovel
6. Easy to maintain in line fuel pump
7. Water separator for getting more reliability longer fuel pump life
8. Should have long service intervals
9. Should have Robust and Heavy duty structure, made of high quality steel.
10. Should have durable loader arm
11. Should have fast travel speed
12. Should enclose performance details of the excavator, loader etc and static dimensions. And axle details
13. Engine: BS III water cooled diesel Engine, 4 cylinder, displacement 3.2 liter, approx 50 BHP @ 2200 RPM
14. Maximum torque: 203 Nm@ 1400 RPM
15. Transmission: Should have four speed fully synchronmesh, smooth shift gear box with integral torque converter
16. And electrically operated reversing shuttle. Torque converter stall ratio is 2.67:1
17. Brakes: Hydraulically actuated dual line, self adjusting, compensated oil immersed, multi disc type on the rear axle. Should have Electronic parking brake
18. Steering: Full power hydrostatic power steering with power track rod and manual capability in the event of engine or hydraulic power failure. Hydraulic working pressure approx 1800 p.s.i (125 bar).
19. Electricals: 100 ampere-hour 12 volts battery with alternator and full road lighting.
20. Hydraulic: 60.0 L, System pressure should be approx 2600 PSI (180 bar). Pump type Gear, double pump. Combined pump flow: 69 lpm @ 2200 rpm. Filtration through suction strainer.
21. Fuel Tank: 60.0 Lt 
   Engine coolant: 13.5 Lt 
   Engine Oil: 8 Lt 
   Transmission: 16 Lt Rear axle: 11.0 Lt
22. Proper canopy with all facilities should be there. Should have Audio and visual fault warning system.
23. Documentation:
   a. User / Technical / Maintenance manuals to be supplied in English.
   b. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital pump technician and company service engineer should be clearly spelt out.
   c. Cost of spare parts, consumables and accessories which are not covered under warranty & CMC period has to quote in schedule XI as percentage value in the Technical Bid, or else will be considering to be cover throughout the warranty & CMC period.
   d. Calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual has to be done throughout the warranty & CMC period.
   e. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet and the offer details has to submit in the technical bid. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.
   f. Certificate of inspection and quality control indicating the S / N for all non-consumable items with date at the time of installation.
24. Warranty and Maintenance:
   a. Warranty for 5 years followed by CMC for 5 years including Spares & service.
(b) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.

(c) Cost of spare parts, consumables and accessories which are not covered under warranty & CMC period has to quote in schedule XI as percentage value in the Technical Bid, or else will be considering to be cover throughout the warranty & CMC period.

(d) Calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual has to be done throughout the warranty & CMC period.

(e) Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page / Para number of original catalogue / data sheet and the offer details has to submit in the technical bid. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.

(f) Certificate of inspection and quality control indicating the S/N for all non-consumable items with date at the time of installation.

9. Warranty and Maintenance:

(a) Warranty for 5 years followed by CMC for 5 years including Spares & Service.

Prof. G. K. Mulhi
Chairperson
SAI Comm. NEIGRIHMS
4. **Manual Control Panel**
   (a) Panel shall be fabricated from 14/16 guage CRCA sheet steel and powder coated finished.
   (b) It shall be provided with Engine Start & Stop switches, selector switches for ammeter & voltmeter, ammeter, voltmeter, frequency meter, timers, control & power contactors, suitable rating MCCB & busbars, instrument & control fuses, indicating lamps, visual & alarm indication for faults and other standard accessories complete with internal PVC insulated FR copper wiring.
   (c) It shall also be provided with battery charger complete with voltage regulator, float/booster selector switch, on-off switch, voltmeter & ammeter for charging the battery from mains.

5. **Fuel Tank**
   (a) Fuel tank shall have capacity for 12 hours continuous running at full load.
   (b) It shall be provided with fuel level gauge, drain valve, inlet/outlet connection & required pipe etc.

6. **Battery**
   (a) A 12 Volt low maintenance/maintenance free lead acid battery of adequate capacity with connecting cable shall be provided.
   (b) It shall confirm to relevant IS specification and of reputed make.

7. **Other requirements**
   (a) The diesel engine and alternator shall be close coupled and mounted on common base of robust construction.
   (b) Engine shall be provided with AVM pads for absorbing the vibration.
   (c) All the relevant test certificates of engine & alternator by the manufacturer & certificate of conforming with CPCB norm shall be provided.
   (d) A set of tools necessary for proper maintenance of the DG set shall be supplied with the DG set.
   (e) Instruction & maintenance manual (in duplicate) shall be supplied along with every DG set with all the details & drawings.
   (f) The engine & alternator shall be provided with a rating plate marked with all the standard details.
   (g) Installation, Commissioning of DG set including testing on full load (for minimum 3 hours) and demonstration to the department staff shall be in scope of the firm.
   (h) The installation shall include making suitable foundation, GI plate earthing as per IS:3043 (2 nos for body & 2 nos for neutral) with GI strip (25 x 3 mm), providing, laying & connecting PVC insulated aluminum conductor armored cable of suitable size including changeover of suitable rating (if required) complete in all respect as per requirement. Installation specification as below:
   i. **Plat Form:** A approximate plat form of 10'x7'x2' with plane flooring.
   ii. **Eartthing Work:** G.I. plat earthing 2x2' (4 no.) complete in all respect.
   iii. Earthing pit should be 3m to 4m deep.
   iv. **Cable:** 3/5/4 core aluminum armored cable of 50 m.m2 and approximate cable required is 25m to 30m.
   v. **Change Over Switch:** One change over switch of 100 amp four pole is required.

8. **Documentation:**
   (a) User / Technical / Maintenance manuals to be supplied in English.
3. **High Pressure Jet Cleaner Machine**: Revised Technical Specification:

**Specification for High Pressure Jet cleaner (cold water) -1no.**

1. High Pressure Jet machine must have automatic stop system and pressure regulator system. Suitable to remove stubborn dirt.
2. Automatic stop system and pressure regulator system preferred.
3. Should be operational within 30-120 bar.
4. Should have minimum delivery rate of 300-660L/hr.
5. Should be operational in 230V-50Hz.
6. Must contain sand blasting lance and cleaning nozzle with adjustable head.
7. The machine should be within 25-30 KG weight.
8. Detergent Tank in built – 3-5L
9. Power -3-3.5 KW
10. Must have wheels for transportation
11. Long power cable wire for easy use.

12. Documentation:
   a. User / Technical / Maintenance manuals to be supplied in English.
   b. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelled out.
   c. Cost of spare parts, consumables and accessories which are not covered under warranty & CMC period has to quote in schedule VI as percentage value in the Technical Bid, or else will be considering to be cover throughout the warranty & CMC period.
   d. Calibration and routine Preventive Maintenance Support as per manufacturer documentation in service / technical manual has to be done throughout the warranty & CMC period.
   e. Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page /Para number of original catalogue / data sheet and the offer details has to submit in the technical bid. Any point, if not substantiated with authenticated catalogue / manual, will not be considered.
   f. Certificate of inspection and quality control indicating the S/N for all non-consumable items with date at the time of installation.

13. Warranty and Maintenance:
   a. Warranty for 5 years followed by CMC for 5 years including Spares & service.

4. **Road Side Bins (2 colour bins) with Iron Stand**: Specification:
   - Road Side PVC Bins (2 colour bins) with Iron Stand
   - 80-100 liters (Blue and Green)

All other terms and conditions remain the same.

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Tel/Fax: 0364-2538032.

Sd/-

Stores & Procurement Officer,
For and on behalf of Director, NEIGRIHMS