

TERMS OF REFERENCE

MONTHLY PREVENTIVE MAINTENANCE OF GENERATOR SETS

I. LOCATIONS

- 1.1 ASTI Building and grounds located at C.P. Garcia Ave., UP Diliman, Quezon City, 1101.
- 1.2 Electronics Product Development Center (EPDC) with office address at MIRDC Comp., Gen. Santos Ave., Bicutan 1631, Taguig City.

II. CONTRACT PERIOD

The contract period from March 2023 to December 2023.

III. QUALIFICATION OF SERVICE PROVIDER

The SERVICE PROVIDER must have the required experience and expertise to carry out the preventive maintenance services. The following must be submitted as part of the post-qualification:

1. Must be in business of generator maintenance services for the past three (3) years (SEC/DTI Registration, Business Permit) and a distributor of the brand of generator gets installed in ASTI;
2. Certified technician/s with at least three (3) years working experience in preventive maintenance of generator to be assigned in ASTI;
3. Must have attended relevant training within the last three (3) years, as evidenced by Training Certificates of technicians who will be assigned to ASTI (submit certification of the generator technician);
4. Proven track record in rendering satisfactory provision of generator maintenance services (submit a copy of certificate of satisfactory rating issued by current or previous client, other than DOST-ASTI);
5. Must provide a copy of Certificate of Manufacturer's Authorized Distributorship of FG Wilson and Perkins spare parts.
6. Must have an Authorized Service Center or must be a Certified Service Provider in the Philippines to conduct service repair and preventive maintenance for FG Wilson and Perkins Generator Sets.

IV. SCOPE OF WORK

No.	GENERATOR DETAILS	RATING	ENGINE MODEL	LOCATION
1	P220HE2 FG WILSON	250KVA	1300SERIES	DOST-ASTI
2	344EPTP PERKINS	350KVA	1506A-E88TAG5	DOST-ASTI
3	ATS	1PANEL		DOST-ASTI
4	SYNCHRO PANEL	2 PANEL		DOST-ASTI
5	P330H-1 FG WILSON	325KVA	1606Aseries	DOST-EPDC
6	ATS	1PANEL		DOST-EPDC

1. GENERAL PREVENTIVE MAINTENANCE

1.1 Cooling System

- 1.1.1 Check radiator level
- 1.1.2 Check water leaks, if any
- 1.1.3 Check all radiator hoses

1.2 Fuel System

- 1.2.1 Check fuel level
- 1.2.2 Check fuel filters

1.3 Air Induction and Exhaust System

- 1.3.1 Check Air Cleaner
- 1.3.2 Check Exhaust Pipe

1.4 Lubrication System

- 1.4.1 Check Oil Level
- 1.4.2 Check Oil Leaks, if any

1.5 Starting System

- 1.5.1 Check battery cables and connections
- 1.5.2 Check battery fluid and terminals
- 1.5.3 Check fan belts
- 1.5.4 Check alternator belts

1.6 Control Panel

- 1.6.1 Check PBC and Module

- 1.6.2 Check all fuses
- 1.6.3 Check all electrical connections

1.7 Testing

- 1.7.1 Testing without load
 - 1.7.1.1 Voltage
 - 1.7.1.2 Frequency / RPM
 - 1.7.1.3 Oil Pressure
 - 1.7.1.4 Water Temperature
 - 1.7.1.5 Running Hour Meter
 - 1.7.1.6 Battery Voltage

- 1.7.2 Testing with load
 - 1.7.2.1 Voltage
 - 1.7.2.2 Frequency / RPM
 - 1.7.2.3 Current
 - 1.7.2.4 Oil Pressure
 - 1.7.2.5 Water Temperature
 - 1.7.2.6 Test AVR and Exciter

1.8 Megger Test

- 1.8.1 Insulation

1.9 Battery

- 1.9.1 Check battery water level and refill water, if necessary.
- 1.9.2 Check Battery DC output voltage and charging rate.
- 1.9.3 Replace battery, if necessary.

1.10 Sanitation

- 1.10.1 Check Cleanliness

2. Automatic Transfer Switch (ATS)

- 2.1 Check ATS indicator lamps and breaker
- 2.2 Checking of temperature on busbar and terminal connection using thermal scanner.

3. Preventive Maintenance for Synchro-Panel

- 3.1 Preventive Maintenance and Check-up

4. Change Oil, Coolant and Filters

- 4.1 Replace radiator liquid with coolant additive

- 4.2 Replace coolant/water filters/Air Filter
- 4.3 Replace fuel filters
- 4.4 Replace oil/lube filters
- 4.5 Change engine oil
- 4.6 Disposal of all waste fluids (if applicable)

Additional Details as follows for ASTI Generator Set:

Description	Quantity
Oil Filter	1-FG Wilson 1-Perkins
Fuel Filter	1-FG Wilson
Fuel Filter Primary	1-Perkins
Fuel Filter Secondary	1-Perkins
Water Filter	1-FG Wilson
Air Filter	1-FG Wilson, 1-Perkins
Engine Oil	At least 30Liters-FG Wilson, At least 40Liters-Perkins
Radiator Coolant	At least 50Liters-FG Wilson, At least 30Liters-Perkins

Additional Details as follows for EPDC Generator Set:

Description	Quantity
Oil Filter	1-FG Wilson
Fuel Filter	1-Fg Wilson
Air Filter	1-FG Wilson
Engine Oil	At least 45Liters-FG Wilson,
6SMF Battery	2- FG Wilson
Radiator Coolant	At least 50Liters-FG Wilson

2. REPAIR SERVICE

1. The Service Provider shall make available the necessary repair services during unscheduled breakdown of equipment for seven (7) days a week. Enrolled generator sets are given priority service attention and service assistance can be requested in a 24 Hour, 7 Days a week basis.
2. The Service Provider must provide a list with contact details of trained technicians/engineers/ personnel who are competent and qualified to provide technical support.
3. The Service Provider shall respond with its best effort upon receipt of emergency call, complaint or trouble notice and shall mobilize its resources within 6 to 12 hours after office hours or 48 hours during weekend and holiday.
4. The Service Provider will submit a quotation for the equipment rehabilitation and major repair.

3. SPARE PARTS

1. All replacement parts are warranted for three (3) months against factory defects upon installation.
2. The Service Provider will submit a quotation for any spare parts as replacement for the diagnosed defective parts and will wait for approval from the End-user prior to delivery and installation.

3. All defective and used parts will be turned over to the End-user's representative for proper disposal. Used oil on the other hand, will be disposed by the Service Provider.

V. OBLIGATIONS OF THE SERVICE PROVIDER

1. Conduct the monthly preventive maintenance, check-up and related minor repairs according to schedule to ensure reliable operation of the Generator Sets during the period coverage. Quotation must include the supplies/materials needed for replacement of engine oil, coolant and filters (breakdown of materials cost shall also be provided).
2. Provide qualified technicians, supervision, tools and equipment necessary to conduct the regular preventive maintenance check-up and related corrective repairs.
3. Undertakes minor adjustments and repairs as required in the manufacturer's periodic schedule. Labor and supplies, at no cost to ASTI.
4. Submits Service Report to the customer or site representative upon completion of work, before leaving the site. Detailed Incident Report may also be requested for further information needed.
5. In case of major repair, the supplier will submit quotation of materials and spare parts needed, including scope of work to be done (applicable only if the unit is no longer under warranty).
6. Dispatch of the technicians for request of service assistance must be done within 24 hours upon receipt of complaint/report.
7. Designate a head office-based personnel who will be responsible in managing and providing administrative support services. 24/7 support thru phone and email, including regular holidays, special holidays and government announced holidays. On-call support services must also be provided in situations that require the presence of personnel, as urgently needed to perform critical activities. Response time is within 4 hours from receipt of call.
8. Provides related maintenance training on site to the end-user's representative during the scheduled check-up service.

VI. SCHEDULE OF PREVENTIVE MAINTENANCE

The schedule of preventive maintenance for **DOST-ASTI** shall be as follows:

ACTIVITY	FREQUENCY	SCHEDULE
General Preventive Maintenance	Monthly	Every 3 rd Friday of the Month
Preventive Maintenance of ATS and Synchro Panel	Semi-Annual	19 May and 17 November 2023
Change Oil, Coolant and Filters	Yearly	15 September 2023

The schedule of preventive maintenance for **EPDC** shall be as follows:

ACTIVITY	FREQUENCY	SCHEDULE
General Preventive Maintenance	Monthly	Every 4 th Friday of the Month



Preventive Maintenance of ATS Annual Change Oil and Battery Replacement	Yearly	25 August 2023
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VII. DUTIES AND RESPONSIBILITIES OF THE ASTI

The ASTI, through Property and Supply Section, shall closely monitor the implementation of the preventive maintenance activity in accordance with the specifications and conditions of the Contract.

During each scheduled preventive maintenance, an authorized representative of ASTI shall be available to supervise the procedures and ensure that office properties, such as computers and other equipment are secured.

VIII. PAYMENT SCHEDULE

Payment to the Service Provider shall be made on a monthly basis upon acceptance of ASTI, subject to the submission of billing statement, duly accomplished service report forms and other documentary requirements.

IX. LIQUIDATED DAMAGES

Non-compliance with the Terms and Conditions stated in the Contract will result in the payment of corresponding penalties/liquidated damages of the Contract Price by the winning Service Provider. ASTI reserves the right to rescind the contract after the Service Provider fails to comply for a maximum of three (3) periods, without prejudice to other courses of action and remedies open to it.

X. DISPUTE RESOLUTION

1. In the matter of dispute, should any dispute related to the Contract and/or rights of the parties arise, the same shall be submitted to mutual consultation, mediation and arbitration, in the order of application. The venue of the proceedings shall be in Quezon City.

In case of court suit, the venue shall be the courts of competent jurisdiction in Quezon City, to the exclusion of all other courts; and

2. Any amendment or additional terms and conditions to the Contract must be in writing, signed and acknowledged by the Parties.

XI. NOTES

1. Should there be any discrepancy with the technical requirements stipulated in the Purchase Request and the Terms of Reference, requirement/s provided for in the latter shall govern.
2. Any other term, condition or provision not stipulated in this document will be covered by a separate agreement as proposed and agreed upon by DOST-ASTI and the Service Provider.
3. Bidders must comply with all specifications contained in this PR, TOR and supplemental bid bulletin, if any.