

ANNEX D TO
TENDER NO 06.06.0000.279.07.175.24
DATED 07 NOVEMBER 2024

TECHNICAL SPECIFICATION AND TERMS & CONDITIONS (DP-5)

TECHNICAL SPECIFICATION FOR PROCUREMENT OF EGPU, CAPACITY: MINIMUM 90 KW, OUTPUT: 115/200V AC, 3 PHASE, 400HZ AND 28V DC THROUGH DGDP IN FY 2024-25

| Ser No | Description | Specification Specified | To be filled up by the Manufacturer/ Principal |
|--------|--|--|--|
| 1. | Nomenclature | eGPU | |
| 2. | Utility/Purpose | The purpose of Ground Power Unit is to supply power to start aircrafts/helicopters of BAF (like Yak-130, MiG-29, K-8W, C-130, AN-32, L-410, GROB-120 aircraft and MI-17, MI-171, MI-171Sh, AW-139, AW-119, Bell-206 and Bell-212 helicopter) on ground | |
| 3. | Brand | To be mentioned by the bidder ✓ | |
| 4. | Model | Latest production during tender ✓ | |
| 5. | Type of eGPU | eGPU ✓ | |
| 6. | Country of Origin | USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan and EU Countries. ✓ | |
| 7. | Country of Manufacturer | USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan and EU Countries. ✓ | |
| 8. | Name of the Manufacturer with full address | To be mentioned by the bidder. | |
| 9. | Specifications of Battery and Charging System | | |
| | a. Type of Battery | Lithium-Ion or to be mentioned by the bidder | |
| | b. Number of Battery | To be mentioned by the bidder | |
| | c. Voltage and Capacity of each Battery | To be mentioned by the bidder | |
| | d. Capabilities of addition of Battery | To be mentioned by the bidder | |
| | e. Number of starts in full charged condition | To be mentioned by the bidder | |
| | f. Replacement warranty of battery pack | Minimum 05 years replacement warranty would be provided for the battery pack (actual replacement warranty is to be mentioned) | |
| | g. Type of Charger | On board fast charger compatible to equipment along with necessary charging cable (Charging time for full charge is to be mentioned) | |
| | h. Capacity of Charger | To be mentioned by the bidder | |
| | j. Input Cable and Plug | 20 meter long (minimum) 3 phase connecting Plug (both male and female) | |

| Ser No | Description | Specification Specified | To be filled up by the Manufacturer/ Principal |
|--------|---|--|--|
| | k. Test Bench Report | Test bench report for capacity of each battery is to be provided with unit. | |
| 10. | Output of the eGPU: | | |
| | a. Output Power | 90 KW (minimum) | |
| | b. Output Voltage | (1) 115/200 V AC, 3 Phase, 400 Hz (2) 28 V DC | |
| | c. Output Current | (1) Rated Current: Minimum 800 Amps continuously (2) Inrush/ Surge Current for supplying 1500 Amps for 30 seconds | |
| | d. Power Factor | To be mentioned by the bidder (if any) | |
| | e. Voltage Regulation | <0.5% for balanced loads and up to 30% for unbalanced loads | |
| | f. Voltage Recovery | Δ <8% and recovery time 10 ms to 100% load change | |
| | g. Total Harmonic Distortion | <2% (linear load) | |
| | h. Output delay timer | Power output delivery delay time should be less than 10 seconds (if delay timer is fitted in the Ground Power Unit) | |
| 11. | Following protection and safety features must be incorporated: | | |
| | a. Protection class IP55 | | |
| | b. No break power transfer | | |
| | c. Over/ Under load at output | | |
| | d. Overload | | |
| | e. Internal high temperature | | |
| | f. Control voltage error | | |
| | g. Short circuit of output | | |
| | h. Plug insertion interlock | | |
| | j. Neutral voltage supervision | | |
| | k. Neutral voltage displacement | | |
| | l. Leakage current supervision | | |
| | m. Beacon for operation and charging separately. | | |
| | n. Beacon for low battery warning. | | |
| 12. | Control Panel | User friendly Plug and Play type. | |
| 13. | Environmental | | |
| | a. Operating Temperature | -10°C to +55°C without additional heating/ cooling. | |
| | b. Relative Humidity | 10-100% | |
| | c. Climate Control Unit | Both cooling and heating system. | |

| Ser No | Description | Specification Specified | To be filled up by the Manufacturer/ Principal |
|--------|--|--|--|
| | c. Noise Level | Typically 60 dB(A). | |
| 14. | Canopy of the eGPU | All the equipment should be fully protected from rain/sun by sliding zinc coated canopy which allows unrestricted access to major equipment. It should be able to operate in hot humid monsoon prone region. | |
| 15. | Metallurgical Treatment | Anti-corrosive treatment must be given on all parts of the Ground Power Unit prone to corrosion. | |
| 16. | Output Power Cable | <p>Following Output Power Cable must be fitted with each Ground Power Unit:</p> <p>a. One output cable 115/200 VAC, 400 Hz, 3 Phase, 04 wire (at least 15 meters long) with a standard 06 pin aircraft adapter.</p> <p>b. One output cable for 28 VDC, 1500 amperes (at least 10 meter long) with a standard 03 pin flat adapter.</p> <p>c. All the output power cable must be covered with insulated rubber material.</p> | |
| 17. | Cable box/ tray | Cable boxes having steel cover are to accommodate all the power cables to protect the power cables from rain. The location of the boxes must be easily accessible. | |
| 18. | 28 VDC Power Socket | One standard two pin, 15 amps, 28 VDC socket with a "ON-OFF" switch should be fitted in the power control board and it must be easily accessible to use. | |
| 19. | Operation Cycle | The GPU should be able to operate for min 06 hours continuously. The bidder is to specify about the operation cycle of the offered eGPU. | |
| 20. | Electrical Equipment/ Aggregate | The country of origin of all the electrical equipment/ aggregate, control instrument and other accessories should be from the stated countries mentioned in clause number 6. | |
| 21. | Dimension, Volume and Weight of GPU | To be mentioned by the bidder. | |
| 22. | Tow bar | Lockable tow bar interlock with standard tow eye. | |
| 23. | Lighting System | <p>The following lighting system must be available:</p> <p>a. Clearly visible flashing beacon light on top of the eGPU and 'NAV' light qty-04 (blue & red) on roof (front & rear corner).</p> <p>b. Flashing indication lights during moving.</p> | |

| Ser No | Description | Specification Specified | To be filled up by the Manufacturer/ Principal |
|--------|--|--|--|
| 24. | Tyre and Wheels | <p>a. The Ground Power Unit must be incorporated with two axle four wheel (front axle center pivoted for 60° left/ right turn able).</p> <p>b. Size of wheels of pneumatic tyres with drum is to be mentioned by the bidder.</p> <p>c. 01 x set of wheel is to be provided as spare.</p> | |
| 25. | Braking System | Manual wheel brake provision must be available. | |
| 26. | Body and Chassis | <p>a. Body must be of steel and fabricated with steel trolley.</p> <p>b. Ground clearance of trolley should not be less than 180 mm.</p> | |
| 27. | Towing Speed | Standard towing speed should be 15 KPH by towing tractor. | |
| 28. | Color | <p>a. Canopies should be painted with golden yellow gloss/ White color.</p> <p>b. Cable boxes, chassis, wheels, bumpers etc should be painted with standard black colors.</p> | |
| 29. | Standard Fittings | <p>a. All safety devices are to be incorporated as per the international standard.</p> <p>b. All types of fittings are to be done by the manufacturer as per the requirement of the user.</p> <p>c. Any other things required to operate the Ground Power Unit smoothly to be provided by the bidder within the quoted price.</p> | |
| 30. | For standard tools, and accessories are to be supplied with each GPU by the suppliers | 01 x Tools box with sufficient special tools for maintenance/ repair of the eGPU is to be provided within the quoted price. But bidder is to submit a list of tools to be supplied with eGPU mentioning type and quantity with the offer. | |
| 31. | Publications | <p>Following Publications are to be supplied along with the each Ground Power Unit:</p> <p>Manuals: Maintenance manuals, Operation manuals, Illustrate Parts Catalogue & Illustrate Parts Breakdown (with detail description and part number of items at component level and detailed drawing, circuit diagram etc), Repair & Workshop manual and trouble-shooting manual each 02 copies are to be provide with each eGPU. Supplier is to provide 02 x soft copy (CD) of the manuals/ publications and related software (if any) required for maintenance/ rectification.</p> | |
| 32. | The supplied eGPU must be equipped with all standard fittings and accessories (as required for operation). | | |

TECHNICAL TERMS AND CONDITIONS FOR PROCUREMENT OF EGPU, CAPACITY: MINIMUM 90 KW, OUTPUT: 115/200V AC, 3 PHASE, 400HZ AND 28V DC THROUGH DGDP IN FY 2024-25

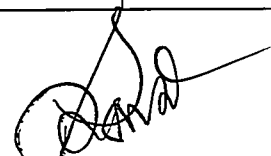
| | The bidder is to mention "Comply/Not comply/Appropriate remarks against each Technical Specification and Terms & Conditions. Otherwise, the quotation will not be accepted. The Terms & Conditions are mentioned below: | |
|-----|---|-----------------------------------|
| Ser | Description | To be filled up by the Principal/ |
| 1. | Authorization certificate (original) in favor of the Principal by the OEM is to be submitted along with the offer in English language. | |
| 2. | Authorization certificate (Original) in favor of the local agent by the principal is to be submitted along with the offer in English language. | |
| 3. | The supplier/manufacturer is to provide Original Equipment Manufacturers (OEM) certificate mentioning the date (month and year) of manufacturing of the eGPU in English language. | |
| 4. | The supplied eGPU should be capable of operating in all-weather condition. A certificate in this regard is to be submitted along with the offer in English language. | |
| 5. | The bidder is to mention in the offer whether the manufacturer is ISO certified or not. A certificate in this regard is to be submitted along with the offer in English language. ✓ | |
| 6. | A complete set of tool kit and all accessories are to be supplied along with the eGPU for full range operations within the quoted price. In this regard, a list of tool kit and all accessories is to be submitted along with the offer. ✓ | |
| 7. | The bidder is to quote the cost of fast and slow-moving consumable spares separately which will be required for the first two years of maintenance. BAF will have the option to accept/reject part or entire list of the spares. | |
| 8. | Original technical brochure/booklet of the eGPU is to be submitted along with the offer in English language. ✓ Offered technical specifications must conform to the specifications mentioned in the submitted brochure/catalogue. Fax/photocopy/hand-written offer/catalogue/brochure and catalogue without marking/signing will not be considered. | |
| 9. | All types of marks/indications/instruction must be engraved in English language on the body of the eGPU. | |
| 10. | Three copies of operation and maintenance manual including soft copies are to be supplied along with eGPU in English language by the bidder. The supplied manual must contain construction of the eGPU, operation, safety procedure, storage condition and serviceability ensuring procedures. | |
| 11. | Item must be brand new, unused and latest product (not earlier than the year of 2025) with necessary accessories and standard fittings. | |
| 12. | The supplier/manufacturer is to provide Quality Assurance Certificate of the eGPU in English language. ✓ | |
| 13. | Hand-written offer and any written clarification will be rejected. It must be typed and printed in the original pad of the manufacturer, principal and local agent duly signed by the authority. | |
| 14. | Delivery of the eGPU is to be completed within 300 days after signing the contract. | |
| 15. | The item/items must be supplied in standard Air/Sea worthy packing. ✓ | |
| 16. | The bidder is to provide following publications including soft copy in English language with the equipment free of cost. a. Operation and technical manual b. Maintenance, troubleshooting and repair manual. c. Illustrated Parts Catalogue (IPC) of all supplied eGPU. | |

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| 17. | The port of shipment must be from the manufacturer's country. | |
| 18. | The supplier/manufacturer is to submit the list of spares required for 10 years operations after warranty period. Supplier will also provide a guarantee of availability of spares of the eGPU in local market for 10 years. A guarantee certificate in this regard is to be submitted along with the offer in English language . | |
| 19. | After-sales service should be available with the local agent of the supplier and is to be provided as and when required for 10 years (free of charge up to the warranty period and thereafter on payment). A guarantee certificate in this regard is to be provided by the local agent along with the offer in English language . | |
| 20. | A Warranty/Guarantee for 36 months is to be provided by the supplier from the date of acceptance of the eGPU in BAF. The period of warranty will stop from the date of reporting discrepancy. The period of warranty will resume after receipt of serviceable/replaced eGPU to make the total warranty period of 36 months. | |
| 21. | If the eGPU or any parts of the eGPU is found unserviceable/unsuitable/damaged/defective during pre-receipt inspection or after receipt or within the warranty/guarantee period, the supplier is to replace the same at his own cost and charges within 60 days from the date of such reporting. Periods of unserviceability for more than 60 days will be added to the total warranty period. | |
| 22. | <p>Pre-Shipment Inspection (PSI) of the vehicle will be carried out by 02 x BAF personnel {01 x Engineering Officer and 01 x BAF technician of E&I (elec) trade} for the duration of 05 working days (excluding journey period) at least 60 days before date of shipment. All cost related to PSI team including both ways air ticket, food and accommodation and other related charges will be borne by BAF. However, the supplier is to arrange local transport, medical and all the admin formalities of the team. The supplier is to extend all possible assistance to the team for checking the documentation including physical checking of the vehicle. The supplier should inform about the date of the pre-shipment inspection at least 08 weeks prior to the exact date of carrying out the pre-shipment inspection. During PSI, following will be checked:</p> <ul style="list-style-type: none"> a. Visual inspection of the vehicle. b. Functional check of the vehicle as per technical specification. <p>Documentation (log book, quality certificate etc) as per the contract.</p> | |
| 23. | <p>Post Shipment Inspection/acceptance of the eGPU will be carried out at BAF site in presence of representative of supplier's specialist/representative of local agent and representatives of BAF. In the process of post-shipment inspection/acceptance, the following shall be checked:</p> <ul style="list-style-type: none"> a. Visual inspection of the eGPU. b. Documentation: <ul style="list-style-type: none"> i. Shipping invoice/documents mentioning the name of the ship and port. ii. Manufacturer's certificates stating that the eGPU is manufactured by them. iii. Quality certificate of the eGPU duly signed by the manufacturer's quality inspector and the year of production is to be mentioned in the Quality Certificate. iv. All relevant manuals of individual equipment. c. Performance test of all the equipment (as applicable). | |
| 24. | Practical and theoretical training for 05 working days on construction, operation, maintenance, troubleshooting and storage procedure of the supplied equipment is to be carried out locally for a group of BAF personnel by the supplier's own expert. The cost of training is to be quoted separately. BAF will have the option to accept/reject the training. | |

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| 25. | All the expenses including food, accommodation, medical etc of the supplier's specialists while staying at Bangladesh for imparting local training will be borne by the supplier. However, BAF may provide internal transportation only. | |
| 26. | Bidders are to submit their Financial Offer (price quotation) in the offer separately mentioning as follows. a. Price of eGPU including freight charge. b. Cost of training (which will be included in the financial part of the contract. BAF has the option to accept/reject the training). | |
| 27. | The bidder is to deliver the eGPU at 201 MU, BAF within one month after customs clearance at Chattogram by the Embarkation Unit, BAF. The eGPU is to be brought from Chattogram to Dhaka by the supplier's/ local agent's expense and arrangement. | |
| 28. | Lowest technically accepted bidder will be selected considering the offered price of the following items: a. Price of eGPU. b. Quoted price for local training. | |
| 29. | Part-shipment and part-payment of the eGPU will not to be accepted. | |
| 30. | Original offer (with proper signing at every page) along with original brochure in English (02 x original copies for 201 MU BAF and 01 x original copy for Directorate of Supply and 01 x copy for Directorate of Engineering) of vehicle having all the relevant information including color photographs of the eGPU and equipment along with details of technical information with proper marking and sign, name, designation, telephone number, fax number, email and mail address must be submitted. | |
| 31. | The bidder is to mention comply/not comply/appropriate remarks against each clause/serial-number of the Technical Specification and Terms & Conditions as per the sequence. Mentioning 'Comply' against any tender specification will be considered that the bidder is fully agreed with the requirement of that particular clause. | |
| 32. | BAF may disqualify a bidder/supplier without any notice who has previous record of poor performance such as abandoning the job, not properly completing the contract, significant delay to supply the contracted items, litigation history of financial failures and non-submission of required certificates/ documents with the offer. | |
| 33. | In case of failure to supply the contracted goods within stipulated time, BAF may cancel the contract. | |
| 34. | BAF has right to reduce or increase the quantity of equipment/items at any stage before concluding the contract. | |
| 35. | No price increment at any stage after submission of offer will be accepted by BAF. | |
| 36. | Offer must remain valid till 30 June 2025 of the tender. Within the validity of the offer, withdrawal of offer or showing unwillingness to deliver the items by the bidder will not be accepted and in such cases subsequent action would be taken against the bidder as per DGDP rules. | |
| 37. | Any other terms and conditions not covered here will be dealt with as per DGDP rules and regulations. | |

MISC TERMS AND CONDITIONS

| Ser no | Miscellaneous Terms And Conditions | Filled by the bidder |
|--------|---|----------------------|
| 38. | The bidder must mention the full address including Telephone number, Fax number and e-mail address in the offer. The bidder also mentions the name and full address (including Telephone number, Fax number and e-mail address) of the local agent (if any) in the offer. | |
| 39. | Item with changed/dissimilar part no/ description (if any) is to be mentioned during submission of offer. | |
| 40. | If any change is required in contract/ LC due to fault of supplier, all expenses shall have to be borne by the supplier. | |
| 41. | Normally transshipment is not allowed. However, if the bidder needs transshipment they are to mention in the offer about their requirement. In case of such requirement, the transshipment may only be allowed under single AWB/ BL. | |
| 42. | Normally transshipment is not allowed. However, if the bidder needs transshipment they are to mention in the offer about their requirement. In case of such requirement, the transshipment may only be allowed under single AWB/ BL. | |
| 43. | The bidder is to mention the name of port/country of shipment in the offer. | |
| 44. | Increase of price at any stage after submission of offer will not be accepted by BAF. The offered unit price and total price against each item must be correct. If the unit price or total price of an item is found incorrect, that unit price or total price will be taken into consideration which will be benefited to BAF. | |
| 45. | The bidder is to quote FCA/ FOB cost and freight charges (by both air and sea) separately & clearly in financial offer. If freight is not quoted separately for each item, total freight will be distributed against each item based on its proportionate FCA/FOB cost of all items. Any price/ cost quoted in the pages of quotation other than financial offer will not be considered. | |
| 46. | For failure to supply the contracted goods in time, DGDP/ BAF may cancel the contract with necessary punitive action. | |
| 47. | Offer must remain valid till 30 June 2025 from the date of opening the tender. Within the validity of the offer, withdrawal of offer or unwillingness to sign the contract by the bidder will not be accepted and in such cases action would be taken against the principal supplier and local agent as per DGDP rules. | |
| 48. | Delivery schedule mentioned in the tender specifications may be changed by DGDP/ BAF due to delay in concluding the contract. In this case, the contract would be signed within offer validity period. DGDP/ BAF also reserves the right to get the offer validity extended with the consent of the supplier. | |
| 49. | Part shipment & Part payment : Not allowed. | |
| 50. | Payment Terms. ✓ 100% Payment in foreign currency (FC) will be made through an irrevocable Letter of Credit (LC) opened with scheduled bank in Bangladesh and negotiating bank recommended by the supplier under following terms and conditions: a. ✓ 80% of CFR/ CPT value will be released on production of shipping documents to the bank. b. ✓ 20% of CFR/ CPT value will be released on satisfactory acceptance of 100% items by BAF after inspection/ functional test (as applicable), on production of Certificate Receipt Voucher (CRV) and written clearance from DGDP. | |
| 51. | AWB/BL must be in the name of consignee. | |
| 52. | Bidders are requested to submit soft copy of Financial Offer in a CD according to the given proforma along with the hard copy of Financial Offer in closed envelop. | |
| 53. | Any other terms and conditions not covered here will be as per DGDP rules and regulations. | |



**ANNEX E TO
TENDER NO 06.06.0000.279.07.175.24
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FORMAT FOR SUBMISSION OF FINANCIAL OFFER (DP-6)

| Subject | Qty | Price | Remarks |
|---|-------|-------|----------------------------------|
| Procurement of EGPU(Electronic Ground Power Unit) | 03 Ea | | |
| Sea/Air Freight | | | |
| CFR/CPT Value | | | |
| Special Service Tools Kit and all accessories as per clause 6 of Annex D (Technical Terms & Conditions) | | | Details may be shown in appendix |
| Cost of Fast and slow-moving Spare Parts as per clause 7 of Annex D (Technical Terms & Conditions) | | | Details may be shown in appendix |
| Cost of Local Training as per clause number 24 of Annex D (Technical Terms & Conditions) | | | Details may be shown in appendix |
| Total Value | | | |

Local Agent's Commission:

Validity : _____
 Delivery : _____
 Country of Origin : -
 Warranty : _____
 PG Amount : _____

Remarks.

1. Each column must be filled in by the Principal and submitted with application.
2. All above information's must be in principal's invoice quotations.
3. Write in column NOT APPLICABLE (NA) if not asked in tender conditions and NOT QUOTED (NQ) if not quoted by principal.

**Signature of the Tenderer
With Full Name, Address and Seal of the Company**

