

F.No. 01/13/2014-Gen.
GOVERNMENT OF INDIA
NATIONAL DISASTER MANAGEMENT AUTHORITY
A-1, Safdarjung Enclave. New Delhi -29

Dated – 08.06.2015

E-NOTICE INVITING TENDER

National Disaster Management Authority, A-1, Safdarjung Enclave on behalf of the President of India invites online bids in two bid systems (Technical & Financial) from specialized agencies for Supply, Installation, testing and commissioning of 2 x 80 KVA(160 KVA) UPS with 30 minutes backup for National Disaster Management Authority at NDMA Bhawan, Safdarjung Enclave , New Delhi as mentioned in the tender document.

Manual bids shall not be accepted.

The Tender Document floated for the purpose can be downloaded only form www.eprocure.gov.in/eprocure/app and bid can only be submitted through the same website. Bid submitted other than on CPP portal will not be accepted. Important dates related to this tender are furnished below for information:

Critical Date Sheet

Sl. No.	Particulars	Date	Time
01	Date of Online Publication of Tender	09.06.2015	17.00 Hrs.
02	Tender Document Download Start Date	09.06.2015	17.30 Hrs.
03	Bid Submission Start Date	09.06.2015	18.00 Hrs.
04	Bid submission Close Date	10.07.2015	15.00 Hrs.
05	Opening of Technical Bids	10.07.2015	16.00 Hrs.

Interested parties may submit online bids on or before the prescribed last date of submission of Tender on the website <https://eprocure.gov.in/eprocure/app>.

Partha Kansabanik)
Under Secretary (General)
National Disaster Management Authority,
A-1 Safdarjung Enclave,
New Delhi-110029,
Phone No. 24601796

TENDER DOCUMENT

DETAILED INFORMATION/TERMS & CONDITIONS IN CONNECTION WITH THE TENDER FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2 x 80 KVA(160 KVA) UPS WITH 30 MINUTES BACKUP AT NDMA.

National Disaster Management Authority, A-1, Safdarjung Enclave on behalf of the President of India invites e-bids in two bid systems (Technical & Financial) from specialized agencies for Supply, Installation, testing and commissioning of 2 x 80 KVA(160 KVA) UPS with 30 minutes backup for National Disaster Management Authority at NDMA Bhawan, Safdarjung Enclave, New Delhi(As per specifications listed in **Annexure-I**). Bids shall be submitted online only at CPPP website www.eprocure.gov.in/eprocure/app. Tenderer/contractor are advised to follow the instructions provided as per **Annexure-II** and also provided in the 'Instructions to the Contractors/Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at above mentioned site. The schedule of the Critical Date Sheet is as under:-.

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Bids to be submitted online in two packet systems only:

1. Technical Bid

Technical bid should contain the following documents:

- Signed and scanned copy Certificate of work experience as stated in **Annexure-III** and Tender acceptance letter as stated in **Annexure-IIA**.
- Signed and scanned copy of original certificate from acceptable make manufacturer i.e. OEM (**Annexure-IV**). Bidder shall submit the scanned copy of certificate from OEM mentioning the continued supply of spare parts, repairing of faulty modules over a minimum period of 5 years from the date of supply of the material.
- Annual financial turnover on works related to installation of UPS should be at least Rs.40.00 lakhs (Rupees forty lakhs) during the immediate last three consecutive financial years. Turn over certificate from Chartered Accountant to be scanned.
- Signed and scanned copy of Bank Solvency Certificate of the amount equal to Rs. 16.00 lakhs and copy VAT/Sales Tax Registration Certificate along with TIN Number .
- Signed and scanned copy of no near relative certificate as per **Annexure-V**.
- Scanned copy of Tender Fee as stated in clause-5 and Earnest Money as stated in clause - 6 of this tender document.

2. Financial Bid

Price Bid to be uploaded online as prescribed BOQ_XXXX format attached in this tender.

3. SUBMISSION OF BID

- 3.1 The tender document can be downloaded only from www.eprocure.gov.in and can only be submitted through the same website. Scanned copies of all the documents as mentioned in Clause-1 above including scanned copies of EMD in the form of demand draft & Tender Fee should be submitted with e-bid.
- 3.2 It is also required to submit hardcopies of EMD & Tender Fee in original instruments in a sealed envelope superscribed for Supply, Installation, testing and commissioning of 2 x 80 KVA(160 KVA) UPS with 30 minutes backup” and addressed to “ Under Secretary (General), National Disaster Management Authority, NDMA Bhawan,A-1, Safdarjung Enclave, New Delhi- 110029” at Main Reception, at Main Reception, NDMA Bhawan, A-1 Safdarjung Enclave, New Delhi – 110029 on or before the closing date and time.
- 3.3 Bidders who had downloaded the tender from the Central Public Procurement Portal (CPPP) website <https://eprocure.gov.in> shall not tamper/modify the tender form including downloaded price bid template in any manner. In case if the same is found to be tampered/modified in any manner, tender will be completely rejected and EMD would be forfeited and bidder is liable to be banned from doing business with NDMA.
- 3.4 Intending bidders are advised to visit CPPP website <https://eprocure.gov.in> at least three days prior to closing date of submission of tender for any corrigendum/addendum/amendment.

4. OPENING OF THE BID

- 4.1 Technical Bids will be opened as per Critical Date Sheet.
- 4.2 Financial Bids of the eligible bidders will be opened on a later date. The date & time for opening of Financial Bids will be announced later.
- 4.3 Offline Bids will not be accepted under any circumstances.

5. TENDER FEE

- 5.1 Tender Fee of Rs. 2226/- (Rupees two thousand two hundred twenty six only) in the form of Demand Draft/Banker’s Cheque/RTGS in favour of the DDO, NDMA payable at New Delhi should be submitted as mentioned in clause 3 of this tender document.

6. EARNEST MONEY DEPOSIT (EMD)/BID SECURITY.

- 6.1 EMD of Rs. 1,20,000/- (Rupees one lakh twenty thousand only) in the form of Demand Draft/Banker Cheque/RTGS from any scheduled Bank in Delhi/ New Delhi in favour of "**Drawing & Disbursing Officer, National Disaster Management Authority, New Delhi-110029**" should be submitted as mentioned in clause 3 of this tender document. EMD should be valid for a period of **45 days** beyond the final bid validity period.
- 6.2 The bid security of the unsuccessful bidder will be discharged /returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract. EMD of the successful bidders will be returned only after receipt of Performance Security.
- 6.3 The amount of EMD is liable to be forfeited if the tendered refuses the offer after submission of the tender or after the acceptance of the offer by the NDMA or fails to sign the contract or to remit the Performance Security Deposit. **The bidder will not be eligible to participate in the tender for same item for one year from the date of issue of APO. The bidder will not approach the court against the decision of NDMA in this regard.**
- 6.4 No interest will be paid by the NDMA on the EMD/Performance Security deposited.
- 6.5 The EMD and Tender Fee is to be deposited electronically by RTGS in favour of ‘**PAO(NDMA) payable at ‘New Delhi”, Bank Name-State Bank of India, Safdarjung Enclave, New Delhi, Account Number: 31454767006, IFSC Code: SBIN0013182.** Bidders are required to submit the details of EMD payment at the time of bid preparation.

6.6 The Hard Copy of original instruments in respect of cost of tender document, earnest money, original copy of affidavits and credit facility certificate must be delivered to the Under Secretary (General), National Disaster Management Authority, NDMA Bhawan, A-1, Safdarjung Enclave, New Delhi- 110029” at Main Reception, NDMA Bhawan, A-1 Safdarjung Enclave, New Delhi – 110029 on or before the closing date and time. Tendered shall likely to be liable for legal action for non-submission of original payment instrument like Demand Draft/Pay Order etc., against the submitted bid. The Demand Draft attached/submitted for tender fee shall be non refundable.

7. PERFORMANCE SECURITY:

7.1 The supplier shall furnish performance security to the purchaser for an amount equal to 10% of the value of purchase order within **15 days** from the date of issue of Advance Purchase Order by the Purchaser.

7.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the supplier’s failure to complete its obligations under the Contract.

7.3 The Performance Security Bond shall be in the form of Bank Guarantee only issued by a Scheduled Bank and in the form provided in ‘**Annexure-VIII**’ of this Bid Document. The duration should be at least 26 months.

7.4 The Performance Security Bond will be discharged by the Purchaser after a period of sixty days beyond completion of the supplier’s performance obligations including any warranty obligations under the contract.

8. PERIOD OF VALIDITY OF TENDER

The bid shall remain for 120 days from the last date of its submission.

9. SCHEDULE OF REQUIREMENTS

The schedule of requirement defines the electrical and mechanical characteristics and requirement for continuous duty, highly reliable, solid state, true on-line double conversion PWM IGBT based uninterruptible Power Supply Systems. The UPS shall provide high quality AC power for sensitive equipment/lighting loads. The details are at **Annexure-IX**.

10. TECHNICAL SPECIFICATION FOR 80 KVA UPS

The technical specification for 80 KVA UPS as input ratings, output voltage, intermediate DC circuit, bypass circuit, communication & management, mechanical & environmental characteristic and environmental characteristic are at **Annexure-X**.

11. PLACEMENT OF ORDER

The Purchaser shall consider placement of orders for commercial supplies on those bidders whose offers have been found technically, commercially and financially acceptable and whose goods have been type approved/validated by the purchaser. **The Purchaser reserves the right to counter offer price(s) against price(s) quoted by any bidder.**

12. PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS:

The Purchaser reserves the right to accept or reject all or any bid, and to annul the bidding process at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds for the Purchaser's action.

13. ISSUE OF ADVANCE PURCHASE ORDER:

13.1 The issue of an Advance Purchase Order shall constitute the intention of Purchaser to enter into the contract with the bidder.

13.2 The bidder shall within 15 days of issue of an advance purchase order, give his acceptance along with performance security in conformity with **Annexure-VIII** provided with the bid documents. The successful bidder shall have to enter into a agreement with NDMA **Annexure -XI** .

14. SIGNING OF CONTRACT:

14.1 The issue of firm purchase Order and Signing of agreement with NDMA, and Signing of Contract Form shall constitute the award of contract on the bidder.

14.2 Upon the successful bidder furnishing of performance security pursuant to clause 13, the Purchaser shall discharge its bid security, pursuant to clause 6.

15. ANNULMENT OF AWARD:

Failure of the successful bidder to comply with the requirement of Clause 14 shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security **in which event the e-tender shall be cancelled and NDMA may call for new bids.**

16. Terms of Payment :

The following percentage of contract rates for the various items included in the contract shall be payable against the stage of work shown herein.

- (a) 70% after initial inspection and delivery at site in good condition on pro-rata basis.
- (b) 20% after completion of installation in all respect.
- (c) Balance 10% will be paid after testing, commissioning trial run and handing over to the NDMA for beneficial use.

17. RATES

The rates quoted by the tenderer, shall be firm and inclusive of all taxes except Service Tax/VAT (including works contract tax, and labour cess), duties, levies, octroi etc. including all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. Service Tax/VAT will be shown separately.

17.1. The department will not issue Octroi exemption certificate.

17.2. The firm must stand Guarantee/warranty of all parts of system for minimum 1/2 year or as per manufacturer's standard, failing which the appropriate recovery shall be made from other source, the decision of Secretary, NDMA shall be the final and binding.

17.3 Prices charge by the supplier for goods delivered and services performed under the contract shall not be higher than the prices quoted by the Supplier in his Bid.

17.4 Prices once fixed will remain valid during the schedule delivery period. Increase and decrease of Taxes and other statutory duties will not affect the price during this period.

18.0 COMPLETENESS OF TENDER

All items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespective of the fact whether such items are specifically mentioned in the tender documents or not.

19.0 STORAGE AND CUSTODY OF MATERIALS

Storage space will be provided if available, may be used for storage of sundry materials and erection equipments or else the agency has to make his own arrangements. No separate storage accommodation shall be provided by the department. Watch and ward of the stores and their safe

custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

20.0 CARE OF THE BUILDING

Care shall be taken by the contractor while handling and installing the various equipments and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

21.0 GUARANTEE

All equipments shall be guaranteed against unsatisfactory performance and / or break down due to defective design, workmanship or material for a period of 12 months but the battery shall be guaranteed for minimum period of 24 month from date of taking over the installation by the department. The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Under Secretary(Gen.). In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor, The decision of the NDMA in this regard shall be final & binding on the contractor.

22. Data Manual and Drawings to be furnished by the tenderers:-

22.1 **With tender:** The tender shall furnish alongwith the tender, detailed technical literature, pamphlets and performance data for appraisal and evaluation of the offer.

23. Insurance and Storage

All consignments are to be duly insured upto the destination from warehouse to warehouse at the cost of the supplier. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

24.0 INSPECTION AND TESTING:

24.1 All major equipments i.e. UPS shall be offered for initial inspection at manufacturers works. The contractor will intimate the date of testing of equipments at the manufacturer's works before dispatch. The successful tenderer shall give sufficient advance notice of minimum two weeks regarding the dates proposed for such tests to the department's representative to facilitate his presence during testing. The Under Secretary (Gen.) at his discretion may witness such testing. The cost of the Under Secretary (Gen.)'s visit to the factory will be borne by the Department. Equipments will be inspected at the manufacturer/Authorised Dealers premises, before dispatch to the site by the contractor if so desired by the Engineer-in-charge.

24.2 Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to the Under Secretary(Gen) and consignee.

24.3 After completion of the work in all respects the contractor shall offer the installation for testing and operation.

25.0 COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS:

25.1 All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification. In particular, the equipment and installation will comply with the following:

- i). Factories Act.
- ii). Indian Electricity Rules.
- iii). B.I.S. & other standards as applicable.
- iv). Workmen's compensation Act.
- v). Statutory norms prescribed by local bodies like CEA, Power Supply Co., etc.

25.2 Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

25.3 Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed on the work by the tenderer. Failure to provide such safety requirement would make the tenderer liable for penalty of Rs. 50/- for each default. In addition, the department will be at liberty to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

26.0 INDEMNITY:

The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

27.0 ERECTION TOOLS:

No tools and tackles either for unloading or for shifting the equipments for erection purposes would be made available by the NDMA. The successful tenderer shall make his own arrangement for all these facilities.

28.0 MOBILIZATION ADVANCE:

No mobilization advance shall be paid for this work.

29.0 VERIFICATION OF CORRECTNESS OF EQUIPMENT AT DESTINATION:

The firm/contractor shall have to produce all the relevant records to certify that the genuine equipments from the manufacturers has been supplied and erected.

30.0 PAINTING:

This shall include cost of painting of the entire installation. The major equipments like UPS Panel etc. shall be factory final finish painted. The agency shall be required to do only touching to the damages caused to the painting during transportation, handling & installation at site, if there is no major damage to the painting. However hangers, supports etc. of cable etc. shall be painted with required shade including painting with two coats of anticorrosive primer paint at site.

31. TRAINING: The scope of works includes the on job technical training of two persons at site. Nothing extra shall be payable on this account.

32.0 MAINTENANCE:

32.1 Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of one year from the handing over of the installation.

32.2 The maintenance, routine as well as preventive, for one year from the date of taking over the installation as per manufacturer's recommendation shall be carried out on quarterly basis.

33.0 INTERPRETING SPECIFICATIONS:

In interpreting the specifications, the following order of decreasing importance shall be followed in case of contradictions:

- a). Schedule of quantities read with technical specification.
- b). Technical specifications
- c). Drawings (if any)
- d). General specifications.
- e). Relevant BIS or other international code in case BIS code is not available.

34. DELIVERY:

Delivery of the goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in its Schedule of Requirements and special conditions of contract and the goods shall remain at the risk

of the Supplier until delivery has been completed. The delivery of the goods shall be to the ultimate consignee as given in the purchase order.

35. DELAYS BY THE SUPPLIER.

35.1 Delivery of the Goods and performance of the services shall be made by the Supplier in accordance with the time schedule specified by the purchaser in its purchase order. In case the supply is not completed in the stipulated delivery period, as indicated in the Purchase Order, purchaser reserves the right to short close /cancel this purchase order and/or recover liquidated damage charges. The cancellation/short closing of the order shall be at the risk and responsibility of the supplier and purchaser reserves the right to purchase balance unsupplied item at the risk and cost of the defaulting vendors.

35.2 Delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to any or all of the following sanctions: forfeiture of its performance security, imposition of liquidated damages and/or termination of the contract for default.

35.3 If at any time during the performance of the contract, the supplier encounters condition impeding timely delivery of the goods and performance of service, the Supplier shall promptly notify to the Purchaser in writing the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the period for performance of the contract (by not more than 1 weeks) subject to furnishing of additional performance security by the supplier @ 5% of the total value of the Purchase Order.

35.4 If the supplies are not completed in the extended delivery period, the purchase order shall be short-closed and both the Performance securities shall be forfeited.

36 LIQUIDATED DAMAGES

36.1 The date of delivery/installation of the stores stipulated in the acceptance of the tender should be deemed to be the essence of the contract and delivery/installation must be completed not later than the dates specified therein. Extension will not be given except in exceptional circumstances. Should, however, deliveries/installation be made after expiry of the contracted delivery period, without prior concurrence of the purchaser and be accepted by the consignee, such delivery will not deprive the purchaser of his right to recover liquidated damage under clause 35.2 below.

36.2 Should the supplier fails to deliver the store or any consignment thereof within the period prescribed for delivery, the purchaser shall be entitled to recover 0.5 % of the value of the delayed supply for each week of delay or part thereof. LD charges shall be levied as above on the total value of the Purchase Order. **Quantum of liquidated damages assessed and levied by the purchaser shall be final and not challengeable by the supplier.**

37 FORCE MAJEURE

37.1 If, at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war or hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to as events) provided notice of happenings of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate this contract nor shall either party have any claim for damages against other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such an event come to an end or cease to exist, and the decision of the Purchaser as to whether the deliveries have been so resumed or not shall be final and conclusive. Further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reasons of any such event for a period exceeding 45 days, either party may, at its option, terminate the contract.

37.2 Provided, also that if the contract is terminated under this clause, the Purchaser shall be at liberty to take over from the Supplier at a price to be fixed by the purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture which may be in possession of the Supplier at the time of such termination or such portion thereof as the

purchaser may deem fit, except such materials, bought out components and stores as the Supplier may with the concurrence of the purchaser elect to retain.

38 TERMINATION FOR DEFAULT

38.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the supplier, terminate this contract in whole or in part

a) if the supplier fails to deliver any or all of the goods/installation within the time period(s) specified in the contract, or any extension thereof granted by the purchaser;

b) if the supplier fails to perform any other obligation(s) under the Contract; and

c) if the supplier, in either of the above circumstances, does not remedy his failure within a period of 24 hours (or such longer period as the purchaser may authorize in writing) after receipt of the default notice from the purchaser.

38.2 In the event the purchaser terminates the contract in whole or in part pursuant to para 37.1 the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the supplier shall be liable to the Purchaser for any excess cost for such similar goods. However the supplier shall continue the performance of the contract to the extent not terminated.

39. TERMINATION FOR INSOLVENCY

The Purchaser may at any time terminate the Contract by giving written notice to the Supplier/contractor, without compensation to the supplier/contractor. If the supplier/contractor becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

40. ARBITRATION

40.1 In the event of any question, dispute or difference arising under the agreement in connection herewith (except as to matters, the decision to which is specifically provided under this agreement) the same shall be referred to sole arbitration of O/o NDMA. Secretary, NDMA shall appoint an Arbitrator. In case his designation of the Arbitrator is changed or his office is abolished then in such case to the sole Arbitration of the officer for the time being entrusted whether in addition to the function of the NDMA or by whatever designation such officer may be called (herein after referred to as the said officer) and if the NDMA or the said officer is unable or unwilling to act as such, than to the sole arbitration of some other person appointed by the NDMA or the said officer. The agreement to appoint an arbitrator will be in accordance with the Arbitration and Conciliation Act, 1996. The adjudication of such Arbitrator shall be governed by the provisions of the Arbitration and Conciliation Act, 1996, or any statutory modification or re-enactment thereof or any rules made thereof.

40.2 The arbitrator may from time to time with the consent of both the parties extend the time frame for making and publishing the award. Subject to aforesaid Arbitration and Conciliation Act, 1996 and the rules made there under, any modification thereof for the time being in force shall be deemed to apply to the arbitration proceeding under this clause.

40.3 The venue of the arbitration proceeding shall be the NDMA at New Delhi or such other place as the arbitrator may decide.

41. SET OFF

Any sum of money due and payable to the supplier (including security deposit refundable to him) under this contract may be appropriated by the purchaser or any other person(s) contracting through the NDMA and set off the same against any claim of the Purchaser or NDMA or such other person or person(s) for payment of a sum of money arising out of this contract or under any other contract made by the supplier with the Purchaser or NDMA or such other person(s) contracting through the NDMA.

Partha Kansabanik)
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New Delhi-110029,
Phone No. 24601796

Annexure-I.

Supply, Installation, testing and commissioning of 2 x 80 KVA(160 KVA) UPS with 30 minutes backup for National Disaster Management Authority at NDMA Bhawan, Safdarjung Enclave , New Delhi". The details of work are as under:-

Sl.No.	NIT No.	Name of work & Location	Estimate cost put to tender	Tender Fee	Earnest Money	Period of Completion
1	01/13/2014-Gen.	Providing 2x80 KVA(160 KVA) UPS with 30 minutes backup at NDMA Bhawan, New Delhi.	Rs.40,00,000/-	Rs.2226/-	Rs.1,20,000/-	45 days

Instructions for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “**Online bidder Enrollment**” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 6) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids (ie after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is **1800 3070 2232**.

TENDER ACCEPTANCE LETTER
(To be given on Company Letter Head)

Date:

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: _____

Name of Tender / Work: -

Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract , without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

Certificate of Work

Specialized firms who fulfill the following requirement shall be eligible to apply. Joint ventures are not accepted. Should have satisfactorily completed the works as mentioned below during the last seven years ending last day of the month 31st March 2015:-

(i) Three similar works each costing not less than Rs.16.00 lacs

OR

(ii) Two similar works each costing not less than Rs.24.00 lacs

OR

(iii) One similar work of value not less than Rs. 32.00 lacs

And

One work of any nature (either part of (i) above or a separate one) costing not less than of Rs. 16.00 lacs with some Central/State Government Department / Central / State Autonomous Body/Central/State Public Sector Undertaking/ City Development Authority /Municipal / Corporation of city formed under any Act by Central/State Government and published in Central/State Gazette.

Note:- The firm should have installed at least one UPS System not less than 80 KVA capacity.

Similar work shall mean works "Supply, installation, testing and commissioning of UPS system". The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for bids.

LIST OF ACCEPTABLE MAKES

S. No	ITEMS	APPROVED MAKES
1.	UPS	Emerson /Schneider electric (APC)/ Mitsubhishi / Merlin Gerin / Gutor / Magnaflux/Agasti
2.	Battery	Exide / HBL / Panasonic / Standard
3.	Vermin Proof Cubical Panel	CPRI approved (Manufacturer)
	TP MCCB	L&T/ABB/Legrand/Siemns/Schnieder
	Automatic Changeover switch	HPL Cat No. ATS02504POX3S or equivalent in GE/ABB
	PVC insulated and PVC sheathed/XLPE power cable	Havells/Polycab/Bencab/ Elektron/Kalinga
	End termination with brass compression gland	Dowells/Action/Comet

Note:

(A). Materials specified in the List of Acceptable Makes shall be got approved from Under Secretary(Gen.) before use on work. Decision of Under Secretary(Gen.) shall be final regarding selection of the make.

(B). Materials not specified in the List of Acceptable make shall be got approved from Secretary, NDMA before use on work. Decision of Secretary shall be final in this respect.

UNDERTAKING

“I.....s/o.....r/o..... hereby certify that none of relative(s) as defined in the tender document (Tender No. 01/13/2014-Gen.) is/are employed in NDMA unit as per details given in tender document. In case at any stage, it is found that the information given by me is false/ incorrect, NDMA shall have the absolute right to take any action as deemed fit, without any prior intimation to me.”

(Signature o the Bidder, with Official seal)

SCHEDULE OF PRICE BID IN THE FORM OF BOQ_.xls

The below mentioned Financial Proposal/Commercial bid format is provided as BoQ_XXXX.xls along with this tender document at <https://eprocure.gov.in/eprocure/app>. Bidders are advised to download this BoQ-XXXX.xls as it is and quote their offer/rates in the permitted column and upload the same in the commercial bid. Bidder shall not tamper/modify downloaded price bid template in any manner. In case if the same is found to be tempered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with NDMA.

Tender Inviting Authority: NATIONAL DISASTER MANAGEMENT AUTHORITY

Name of Work: Supply, Installation, testing and commissioning of 2 x 80 KVA(160 KVA) UPS with 30 minutes backup

Contract No: 01/13/2014-Gen

Bidder Name :

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	NUMBER #	NUMBER #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	BASIC RATE In Figures To be entered by the Bidder Rs.	Service Tax/VAT %	TOTAL AMOUNT Without Taxes	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
1	2	4	13	14	53	54	55

1	Supply, installation, testing and commissioning of 2 X 80 KVA, True Online double conversion VFI (Voltage Frequency Independent) technology & with FPGA(Field Programmable Gate Array) based DSP (Digital Signal Processing) Technology using fully IGBT (Insulated Gate Bipolar transistor) 3 phase input & 3 phase output online fully microprocessor based parallel redundant UPS system, the UPS shall also be provided with built in CBCF isolation transformer at input line, static bypass arrangement, TVSS protection along with required parallel redundancy kit (Accessories) and having sealed maintenance free lead acid batteries suitable to deliver minimum 30 minutes battery backup time on full load condition i.e. for 80 KVA load with battery rack interconnections with suitable size of copper conductor leads with the help of thimbles/lugs and battery terminals i/c battery charger for 30 min backup complete as required at site with following features and as per specification attached: (i)Alpha Numeric LCD Display. (ii)Inbuilt back feed protection. (iii)Inbuilt manual by pass switch. (iv)Input voltage 415 +/- 15%, 3 Phase (v)Output voltage 415 V +/- 1% 3 Phase	2.0000			0.0000	0.0000	INR Zero Only
2	II) SH-II (Paralleling Kit) Parallel redundancy kit suitable for 80 KVA UPS	2.0000			0.0000	0.0000	INR Zero Only
Total in Figures					0.0000	0.0000	INR Zero Only
Quoted Rate in Words	INR Zero Only						

Person)

PERFORMANCE SECURITY BOND FORM

In consideration of the President of India (hereinafter called 'the Government') having agreed to exempt -
 ----- (hereinafter called 'the said Contractor(s)' from the demand, under the terms and
 conditions of an agreement / (Work Order) No. ----- Dated ----- made between ---
 ----- and ----- for the supply of ----- (hereinafter called 'the
 said Agreement'), of performance security for the due fulfillment by the said Contractor(s) of the terms
 and conditions contained in the said Agreement, on Production of a bank guarantee for -----
 ----- we, (Name of the bank) ----- (hereinafter referred to
 as 'the Bank') at the request of ----- contractor(s) do hereby undertake to pay to
 the Government an amount not exceeding ----- against any loss or damage caused to or
 suffered or would be caused to or suffered by the Government by reason of any breach by the said
 Contractor(S) of any of the terms or conditions contained in the said Agreement.

2. We (Name of the bank) ----- do hereby undertake to pay the amount due and payable
 under this guarantee without any demur, merely on a demand from the Government stating that the
 amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the
 Government by reason of the contractor(s) failure to perform the said Agreement. Any such demand
 made on the bank shall be conclusive as regards the amount due and payable by the Bank under this
 guarantee where the decision of the Government in these counts shall be final and binding on the bank.
 However, our Liability under this guarantee shall be restricted to an amount not exceeding -----
 -----.

3. We undertake to pay to the Government any money so demanded notwithstanding any dispute or
 disputes raised by the contractor(s)/ AMC vendor(s) in any suit or proceeding pending before any court or
 tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so
 made by us under this bond shall be valid discharge of our liability for payment there under and the
 contractor(s)/ AMC vendor(s) shall have no claim against us for making such payment.

4. We (name of the bank) ----- Further agree that the guarantee herein contained shall
 remain in full force and effect during the period that would be taken for the performance of the said
 Agreement and that it shall continue to be enforceable till all the dues of the government under or by
 virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till -----
 ----- (office/ Department) ----- certifies that the terms and conditions of the said
 Agreement have been fully and properly
 carried out by the said contractor(S) and accordingly discharge this guarantee. Unless a demand or claim
 under this guarantee is made on us in writing on or before the expiry of **TWO years and two months**
 from the date hereof, we shall be discharged from all liability under this guarantee thereafter.

5. We (Name of the bank) ----- further agree with the Government that the Government shall
 have the fullest liberty without our consent and without affecting in any manner our obligations
 hereunder to vary and of the terms and conditions of the said Agreement or to extend time of
 performance by the said contract(s) from time to time or to postpone for any time or from time to time
 any of the powers exercisable by the Government Against and said Contract(s) and to forbear or enforce
 any of the terms and conditions relating to the said agreement and we shall not be relieved from our
 liability by reason of any such variation, or extension being granted to the said Contract(s) or for any
 forbearance, act or omission on the part of the Government or any indulgence by the Government to the
 said contract(s) or by any such matter or thing whatsoever which under the law relating to sureties
 would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the
 contractor(s)/ vendor(s).

7. We (name of the bank) ----- lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Government in writing.

Dated the ----- day of -----.

For -----

(Indicate the name of the bank)

Witnesses:-

1.

Telephone No.(s):-

STD Code-

FAX No.

E-Mail Address:-

2.

SCHEDULE OF REQUIREMENTS**1 UNINTERRUPTIBLE POWER SUPPLY (UPS)****1.1 General Summary**

This specification defines the electrical and mechanical characteristics and requirements for a continuous duty, highly reliable, solid state, true on-line double conversion PWM IGBT based Un-interruptible Power Supply systems. The UPS shall provide high quality AC power for sensitive equipment/lighting loads. It should also supply clean power automatically without any break in the supply in the absence of raw power. Under no conditions will the protected system get direct supply from the raw mains unless there is fault in the protected system.

All the manufacturers have to ensure that their product confirm to the specifications set in this documents, failure to do so will result in the disapproval of the product.

2 SYSTEM DESCRIPTION**2.1 Design Requirements - UPS Module**

Voltage

Input/ Output specifications of the UPS shall be
Rectifier Input (415±10% Volts - Three Phase)
Bypass Input (415±10% Volts - Three Phase)

Output – 415±1 Volt, 3Ph, 50 Hz

Output Load Capacity

Specified output load capacity of the UPS shall be as per schedule at 0.8 lagging Power factor as per data sheets.

2.2 Modes of Operation

- A. Normal - The critical AC load is continuously supplied by the UPS Inverter. The rectifier/ charger derives power from AC Input source and supplies DC power to the Inverter while simultaneously load charging power reserve battery.
- B. Emergency - Upon failure of AC Input power, the critical AC load is supplied by the Inverter which without any switching obtains power from the battery. There shall be no interruption in power to the critical load upon failure or restoration of the AC input source.
- C. Recharge - Upon restoration of AC input power during the emergency mode of operation, the rectifier/ charger shall automatically restart walk-in and gradually assume the inverter and battery recharge loads.
- D. Bypass - If the UPS must be taken out of service for maintenance or repair or should the inverter overload capacity be exceeded, static transfer switch shall perform reverse transfer of the load from the inverter to bypass source with no interruption in the power to the critical AC load. The static bypass switch should be double ended. The static switch should also have an overload rating of 14 times of rated load for 10 msec (1/2 cycles).

A manually operated Maintenance Bypass Switch should be incorporated into UPS cabinet that will connect the load to AC power source bypassing the rectifier/charger, Inverter and Static transfer switch.

2.3 Battery Requirements

Battery should be designed to provide 30 minutes back-up at full load specified in schedule of quantities for individual UPS. Battery should be sealed maintenance free type. The UPS module should have the Battery Circuit breaker mounted near to the batteries. When this breaker is opened no battery voltage should be present in the UPS enclosure. The UPS module should be automatically disconnected when the battery reaches to the minimum discharge voltage level or when signaled by other control functions. Remote tripping of Battery Ckt breaker facility shall be also incorporated.

A. Common Battery Sharing Kit OR charger redundancy kit

During the normal operation batteries are continuously float charged and in common battery installation the charging current is electronically controlled so that it is shared equally between the modules concerned. The charging current remains constant irrespective of no. of modules are active or in line. If any one of the charger is failed due to failure of input supply, the inverter of this UPS will continue to get the DC power from the rectifier of the other UPS system. This cross functions of the charger and inverter will prevent the battery discharging.

3. PRODUCT

3.1 Fabrication

3.1.1 Materials

All materials of the UPS shall be new, of current manufacture, high grade and free from all defects and shall not have been in prior service except as required during factory testing.

3.1.2 Construction and Mounting

The UPS unit comprised of Input Isolator, Rectifier/ Charger, Inverter, Static Transfer switch, Maintenance Bypass switch and static bypass Input switch shall be housed in a free standing steel enclosure with key lockable doors. Front access only shall be required for expedient servicing, adjustments and installation. The enclosure will be built to comply with IP20. The UPS shall be constructed of replaceable sub-assemblies. Printed circuit assemblies shall be plug-in type.

3.1.3 Cooling

Cooling of the UPS shall be by forced air. Low velocity fan shall be used to minimize audible noise output. Fan power shall be provided by the UPS output. Temperature shall be monitored by thermal sensors.

3.1.4 Cable Entry

Standard cable entry for the UPS module shall be through the enclosure or from the bottom.

3.1.5 Service Area Requirements –

All serviceable subassemblies shall be modular and capable of being replaced from front of the UPS (Front access only). The UPS module shall require not more than 1.2 meter of front service access room and shall not require rear or side access for service.

4. COMPONENTS

4.1 Rectifier / Charger

4.1.1 General

The term rectifier/ charger shall denote the solid state equipment and controls necessary to convert incoming AC power to regulator DC power for input to the inverter and for Battery charging. The rectifier/ charger shall be three phase controlled, thyristor bridge type with constant voltage/ current limiting control circuitry.

4.1.2 Input current Walk-in

The rectifier/ charger shall contain time walk-in circuit that causes the unit to gradually assume the load over a 10 sec time interval after input voltage is applied.

4.1.3 Fuse Failure protection

Power semi-conductors in rectifier/ charger shall be fused with fast acting fuses so that loss of any power semi-conductor shall not cause cascading failures.

4.1.4 DC Filter

The rectifier/ charger shall have an output filter to minimize ripple voltage into the battery. Under no conditions shall ripple voltage into the battery exceed 1% RMS. The filter shall be adequate to ensure that the DC output at the rectifier charger will meet the Input requirements of the Inverter. The inverter shall be able to operate from the rectifier charger with the Battery disconnected.

4.1.5. **Battery Recharge**

In addition to supply power for the inverter load, the rectifier/ charger shall be capable of producing battery charging current to recharge the batteries. After the battery is recharged, the rectifier/ charger shall maintain the battery at full charge until the next emergency operation. Charging shall be an automatic cycle per DIN 41772 characteristics I-U. Both float and recharge voltages shall be adjustable. Charge voltage can also be manually controlled.

4.2 Inverter

4.2.1 The term inverter shall denote the solid state equipment and controls to convert DC power from the rectifier/ charger or battery regulated AC power for supporting the critical load. The inverter shall be IGBT based pulse width modulated (PWM) design capable of providing the specified AC output.

4.2.2 **Overload capacity**

Inverter shall be capable of supplying current and voltage for overloads exceeding 100% and upto 150% of full load current for min. of 1minute. A status indicator and audible alarm shall indicate overload operation. The UPS shall transfer the load to bypass when overload capacity is exceeded.

4.2.3 **Fault clearing and current Limit.**

Without bypass supply available, the inverter shall be capable of supplying an overload current of 150% of its full load rating in excess of 60 secs. For greater currents, or longer time duration, the inverter shall have electronic current limiting protection to prevent damage to components. The inverter shall be self protecting against any magnitude of connected output overload.

4.2.4 Output Frequency

The output frequency of the inverter shall be controlled by an oscillator. The oscillator shall hold the inverter output frequency to +/- 0.1 % for steady state and transient conditions.

4.2.5. The output harmonic shall not be greater than 1% with linear load and shall be max. 5% at 100% non linear load. The UPS shall be capable of handling load of crest factor more than 3:1.

4.2.6 Inverter efficiency shall be greater than 90 % at 100% load.

4.3 Display and Controls

4.3.1 Monitoring and Control

The UPS shall be provided with a micro-processor based unit status display and controls section designed for convenient and reliable user operation. A system power flow diagram, a percentage load and battery time remaining display shall be provided as part of the monitoring and controls sections which depicts a single-line diagram of the UPS. Illuminated visual indicators shall be of the long-life light-emitting diode (LED) type. All of the operator controls and monitors shall be located on the front of the UPS cabinet. The monitoring functions such as metering, and alarms shall be displayed on an alphanumeric LCD panel. LCD panel shall be provided with following monitoring functions and indicators (each alarm and notice conditions shall be accompanied with an audible alarm).

A. NORMAL: This symbol shall be lit when the UPS is operating in Normal Mode. B. BATTERY-

This symbol shall be lit when the UPS is operating in battery mode.

- B. BYPASS - This symbol shall lit when the UPS is operating in bypass mode.
- C. WARNING - This symbol shall lit when the system needs attention. Some notices shall be displayed and shall include
 - a. UPS on Maintenance Bypass
 - b. Inverter Unsynchronized
 - c. Battery on load
 - d. Load on Bypass
 - e. Mains Failure
- D. ALARM: This symbol shall lit when a situation requires immediate attention All alarms shall be accompanied by the Audio alarms. Alarm shall include -
 - a. Emergency Stop
 - b. Inverter Off or Failed
 - c. Over- temperature
 - d. Overload
 - e. Battery C.B Open
 - f. Rectifier Off or Failed g. Input C.B Open
 - h. Output C.B Open

4.3.2 Power Status Diagram:

A mimic panel shall be provided to depict a single line diagram of the UPS. Indicating lights shall be integrated within the single line diagram to illustrate the status of the UPS. The six LEDs shall indicate the following status.

- Input Voltage OK
- Bypass Voltage OK
- Load on Bypass
- Load on Inverter
- Battery Voltage OK
- Inverter Output OK

- 4.3.3 Battery Management Systems (BMS) - The UPS shall contain a battery management system with the following feature
 - 1. The BMS shall provide battery time available, or percentage remaining with operating in battery mode.
 - 2. The battery management system shall provide the imminent shutdown to signal low battery condition.

4.4 Static Transfer Switch

4.4.1 General

A static transfer switch and bypass transfer switch shall be provided as an integral part of the UPS. The Static switch shall be a Bi-directional naturally commutated high speed static (SCR type) device rated to carry full load current continuously. The static transfer switch control logic shall contain an automatic transfer logic circuit that senses the status of the inverter logic signals, and operating and alarm signals. This control circuit shall provide an uninterrupted transfer of the load to an alternate bypass source, without exceeding the transient limits, when an overload or malfunction occurs within the UPS, or bypassing the UPS for maintenance.

4.4.2 Uninterrupted Transfer

The transfer control logic shall automatically turn on the static transfer switch, transferring the critical AC load to the bypass source, after the transfer logic senses any of the following conditions.

- Inverter Overload capacity exceeded
- Critical AC load overvoltage OR under voltage
- UPS fault conditions

- The transfer control logic shall inhibit an automatic transfer of the critical load to the bypass source if any of the following conditions are present.
- Inverter/ Bypass Voltage difference exceeding presets limits
- Bypass frequency out of limits
- Bypass out of synchronization range with inverter output.

4.4.3 Uninterrupted Retransfer

Retransfer of the critical AC load from the bypass source to Inverter output shall be automatically initiated unless inhibited by manual control. The transfer control logic shall inhibit an automatic retransfer of the critical load to the inverter if one of the following conditions exists.

- Bypass out of synchronization range with Inverter output.
- Inverter / Bypass voltage difference exceeds the preset limits
- UPS faulty conditions presents.
- Overload conditions exists in the excess of inverter full load ratings.

4.4.4 Maintenance Bypass Isolator

A manually operated maintenance bypass isolator shall be incorporated into the UPS cabinet to directly connect the critical load to the input AC power source, bypassing the rectifier, inverter and static transfer switch.

With the critical load powered from the maintenance bypass circuit, it shall be possible to check out the operation of the rectifier /charger, inverter, battery and static switch.

4.4.5 Remote Emergency Power off (REPO)

Provision shall be available for adding a REPO switch to meet specific site needs. The REPO switch shall be electronically shut down the UPS by turning off the rectifier, inverter static switch and battery circuit breaker.

5. EXECUTION

5.1 Field Quality Control

The following inspections and test procedures shall be performed by factory trained field service personnel during UPS startup.

5.1.1 Visual Inspection

Inspect equipment for sign of damage Verify installation as per drawing Inspect cabinet for foreign object

Verify neutral and ground conductors are properly sized and configured. Inspect battery cases.

Inspect battery for proper polarity

Verify all printed boards are configured properly

5.1.2 Mechanical Inspection

Check all control wiring connections for tightness

Check all power wiring connections for tightness

Check all terminals screws, nuts, and / or spade lugs for tightness.

5.1.3 Electrical Inspections

Check all fuses for continuity

Confirm input voltage and phase rotation is correct

Verify control transformer connections are correct for the voltage being used Assure connections and voltage of the battery strings

5.2 Documentation

The manufacturer shall supply minimum 2 sets of an installation manual with installation startup trouble shooting guide and operation instruction of the specified system.

5.3 Installation

The UPS shall be installed by a service engineer fully trained on the UPS by the manufacturer. The manufacturer will have to conduct load/site study prior to the commissioning of the UPS. A copy of the load/site study report will have to be submitted with required comments.

5.4 Service Capability

The Manufacturer should have the independent service setup with engineers who are fully trained in the UPS. All the service personnel's should have the latest power measurement equipments which will be required during the process of site study, installation and maintenance. The manufacturer should have ISO 9001 or equivalent certification to ensure the quality of the service.

All the manufacturers service engineers should have any alternative means of mobile communication, for instantaneous communications as and when the need arises.

The manufacturer should have the capability to provide consultancy on the aspect of power quality as and when required for which they should have their own power solutions. (Product and technology)

The response time to attend the complaint shall be less than two hours in normal working hours. The manufacturer should have the facility to provide night services as and when required.

(Partha Kansabanik)
Under Secretary (General)
National Disaster Management Authority,
A-1 Safdarjung Enclave,
New Delhi-110029,
Phone No. 26701796

TECHNICAL SPECIFICATION FOR 80 KVA UPS

INPUT VOLTAGE

INPUT RATINGS	UNITS	80KVA
INPUT VOLTAGE RATING	V	400/480/600 VOLTS THREE PHASE
Line voltage	V AC	415, 3 ph
Permissible input voltage variation	%	+ 10-15
Permissible input frequency variation	%	± 5
Power walk in		Progressive over 30 seconds
Frequency	HZ	45-65Hz

OUTPUT VOLTAGE

OUTPUT RATING	UNITS	80KVA
Voltage	V AC	400 - 480 - 600 (preset on commissioning) 3ph N
Frequency	Hz	50 or 60 (presettable)
Overload at 0.8 pf, 3 ph-3ph	-	110% for 60 minutes 125% for 10 minutes 150% for 1 minutes 200% for 30 seconds
Current liming short circuit (inverter) 150% rated current (3 phase) for 220% rated current (1 phase) for	- Sec Sec	5 seconds 5 seconds
Maximum permissible non-linear load	%	100% with 3:1 crest factor

Voltage stability-steady state-Transient state	%	± 1 ± 5
Reset time to within ± 1%	mSec	20
Synchronizing window	Hz	± 1 hz or ± 2 Hz (selectable via operator control)
Frequency stability-synchronized	-	The output will synchronise with the bypass supply within the set synchronizing range (upto±2Hz)
Frequency stability-not synchronized		±0.1 Hz, when the input supply frequency is outside the synchronizing range.
Phase voltage symmetry balanced load	-	± 1%
Phase voltage symmetry-100% unbalanced load		± 2 %
Voltage phase displacement-balanced load	Angle°	120 ± 1
Voltage phase displacement-unbalanced load	Angle°	120 ± 1
Output voltage distortion linear load	-	1% typical-2% max
Maximum frequency slew rate	Hz/Sec	0.1 to 1.0
Synchronized transfer to Bypass	mSec	0 approx.
Overload on bypass (with fuses)	-	10 x rated current for 100 mSec.

INTERMEDIATE DC CIRCUIT

INTERMEDIATE CIRCUIT	UNITS	80KVA
Voltage limits of inverter operation for 380 v Min- Max-	Vdc	320 460
Voltage limits of inverter operation for 400 v Min- Max-	Vdc	330 475
Voltage limits of inverter operation for 415 v Min- Max-	Vdc	340 490
Number of lead acid cells	No	192 (At 380V) 198 (At 400V) 204 (At 415V)
Float charge voltage	Vdc	432 (At 380V) 446 (At 400V) 459 (At 415V)
Boost charge voltage	Vdc	460 (At 380V) 475 (At 400V) 490 (At 415V)

End of discharge voltage	Vdc	320 (At 380V) 330 (At 400V) 340 (At 415V)
Absolute maximum voltage (manual charge)	Vdc	480 (At 380V) 495 (At 400V) 500 (At 415V)
Voltage stability with rectifier	-	± 1%
Residual alternating voltage	%	≤ 1%
Maximum boost charge duration	Hours	1-15 hours (selectable)

BYPASS CIRCUIT

BYPASS CIRCUIT	UNITS	80KVA
Voltage	VAC	600, 480, 400 selectable via operator control 3 Phase + N
Input Voltage variation	%	+/- 10%
Frequency	Hz	50Hz +/- 2%
Overload from standby supply	A	150% of rated current
“Protection, bypass line.”	A	200% of rated current
Current rating of neutral cable	A	1.5 times of rated current

COMMUNICATION & MANAGEMENT

Available smart slot TM interface quality	3 (Three)
Control Panel	Multi-function LCD status and control console.
Emergency power off (EPO)	Optional

MECHANICAL & ENVIRONMENTAL CHARACTERISTIC

MECHANICAL CHARACTERISTIC	UNITS	80KVA
Class of protection for enclosure		IP 20
Ventilation		By internal intake fans
Airflow	M ³ /hour	480
Cable Entry		Bottom
ENVIRONMENTAL CHARACTERISTIC	UNITS	80KVA
Operating Temperature	°C	0 to 40°C
Mean temperature for 24hr a day	°C	35° C max.
Maximum temperature for 8 hour a	-	40° C, derate by 1.5 % per °C between 40° C and 45° C

Relative humidity	-	≤ 90% at 20°C
Altitude	-	≤ 1000 m (derate 1% per 100m between 1000 to 2000)
Storage temperature	°C	-25 to 45
No. & AH rating of SMF Batteries		To be specified for minimum 30 minutes backup on full load as per recommendation of manufacturer

Under Secretary(Gen.)

PART –I
Contract Form

1. This agreement is made this day.....between, herein after called “name of company” the first party which expression shall include his heirs, executors and administrators/ their successors and National Disaster Management Authority (NDMA), herein after called “NDMA”, the second party, through Under Secretary(Gen.), NDMA, New Delhi herein after include his successors and assignees, shown as under:-

2. That WHEREAS the first part shall and will execute the work described as “Supply, Installation, testing and Commissioning of 2 x 80 KVA(160 KVA) UPS with battery alongwith its accessories in National Disaster Management Authority, New Delhi details of which are given in section- to this office tender noticedatedat the rated quoted byvide their tender..... dated and as per all the terms and conditions given in notice Inviting Tender(NIT) dated.....which shall become part and parcel of this agreement.

3. That the first party would raise demand and the payment shall be done in accordance with _____ of aforesaid tender document.

4. The performance security bond would be encashed by second party in case first party fails to deliver items and/or breaches terms & condition of the aforesaid tender documents.

5. In accordance with the NIT this agreement is made for a period of two years from, as in clause 1(i) of section II of the bid document as decided upon to do so by the second party on the same terms, conditions and rate.

IN WITNESS THEROF THE ABOVE MENTIONED PARTIES HAVE PUT THEIR SIGNATURES ON THISDAY OF.....2015

Witness

For
Firm/Contractor.

Witness

For
Firm/contractor.