

राष्ट्रीय प्रौद्योगिकी संस्थान पुदुच्चेरी
कारैक्काल – 609 609
NATIONAL INSTITUTE OF TECHNOLOGY PUDUCHERRY
Karaikal – 609 609



Tender Document

for

**Supply of Converters for Solar Panel, Wind Turbine
Generators and Grid Integration**

at

**National Institute of Technology Puducherry
Thiruvattakudy, Karaikal – 609 609
Union Territory of Puducherry
India.**

National Institute of Technology Puducherry @ Karaikal an autonomous Institute established under Ministry of Human Resource Development, Government of India would like to procure the following items.

Particulars of the work	:	Supply, Erection & Commissioning of Converters for Solar Panel, Wind Turbine Generators and Grid Integration at NIT Puducherry, Karaikal.
Tender Enquiry No	:	NITPY/CPRI Project/T03/2016-17 dated : 11.11.2016
Item Required	:	<ol style="list-style-type: none"> 1. DC-DC BOOST CONVERTER WITH CONTROLLER FOR SOLAR PANEL – 1 Nos. 2. THREE PHASE RECTIFIER AND DC-DC BOOST CONVERTER WITH CONTROLLER FOR WIND TURBINE GENERATOR – 1 Nos. 3. BI-DIRECTIONAL BUCK-BOOST CONVERTER AND BI-DIRECTIONAL INVERTER WITH CONTROLLER – 1 Nos. 4. GRID SIDE INTERFACING COMPONENTS <p>(Specification Enclosed- SECTION 3)</p> <p>NOTE: The firm should quote all the items as a whole package</p>
Due Date (For submission of bids)	:	03.00 P.M. 24.11.2016
Technical Bid Opening time	:	04.00 P.M. 24.11.2016
EMD	:	Earnest Money Deposit (EMD) for Rs.25000/- (Rupees Twenty five thousand only) in the form of Demand Draft drawn in favour of “The Director, NIT Puducherry” payable at Karaikal
Eligibility Criteria	:	The Contractors / Tenderers should have experience in supply of similar item with ONE similar work of Rs.7,00,000/- or above (or) TWO similar works each of Rs.4,00,000/- (or) above executed during the last 3 years with reputed educational institutions, organizations, etc., along with the copy of orders.
Submission of Offer	:	<p><u>Two Bid System:</u></p> <p>Two bid system will be followed for this tender. In this system the bidder must submit his offer in two separate sealed envelopes. Both the technical bid and commercial bid envelopes should be securely sealed and stamped separately and clearly marked as “Envelope No : 1 – Technical Bid” and “Envelope No : 2 – Commercial Bid” respectively. EMD should be placed in the Envelope No : 1, Technical Bid.</p>

Place of Submission	Please send the tenders in a sealed envelope superscribed as "Supply of Converters for Solar Panel, Wind Turbine Generators and Grid Integration, Ten. Notification NO: NITPY/CPRI Project/T03/2016-17 " so as to reach : The Registrar (i/c) National Institute of Technology Puducherry Thiruvattakudy, Karaikal – 609 609 Union Territory of Puducherry India.
----------------------------	---

INSTRUCTIONS TO BIDDERS

1. This document set contains the following:
 - a) Terms and conditions of the Tender
 - b) Details of the Firm offering this Quote
 - c) Technical Compliance Form
 - d) Quotation form (Price Bid)
 - e) Currency Form (quoted on behalf of the foreign suppliers)
 - f) NIT Puducherry's check list copy
2. The bidder's copy is for your future records. **Please fill in and return only NIT Puducherry's copy.**
3. The bidder should give details of their technical soundness and provide list of customers of previous supply of similar items to Universities, Institutes or Government Departments / Undertakings/public sectors with contact details. The details of the agency / profile should be furnished along with the copy of all related documents.
4. Read through the terms and conditions given and affix your signature and seal if you find them acceptable. Any deviations may be recorded. Read carefully list of specifications that we have enclosed.
5. Fill in the questionnaire regarding the Firm.
6. The downloaded documents 'Technical Compliance Form' and 'Quotation Form (Price Bid)' should be TYPE WRITTEN USING CAPITAL LETTERS ONLY. At the time of filling the "Quotation Form (Price Bid)" make sure that you have not missed anything. Specify the model number & specification for each item. The form should be filled item-wise. Do not leave blank fields. If you are not quoting for a specific item, you should specify "NOT QUOTING".
7. **Do not use ambiguous terms like "yes", "complied" or "available". Specifically mention the matching specification of the product offered by you. Make sure that all the documents should be duly signed by you with date and seal.**

CHECKLIST TO BE FILLED IN BY BIDDER	
List of documents to be enclosed	Completed & Signed
1. Terms and Conditions form	YES / NO
2. Details of the Firm offering this Quote	YES / NO
3. NIT Puducherry's Quotation form (Technical & Price Bid)	YES / NO
4. Currency Form(quoted on behalf of the foreign suppliers)	YES / NO
5. Other technical specifications & pamphlets	YES / NO

- Note:** 1. "Cover" should contain the following:
- a. Form of "**Acceptance of Terms and Conditions**".
 - b. Form of "**Firm details**"
 - c. Pamphlets, if any (in a separate sealed cover)
 - d. Quotation Form (Technical, Price Bid and Currency Form)

Please retain this page with you for your future reference

Envelope 1: EMD and Technical Bid**EMD**

(should be superscribed as 'EMD cover' duly indicating the Tender reference No. and the due date of opening)

Earnest Money Deposit (EMD) and tender cost are to be submitted by way of Demand Draft drawn on any Nationalized bank in India in favor of "The Director, NIT Puducherry, Karaikal" payable at Karaikal. The bids submitted without EMD will be treated as non-responsive and will be rejected.

EMD shall bear no interest.

Technical Bid

(should be superscribed as 'Technical Bid' duly indicating the Tender reference No. and the due date of opening)

Should contain:

- a. Technical pamphlets
- b. Detailed technical specification
- c. Copy of license certificate for manufacture/supply of the item*
- d. Income Tax PAN number & TIN number.*
- e. Last three years balance sheet approved by the CA and the IT clearance certificate.*
- f. Warranty period offered for the tendered item to be specified. If the warranty period is not conforming with the schedule of requirements given in section 3 of the Tender document, the bid is liable to be treated as non-responsive and will be rejected.
- g. Duly filled up technical questionnaire, if any
- h. Duly filled up deviation schedules to technical specifications, if any
- i. Copy of supply orders completed during the last three years

* Appropriately pertaining to the country of origin.

Envelope 2: Price Bid

(should be superscribed as 'Price Bid' duly indicating the Tender reference No. and the due date of opening)

Should contain:

- a. Price bid as per the format in Section-4 of the tender document

Note:

- a. If the prices are revealed in **Envelope 1**, the offer will be summarily rejected.
- b. Each Cover shall be sent in a double sealed cover. The inner covers (**Envelope 1** and **Envelope 2**) should be sealed individually with the Seller's distinctive seal and superscribed with the tender reference No. and due date of opening. All inner covers shall be placed in a common outer cover which shall also be sealed with seller's distinctive seal and superscribed with the tender reference No. and due date of opening.

SECTION : 2 – TERMS AND CONDITIONS FORM

1. The Bidders are requested to give detailed tender in their **own forms** in two bids.
Part-1 : **Technical Bid**
Part-2 : **Commercial Bid**
2. Tenders, which are submitted without following the two bid offer system will summarily be rejected.
3. The tender document can be downloaded from the National Institute of Technology Puducherry website www.nitpy.ac.in
4. **Technical Evaluation Committee**
 - i) A committee duly constituted by The Registrar (i/c), NIT Puducherry will go through the technical aspects of the tender and recommend short listed firms. The recommendation of the technical committee shall be final and binding on all the parties.
 - ii) The technical committee will examine all the technical aspects of the bids received. Further, the technical committee may seek additional information from the existing users at NIT Puducherry or from other Institutes and also call for technical presentations from the bidders if required.
 - iii) The bidders are required to submit the sample for evaluation before the stipulated time.
 - iv) No cost will be paid by NIT Puducherry for sample.
5. **Opening of Commercial Bids**
 - i) NIT Puducherry will open commercial bids of only the shortlisted bidders in the presence of the bidders or their authorized representatives who choose to attend the commercial bid opening. The date and time of opening the commercial bid will be intimated only to pre-qualified and technically acceptable bidders for the item at a later date. The representatives of shortlisted firms only will be allowed for commercial bid opening.
 - ii) No sub-contracting is allowed with regard to installation, commissioning, training, warranty, maintenance and after sales service. This is the sole responsibility of the principals / their authorized agents.
 - iii) The NIT Puducherry reserves the right to accept the offer in full or in parts or reject summarily or partly.
6. **Delivery Period / Timelines**

The deliveries and installation must be completed within 04 - 06 weeks from the date of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet this expectation, as this is linked to student's admission and shifting the college to permanent campus.
7. **Locations for the supply / services**

The items covered by this document is required to be supplied and installed at National Institute of Technology Puducherry
Thiruvattakudy, Karaikal – 609 609
Union Territory of Puducherry, India

8. NIT Puducherry will not provide any accommodation / transportation for the engineers / representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the principal supplier / agent to make their own arrangements.
9. **Purchasers right to vary quantities at the time of award**
NIT Puducherry reserves the right at the time of award of contract to increase or decrease the quantity of items specified in the schedule of requirements without any change in price or other terms and conditions.
10. **Price**
The price quoted shall be considered firm and no price escalation will be permitted. The quote should be for **FOR Destination** at National Institute of Technology Puducherry, Thiruvattakudy, Karaikal – 609 609, Union Territory of Puducherry.
- i) **The firm should quote all the items as a whole package, otherwise the firm will not be considered for further process.**
- ii) The packing, forwarding, freight, insurance and commissioning charges, if any extra may be quoted separately in commercial bid.
- iii) The actual sales tax percentage (without form "C") if any, should be specified.
11. **Performance Bank Guarantee**
The vendor will have to furnish performance bank guarantee for 10% of the total purchase order value, to be valid for one year plus two months from the date of installation and acceptance.
12. **Installation**
- i) Bidder shall be responsible for installation / demonstration as applicable and for after sales service during the warranty and thereafter.
- ii) Installation and demonstration to be arranged by the supplier within 15 days of the arrival of the equipment at site.
13. **Warranty / Support**
- i) The items supplied shall carry a **warranty as per the period given in the section 3** from the date of acceptance of the equipment.
- ii) The defects, if any, during the guarantee / warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, octroi, local taxes if any and should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.
14. **Indemnity**
The vendor shall indemnify, protect and save NIT Puducherry against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc., or such other statutory infringements in respect of all the items supplied by him.
15. **Freight and Insurance**
The items to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NIT Puducherry permanent campus.

16. Payment

90% payment shall be made at site against delivery, installation, commissioning and acceptance as per purchase order and balance 10% shall be made after receipt of performance bank guarantee. If no bank guarantee is given, the balance 10% will be paid after the warranty period plus two months.

17. Penalty for delayed services / LD

- i) As time is the essence of the contract, delivery period mentioned in the purchase order should be strictly adhered to. Otherwise the NIT Puducherry will forfeit EMD and also LD clause will be applied / enforced.
- ii) If the supplier fails to supply, and fix the item as per specifications mentioned in the order within the due date, the supplier is liable to pay liquidated damages of 1% of order value for delay of every week or or partthere of subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.
- iii) NIT Puducherry reserves the right to cancel the order in case the delay is more than 10 weeks. Penalty as at (ii) above, will be deducted from the security deposit.

18. Jurisdiction

The disputes, legal matters, court matters, if any, shall be subject to Karaikal Court Jurisdiction only.

19. Force Majeure

NIT Puducherry may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that the delay, in performance or other failure to perform its obligations under the contract, is the result of a force majeure.

20. Arbitration

All disputes of any kind arising out of supply, commissioning, acceptance, warranty maintenance etc., shall be referred by either party (NIT Puducherry or the bidder) after issuance of 30 days notice in writing to the other party clearly mentioning the nature of dispute and will be referred to the arbitrator to be nominated by The Registrar (i/c), NIT Puducherry, Karaikal. The Venue for arbitration shall be Karaikal, Union Territory of Puducherry, India.

21. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity / dispute in the interpretation of any of the clause in this tender document, interpretation of The Registrar (i/c), NIT Puducherry, Karaikal shall be final and binding on all parties.

22. Purchase Order may be issued to the L1 supplier based on the quote all the items as a whole package.

-Sd-
Registrar (i/c)
NIT Puducherry

“DETAILS OF THE FIRM OFFERING THIS QUOTE”
(Write or print or type in block letters)

1. Name of the firm:
2. Date of incorporation:
2. Nature of the company (tick one): Government / Public / Private Company / Partnership / Proprietorship
3. Specify the number of years in this line of activity by the Company:
4. Quantity of sales in the last three years for the “.....” (same model that you have quoted):

2012-2013	2013-2014	2014-2015

5. Turnover in the last three years (Lakh Indian Rupees):

2012-2013	2013-2014	2014-2015

6. Provide the postal address, telephone & fax numbers, and email address of the nearest service center.
7. Number of service engineers in the above location trained on the product quoted along with their educational qualification, certification and designation (applicable only for instruments):
8. Assured response time for service calls in hours:
9. Delivery period from the date an official purchase order placed (in weeks):
10. Enclose the list of customers to whom you have supplied “.....” during the last 3 years ending 31/12/2015 with full postal address and name of the contact person with phone, FAX numbers, and E-Mail id. Certificate regarding satisfactory performance of the “.....” from the minimum three end users should be furnished.
11. Enclose the certificate regarding the authorized dealer or distributor for the products quoted.
12. On Manufacturer’s Side to whom NIT Puducherry have to contact in case of delayed in supply and other issues committed by the authorized dealer / distributor / reseller :

Contact Person Name :

Address :

E-mail ID :

Telephone / Cell Phone :

DECLARATION

I/we have not tampered/modified the tender forms in any manner. In case, if the same is found to be tampered/modified, I/we understand that my/our tender will be summarily rejected and full Earnest Money Deposit (EMD) will be forfeited and I/we am/are liable to be banned from doing business with NIT Puducherry and /or prosecuted.

Signature of the Bidder:

Name and Designation:

Business Address:

.....

.....

Place :

Date : Seal of the Bidder's Firm

SECTION : 3 – SPECIFICATION

1. DC-DC BOOST CONVERTER WITH CONTROLLER FOR SOLAR PANEL

DC-DC BOOST CONVERTER FOR SOLAR PANEL	Rating	5000 watts
	Switching device rating	SEMIKRON IGBT Rating @600v,100A ,20khz with proper heat sink and snubber circuit used to form power circuit.
	I/P voltage range	min : 300v DC
	O/P voltage range	max : 650V Dc
	Output power	5000W(max)
	Switching Frequency	5 to 20khz
	Driver circuit	Tlp250 IC based PWM driver circuit used
Addition Requirements:		
<ul style="list-style-type: none"> • One Hall Effect current sensor used to sense Inductor current and over load trip purpose. • One Hall Effect voltage sensor used to sense the o/p voltage. • Voltage and current sensor o/pts terminated in front panel bs2 connector. • Over load fuse protection is required • Over temperature protection will be provided • One no of 4 inch cooling fan used to dissipate switching device heat 		
CONTROLLER BOARD SPECIFICATION	FPGA development board with maximum 100 user IOs.	
	It is specially designed for experimenting and research system design with FPGAs.	
	Make: Xilinx/altera any other reputed Multinational Branded	
On-Board Specification and Requirements:		
<ul style="list-style-type: none"> ✓ Processor speed 20 MHZ ✓ 100 output lines / inputs lines are in 3.3/5V level ✓ Isolated serial communication interface through USB connector ✓ 4MB PROM for code execution memory. ✓ External JTAG header for programming ✓ 20x4 (or 16x2) LCD interface header. ✓ 8 user LEDs/4 position user DIP switch ✓ 2 up & down input push switch ✓ Up to 100 Individually Programmable GPIO Pins ✓ ADC <ul style="list-style-type: none"> • No of ADC input : 8 Channels • Resolution : 12 bit • Sampling rate : 1MSPS • Analog input range : ±10V • Buffer section for voltage protection ▪ DAC <ul style="list-style-type: none"> • No of DAC output : 4 Channels • Resolution : 12 bit • Settling time : 6µs • Analog input range : -5v to +5V ▪ Connectors <ul style="list-style-type: none"> • 16 pin header for ADC input • 16 pin header for PWM OUTPUT • 2 no's of 50 pin headers for GPIO line termination • External Programming header • Total 100pwm signals can be generate. 		

2. THREE PHASE RECTIFIER AND DC-DC BOOST CONVERTER WITH CONTROLLER FOR WIND TURBINE GENERATOR

THREE PHASE RECTIFIER AND DC-DC BOOST CONVERTER FOR WIND TURBINE GENERATOR	Rating	5000 watts
	Switching device rating	SEMIKRON IGBT Rating @600v,100A ,20khz with proper heat sink and snubber circuit used to form power circuit.
	I/P voltage range	min : 300v DC
	O/P voltage range	max : 650V Dc
	Output power	5000W(max)
	Switching Frequency	5 to 20khz
	Driver circuit	Tip250 IC based PWM driver circuit used
	Addition Requirements:	
<ul style="list-style-type: none"> • One Hall Effect current sensor used to sense Inductor current and over load trip purpose. • One Hall Effect voltage sensor used to sense the o/p voltage. • Voltage and current sensor o/pts terminated in front panel bs2 connector. • Over load fuse protection is required • Over temperature protection will be provided • One no of 4 inch cooling fan used to dissipate switching device heat 		
CONTROLLER BOARD SPECIFICATION	It is specially designed for experimenting and research system design with FPGAs.	
	Make: Xilinx any other reputed Multinational Branded	
	On-Board Specification and Requirements:	
<ul style="list-style-type: none"> ▪ Programming & Memory section <ul style="list-style-type: none"> • Processor speed 20 MHZ. • 57 Individually Programmable GPIO Pins. • 4MB On board PROM for standalone program execution memory. ▪ Interfaces <ul style="list-style-type: none"> • 8 output and 8 input lines with 5V Level. • Isolated serial communication interface through USB connector. • 4 position user DIP switch. • 8 user LEDs. • 2 no of input push switches. • 20x4 (or 16x2) LCD interface header. • External JTAG header for programming ▪ ADC <ul style="list-style-type: none"> • No of ADC input : 4 Channels • Resolution : 12 bit • Sampling rate : 1MSPS • Analog input range : 5V(unipolar) • Over voltage protection ▪ Headers <ul style="list-style-type: none"> • 16 pin header for ADC input, 5V level Output and 5V level Input. • 2 no's of 26 pin and 1 no of 10 pin headers for GPIO line termination (49 Pins). • 10 pin External JTAG header for Programming • 5 pin Unicon connector for power supply (+5V, GND). • 20 pin header used to interface 20x4 LCD or 16x2 LCD. 		

3. BI-DIRECTIONAL BUCK-BOOST CONVERTER AND BI-DIRECTIONAL INVERTER WITH CONTROLLER

BI-DIRECTIONAL BUCK-BOOST CONVERTER FOR BATTERY	Power Rating	5000Watts
	Switching device rating	2 Nos of High Speed MOSFET/IGBT rating @600v/25A semiconductor devices
	Input/output voltage	600/300 v
	Driver Circuit	2 Nos of Isolated High Speed Driver circuits with Heat sink and snubber circuit used to form power circuit.
	Gate signal generation	FPGA Digital controller is used for generating the gate signal for the IGBT or MOSFET
	Converter other Specification and Requirements:	
<ul style="list-style-type: none"> • 2 Nos of Current Transducer used for sensing the input and output of the converter current • 2 Nos of Voltage Transducer used for sensing the input and output of the converter voltage • Over Load Protection is available • Additional Controller can be interfaced. • Outputs terminated in Banana socket • User can give PWM inputs from external controller using dspace interface. Performance can be tested with various control strategies. 		
BI-DIRECTIONAL INVERTER ON GRID SIDE - IGBT BASED POWER MODULE	Power Rating	5000Watts
	Switching device rating	<ul style="list-style-type: none"> • 1200V/ 75A, Peak Semikron based IGBT module • 6Nos of IGBT's provided in 3nos of IGBT module, Six driver (inbuilt opto isolator)
	Converter other Specification and Requirements:	
<ul style="list-style-type: none"> • Two nos of 3000 microfarad/450v dc link capacitors used to split the dc link voltage. • All the collector and emitter terminals are brought out in proper connector for power circuit connection • All the gate and emitter terminals are brought out and terminated on front panel to view driver output fault output • Indicator LED provided for PWM input and power supply input • Proper heat sink provided for all the IGBTs with cooling fan provision • Temperature sensor provided for over temperature Protection • PWM inputs are brought out on Front Panel, you may connect any controller for interface • One common +15V Power supply for all the driver circuit, Inbuilt isolated power supply provided. • Over current protection and short circuit protection provided for all individual IGBT module • Reset circuit provided and terminated to clear the fault • Snubber capacitor provided for dv/dt protection for all IGBT module • 60A / 3 phase bridge rectifier and filter circuit available for power circuit input. • 4 no Current sensor for DC link current and Output line current no Voltage sensor for DC link voltage • External PWM Generator Can be used 		
CONTROLLER BOARD	FPGA development board with maximum 100 user IOs.	

SPECIFICATION	<p>It is specially designed for experimenting and research system design with FPGAs.</p> <p>Make: Xilinx any other reputed Multinational Branded</p> <p>On-Board Specification and Requirements:</p> <ul style="list-style-type: none"> ✓ Processor speed 20 MHZ ✓ 100 output lines / inputs lines are in 3.3/5V level ✓ Isolated serial communication interface through USB connector ✓ 4MB PROM for code execution memory. ✓ External JTAG header for programming ✓ 20x4 (or 16x2) LCD interface header. ✓ 8 user LEDs/4 position user DIP switch ✓ 2 up & down input push switch ✓ Up to 100 Individually Programmable GPIO Pins ✓ ADC <ul style="list-style-type: none"> • No of ADC input : 8 Channels • Resolution : 12 bit • Sampling rate : 1MSPS • Analog input range : ±10V • Buffer section for voltage protection ▪ DAC <ul style="list-style-type: none"> • No of DAC output : 4 Channels • Resolution : 12 bit • Settling time : 6µs • Analog input range : -5v to +5V ▪ Connectors <ul style="list-style-type: none"> • 16 pin header for ADC input • 16 pin header for PWM OUTPUT • 2 no's of 50 pin headers for GPIO line termination • External Programming header <p>Total 100pwm signals can be generate.</p>
----------------------	--

4. GRID SIDE INTERFACING COMPONENTS

LA25-P HALLEFFECT Current sensors with signal conditioner - which is used to measure the grid side current and inverter output current..	6 nos, 25Amps Current sensor
LA25-P HALLEFFECT Voltage sensors with signal conditioner used to sense the grid voltage.	230/440 v Voltage sensor
Three Nos of Inductor Used to filter the grid side injected current.	

Note:

1. Refer figure 1 for overall system layout
2. All interconnecting cables including cables required to connect CT measurement core and PT output are to be provided.
3. Printed literature in support of compliance to the prescribed specifications is to be submitted.
4. Active power and reactive power control program will be provided.
5. PQ theory or extended pq theory will be used to generate the reference current and active and reactive power control.

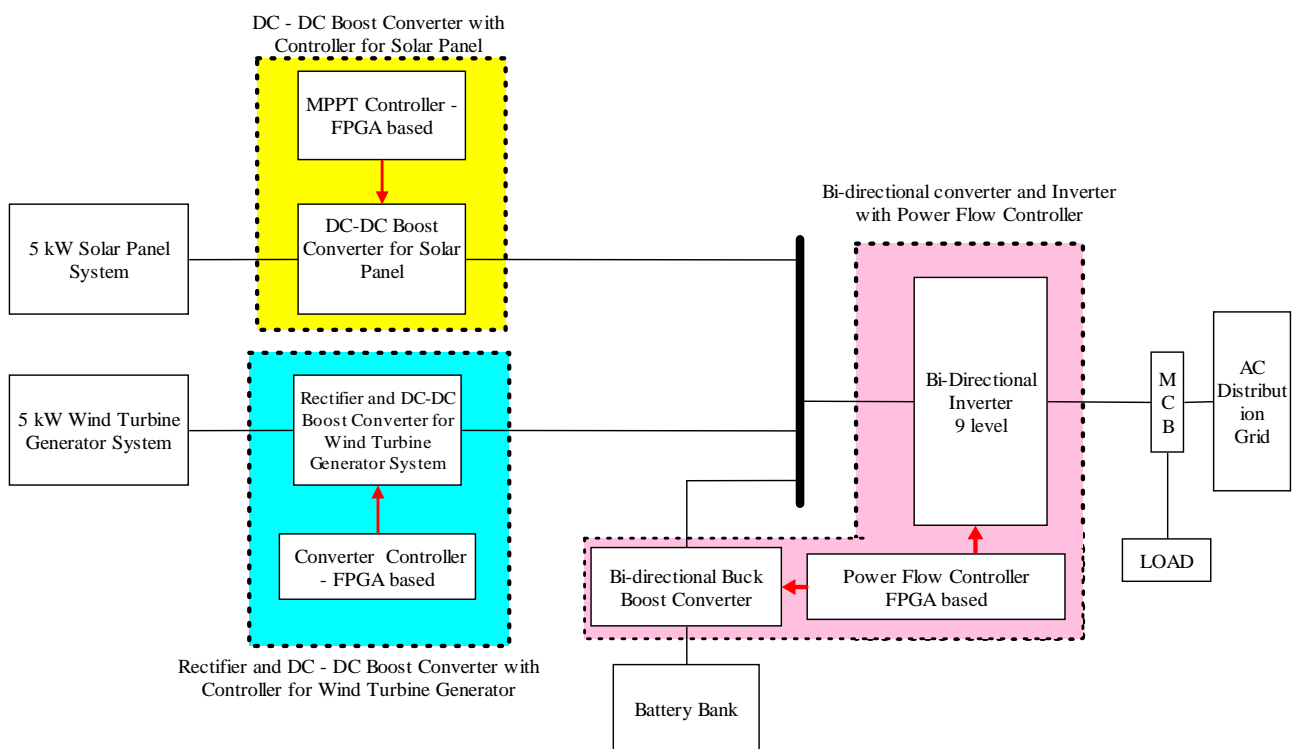


Fig. 1 Over all block diagram

SECTION : 4 - PRICE BID

Tender No. & Date:

Bidder's Offer No. & Date:

S. No.	Description of item	Unit Price In Rs.	QTY	Sub Total in Rs. (excluding of all taxes) (Col.2*Col.3)	ED in % For Col. 4	VAT/CST In % For Col. 4	Service Tax in For Col. 4	Total Value in Rs. (inclusive of all taxes) Col. (4+5+6+7)
	Column No.1	2	3	4	5	6	7	8
1	DC-DC BOOST CONVERTER WITH CONTROLLER FOR SOLAR PANEL – 1 Nos.		1					
2	THREE PHASE RECTIFIER AND DC-DC BOOST CONVERTER WITH CONTROLLER FOR WIND TURBINE GENERATOR – 1 Nos.		1					
3	BI-DIRECTIONAL BUCK-BOOST CONVERTER AND BI-DIRECTIONAL INVERTER WITH CONTROLLER – 1 Nos.		1					
4	GRID SIDE INTERFACING COMPONENTS		1					
5	Other accessories /spares etc as given in scope of supply (if any)							
6	Installation & Commissioning (extra, if any)							
7	Packing & Forwarding charges (extra, if any)							
8	FOR Dispatching station value in Rs.							
9	Freight & Transit insurance charges, extra, if any							
10	Total all inclusive price delivered, installed and commissioned at NIT Puducherry							
11	Net cost to be paid by NIT Puducherry for whole package							

Signature & Seal of Vendor

Note: The price bid should be submitted only as per the above format. No row shall be left blank. Please indicate NA, in case the item is "Not Applicable". If this format is not used or any column is left blank, then the bid will be rejected.

SECTION : 5 - CONTRACT FORM

To be provided by the bidder in their business letter head

[Name of the Supplier's Firm] hereby abide to deliver theby the delivery schedule mentioned in the Section 2 of the Tender document for supply of the items if the purchase order is awarded.

The item will be supplied conforming to the specifications stated in the tender document without any defect and deviations.

Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NIT Puducherry during this period.

Signature of the Bidder :

Name and Designation :

Business Address :

Place :

Date :

Seal of the Bidder's Firm