

Bharat Heavy Electricals Ltd.,

(A Government of India undertaking)

Electronics Division

PB No.2606, Mysore Road, Bangalore-560026, India

Sealed quotations are invited under two part bid system for manufacturing and supply of PV Module (crystalline silicon) as per BHEL technical specification.

RFQ NO and date	MDSSCPV040 dated 05.11.2018
RFQ due date & time	16.11.2018 up to 13.00 hrs (IST)
Date, Time & Venue of Part-I Bid Opening	16.11.2018 after 13.30 hrs (IST) New Engineering Building 2nd Floor Bharat Heavy Electricals Limited PB NO 2606, Mysore road, Bangalore-560 026. INDIA
Date, Time & Venue of Price Bid opening	Will be intimated later for technically & commercially qualified bidders
Address for Communication & Contact Person in BHEL	Mr. Muhammed Shakir/ Mr. Ramachandra, SC&PV MM Department, BHEL Electronics Division, PB NO 2606, Mysore road, Bangalore-560 026. INDIA Email: muhammedshakir@bhel.in , ramachandra@bhel.in Telephone number: +91 80 26989665, +91 80 26998476

RFQ No. : MDSSCPV040 dated 05.11.2018
Supplier Name :
Offer Ref :

Contact Details

Registered Office:-

Address :

Telephone No. :

Email :

Manufacturing plant:-

Address :

Telephone No. :

Email :

Contact person :-

Name :

Office Address :

Telephone No. :

Mobile No. :

Email :

Contact person in India (if any) :-

Name:

Office Address :

Telephone No. :

Mobile No. :

Email :

Bank details (for LC establishment, in case required) :-


Name :

Address :

Account No. :

SWIFT Code :

REQUEST FOR QUOTATION

	BHARAT HEAVY ELECTRICALS LIMITED Electronics Division PB No. 2606, Mysore Road Bangalore - 560026 INDIA	RFQ NUMBER: MDSSCPV040 RFQ DATE : 05.11.2018	Due Date/Day: 16.11.2018 FRI Time : 13:00 HRS Tender Box : Reception Area Opening Venue: NEW ENGG. BLDG
MMI:PU:RF:003	(address for communication) :		(for all correspondence)
		Purchase Executive : MUHAMMEDSHAKIR M K Phone : Fax : E-mail: muhammedshakir@bheledn.co.in	

SI No.	Description	Qty	Unit	Delivery qty	Delivery Date
1	PV0679040340 PV Module >=325 Wp (Crystalline Silicon) * HSN/SAC : 8541 Doc No.- PS439396 Rev - 02	12,922	KW	12,922	31.12.2018

Total Number of Items - 1

- 1.
- 2.

TWO PART BID - SUBMIT TECHNICAL AND PRICE BID IN SEPARATE SEALED COVERS

NOTES :


- 1.This RFQ is Governed by :
 - a)INSTRUCTIONS TO BIDDERS/SELLERS(Doc No :BHEL:EDN:ITB-SHOP) available at **www.bheledn.com (RFQ-PO Terms & Conditions)**
 - b)GENERAL CONDITIONS OF CONTRACT FOR PURCHASE(Doc no :BHEL:EDN:GCC-SHOP) available at **www.bheledn.com (RFQ-PO Terms & Conditions)**
 - c)Any other specific Terms and Conditions mentioned.
2. Bidders / Representatives who would like to be present during opening of offers are required to furnish authorization letter for the same .

* The HSN/SAC no mentioned against the line items in the RFQ are indicative only.

For and On behalf of BHEL.

MUHAMMEDSHAKIR M K
Semiconductors & Pho

1 OF 1


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TECHNICAL SPECIFICATION FOR SUPPLY OF CRYSTALLINE SILICON PV MODULES

REVISION DETAILS: (02) PQC revised.	PREPARED JRS <i>Jamuna Kaur S</i>	ISSUED ENGG	DATE 05.11.2018
	<i>S.R.</i> APPROVED SR		


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1. PRE-QUALIFICATION CRITERIA (PQC) :

Sl. No	Particulars	Bidder's confirmation
1	The offer shall be quoted only by the Bloomberg Tier-1 PV Module supplier as per Bloomberg BNEF Q4 2017 report	<p>PV module supplier name:</p> <p>Manufacturing Plant Location:</p> <p>Website: <i>(Please mention name of PV module manufacturer, complete address & contact details with email address)</i></p>
2	Vendor should have a minimum manufacturing capacity of 100 MW/annum PV module in-house manufacturing facilities	<p>PV Module Manufacturing Capacity : ___ MW <i>Please enclose documentary evidence for PV module manufacturing capacity</i></p>
3	<p>The vendor shall have the following valid IEC certifications (latest standards) for the offered PV modules:</p> <p>i) IEC 61215 – Edition 2 Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval</p> <p>ii) IEC 61730 – 1 Photovoltaic (PV) module safety qualification – Part 1: Requirements for construction</p> <p>iii) IEC 61730 – 2 Photovoltaic (PV) module safety qualification – Part 2: Requirements for Testing</p> <p>iv) IEC 61701 Salt mist corrosion testing of photovoltaic (PV) modules</p> <p>v) IEC 62804-1:2015 PV modules – Test methods for detection of Potential Induced Degradation – Part 1: Crystalline Silicon</p>	<p>Yes / No</p> <p><i>Valid IEC test certificates to be submitted along with the offer. All IEC test reports to be sent by e-mail to the e-mail id as mentioned in BHEL tender.</i></p>

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4.	The bidder shall be Tier-1 manufacturer as per Bloomberg BNEF Q4 2017 report	Yes / No <i>Please submit proof for Bloomberg Q4-2017 Tier 1 PV module manufacturer</i>
5.	The bidder must have cumulatively supplied 300 Wp and above wattage crystalline silicon PV modules for a minimum quantity of 100 MW in India. Out of the above, 10 MW or more of PV modules must have been supplied to atleast one solar Power plant project of minimum capacity of 10 MW. The bidder shall also submit the proof of supply.	Yes / No <i>Enclose customer certificate</i>
6	Bloomberg Tier-1 PV module supplier only will execute the order, Certify the Quality of the PV modules, Stand guarantee and warranty for the supplied PV modules and also issue insurance certificate or Bank Guarantee for the 25 years power performance of the PV modules.	Accepted / Not accepted
7	PV Module vendor has to be approved by BHEL customer. BHEL shall take up approval with its customer before price-bid opening. Vendors approved by BHEL's customer only will be considered for further processing.	Accepted / Not accepted
8	Price Variation Clause : Price variation clause will be applicable for the unit rate in PO to take care of market trend in PV Module price. The unit price in PO will be varied as per the variations in the average price of Poly High Eff Module/ Mono High Eff Module as the case may be, as per www.pvinsights.com, displayed under the heading "Solar PV Module Weekly Spot Price". The reference price will be average price of Poly/ Mono High Eff as on Techno-commercial bid opening date. The unit rate in PO will be allowed to vary (increase/ decrease) in the ratio of 1:1 for variations (increase/ decrease) in average price PV modules prevailing on date of MQP approval with respect to the reference price.	Accepted / Not accepted

Note A :

- i. Pre-qualification will be carried out based on the details furnished by the vendor / purchase orders, documents from their customers/ inspection of the company/product, if required by BHEL and at its sole discretion.
- ii. The pre-qualification criteria are mandatory requirements and the technical bids will be considered only if all the above Pre-Qualification Criteria are met.

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2. TECHNICAL REQUIRMENTS:

Sl. No	Item	Remarks
1	PV Module Configuration	<p>Mono or Multi crystalline photovoltaic module with 72 nos of cells in 12X6 series configuration.</p> <p>The module construction and bill of material shall be as per vendor's approved IEC certification.</p> <p><i>Please enclose:</i></p> <p><i>i. Module overall assembly drawing with mounting holes</i></p> <p><i>ii. Data sheet with typical electrical characteristics, I-V curves, temperature coefficients etc.</i></p>
2	Power Output	<p>325 Watts and above, in 5 Watt band only. No negative tolerance accepted.</p> <p>Each 5 watt band PV modules supplied shall be in multiple of 1.615 MW.</p>
3	Efficiency	15% (min)
4	Fill Factor	0.75 (min)
5	Temp coefficient of Power	-0.43% or better
6	Operating Conditions	<p>Modules shall be able to perform satisfactorily in relative humidity up to 85% with temperature between -40°C to +85°C and shall withstand adverse climatic conditions such as high speed wind (150 KM / hour) with dust/sand particles, saline climatic/soil conditions etc.</p>
7.1	IEC Certifications	<p>The PV modules supplied shall be with valid IEC certifications as below.</p> <ol style="list-style-type: none"> 1. IEC 61215-Edition 2 (Design Qualification and Type Approval) 2. IEC 61730-1 (Safety Qualification – Part 1) 3. IEC 61730-2 (Safety Qualification – Part 2) 4. IEC 61701 (Salt Mist Corrosion testing) 5. IEC 62804-1 (PID Testing – Part 1) <p>Vendors shall use raw materials for manufacture of PV modules as per approved IEC Bill of Materials.</p>
7.2	BIS Certification	<p>If required, successful bidder shall submit PV modules to PV Labs in India for type testing and certification as per BIS Standard.</p>
8	BILL OF MATERIALS	
8.1	Solar cells	<p>Mono or Multi-crystalline solar cells</p> <p>Pl. mention make of cells that will be used for this project :</p>
8.2	EVA	Fast cure type, preferably UV resistant (as per IEC certificate approved BoM)

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8.3	Glass	High transmission, low iron, toughened glass
8.4	Back Sheet	<p>(as per IEC certificate approved BoM)</p> <p>System Voltage: > = 1000 V DC</p> <p>Back-sheet shall meet globally benchmarked durability properties such as moisture barrier, tensile strength, UV stability etc.</p>
8.5	PV Module Frame	Corrosion resistant preferably, preferably anodized Aluminum.
8.6	Junction box	<p>IP67 grade with min 3 bypass diodes, UV resistant & weather-proof</p> <p>Junction box shall have two 4 sq mm UV resistant cables of minimum 1.2 metre length and plug-in connectors.</p> <p>Cables shall conform to specification: 2Pfg 1169/08.2007 or EN 50618.</p> <p>Pl. confirm for Junction cable length of 1.2 Metre : Yes / No</p>
8.7	Adhesive for framing, junction-box fixing and potting	As per manufacturer's IEC test report
8.8	RFID	<p>Positioned inside the laminate. RFID shall be durable for the entire life of panel and shall contain the following information:</p> <ol style="list-style-type: none"> Name of module manufacturer with country of origin Month & year of manufacture of modules Name of cell manufacturer with country of origin Month & year of manufacture of cells IV curve Wattage, I_{max}, V_{max}, V_{oc}, I_{sc}, temperature coefficients & fill-factor Module model number Unique serial number Date of obtaining IEC qualification certificates Name of test lab issuing IEC certificates Other relevant information etc

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8.9	Nameplate	<p>Each module shall be provided with a name plate label (sticker) containing the following information:</p> <ol style="list-style-type: none"> Name of module manufacturer Module model number Unique serial number Overall Dimension Weight P_{max}, I_{max}, & V_{max} Short-circuit current I_{sc} & Open-circuit voltage V_{oc} System Voltage Relevant standards and certifying lab name Warnings, if any Other relevant information etc <p>Nameplate shall be clearly visible and shall not be hidden by equipment wiring. It shall be durable for the entire life of panel.</p>
8.10	.PAN File	.PAN file for each module wattage offered shall be provided for carrying out PVSYS calculations at our end.
8.11	BOM as per CDF of IEC Certificate	<p>Pl. confirm for using solar cells and module materials as per approved CDF as per IEC Certificate.</p> <p>Vendor confirmation : Yes / No</p>
8.12	Spare PV Modules	<p>115 nos. of highest offered PV modules (eg. 330 Wp Multi) are required to be supplied as spare PV modules at free of cost.</p> <p>Vendor confirmation : Yes / No</p>
8.13	RFID Readers	<p>2 nos of hand-held RFID reader (gun type) compatible to read module IV data (at the site) stored in RFID tags to be supplied at free of cost. All associated software, cables and accessories shall also be provided at free of cost for displaying and downloading RFID data from the RFID reader.</p> <p>Vendor confirmation : Yes / No</p>
8.14	Mounting hole Pitch	<p>Pl. provide mounting hole pitch details.</p> <p>Horizontal :</p> <p>Vertical :</p> <p>Mounting hole size :</p>

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3. QUALITY ASSURANCE

Module Quality Plan and Data Sheet shall be subject to customer's approval. Each lot of modules shall be subject to pre-dispatch inspection by BHEL, customer or any third party.

1	Quality Plan and Data sheet.	<p>Quality Plan and Data Sheet format shall be as per document QP-GSFC.PDF.</p> <p>Pre-Shipment inspection by customer at Vendor's works will include :</p> <ul style="list-style-type: none"> i. Dimensional and Visual Check ii. Electrical test (I-V test) iii. IR-HV-IR test and Earth Continuity Test iv. Electro Luminescence (EL) Test v. Wet Leakage test vi. Mechanical Load test <p>The acceptance criteria and Sampling plan are mentioned in the Quality Plan.</p> <p>Pl. confirm for adherence to Quality Plan and Data Sheet format as per document QP-GSFC.PDF</p> <p>Vendor confirmation : Yes / No</p>
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4. WARRANTY

Product warranty shall be for 10 years and performance warranty shall be for 25 years.

PV modules supplied must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and not less than 80% at the end of 25 years from the completion of the trial run. Degradation of PV module for first year shall be limited to 3% and shall not be more than 0.7% in any subsequent year. Modules that do not meet the above criteria shall be replaced free of cost at BHEL's/customer's sole discretion.

5. INSURANCE or BANK GUARANTEE FOR POWER OUTPUT WARRANTY for 25 Years

The PV module power output warranty as per the technical specification shall be insured and backed up through an insurance policy by a reputed insurance company which will cover against the PV module power output warranty for 25 years in case of insolvency or bankruptcy of the PV module manufacturer. The Bidder shall submit a suitable insurance from Third Party.

The Successful Bidder who is not able to provide insurance of PV modules as above, shall submit a Bank Guarantee of INR Rs. 25 Lakh per each megawatt of PV modules or an equivalent amount in international currency (i.e. DC capacity), through BHEL consortium bank and shall be valid for a period of twenty five (25) years and 90 days. The minimum validity of the Bank guarantee shall be five (5) years and shall be renewed by the bidder of their own subsequently every five (5) years prior to thirty (30) days of its expiry. In case the PV module fails to provide power output as per its performance warranty, and if the bidder fails to rectify, replace or repair the PV module, then BHEL shall carry out the necessary rectification, repair or replacement at its own discretion at the risk and cost of the supplier. The cost of such rectification, repair or replacement shall be encashed from the Bank Guarantee against PV Module Warranty. The same shall be replenished by the supplier within thirty (30) days, failing which the entire Bank Guarantee amount shall be encashed and all pending payment shall be withheld by BHEL till such amount is replenished by the supplier. In another instance, if the supplier becomes bankrupt or insolvent, then BHEL shall immediately encash the entire amount of the Bank Guarantee against PV Module Warranty.

6. PACKING & IDENTIFICATION OF PV MODULE

The modules shall be packed in carton boxes. One carton box shall contain one module power rating (325 Wp or 330 Wp). Module power rating shall be displayed with a sticker on both the longer sides of the carton box. Eg: 325 Wp Multi Crystalline PV module to be identified as **Multi-325 Wp** Sticker. The carton box should display the manufacturer's name, number of modules, type, serial numbers, module wattage etc.


PV Modules in one Pallet / carton box shall be packed such that mismatch losses shall be minimum or current rating difference shall be minimum for PV modules packed in one pallet / carton to minimize mismatch losses.

Modules from outside India shall be with Sea worthy packing and modules made in India shall be with road worthy packing.

Modules found damaged at the time of opening of the cartons in the project site shall be replaced by the vendor.

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7. GENERAL CONDITIONS


- a. PV Modules shall be manufactured at the vendor's works only.
- b. Manufacturing clearance shall be given only after approval of manufacturing quality plan, approval of drawings and datasheet by BHEL's customer and after sample PV Module approval (if deemed necessary).
- c. Any additional tests/type tests/Certification required by BHEL/BHEL's customer shall be complied and borne by the vendor.

8. Enclosures :

Sl. No.	Document
1.	Proof for >= 100 MW PV module manufacturing capacity
2.	Proof for Bloomberg Q4-2017 Tier 1 PV module manufacturer.
3.	Customer/client certificate for cumulatively supply of 100 MW or more of 300 Wp and above wattage PV modules to India. Out of the above, 10 MW or more of PV modules must have been supplied to atleast one solar Power plant project of minimum capacity of 10 MW.
4.	IEC 61215, 61730-1 & 2, 61701 & 62804 test certificates.
5.	PV Module catalogue having Over all PV module assembly drawing indicating mounting hole pitch & I-V Electrical data sheet for PV modules.
6.	Signed copy of BHEL Specification PS-439-396
7.	.PAN files for 325 Wp and 330 Wp, etc. rating PV modules
8.	Hard copy of above documents shall be enclosed along with the technical bid. Soft copy of all above documents and IEC test reports to be sent by e-mail to the email id as mentioned in tender documents.

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9. DEVIATION SHEET

Sl. No.	Particulars	Bidder's Confirmation
1.	Confirmation to BHEL Specification PS- 439- 396 in toto	<i>YES / No</i> <i>Please indicate deviations, if any.</i>

Signature of Tenderer with stamp

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<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> Pl. insert your Monogram </div>	QUALITY PLAN AND DATA SHEET FOR PV MODULES	QP No	??*/BHEL/ GSFC 10 MW
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QUALITY PLAN AND DATA SHEET FOR PHOTOVOLTAIC MODULES

Project	10 MW GSFC Solar Power Project, Gujarat Solar Park, Charanka, Gujarat
Product	Solar PV Module – 325 Wp, 330 Wp
PV Module Manufacturer	??*
Quantity	?? MW 325 Wp - ?? MW 330 Wp - ?? MW
Customer	GSFC, Gujarat
BHEL Purchase Order No.	
Customer Inspection	Applicable
Requirements	As specified in this Quality Plan.

REVISION STATUS:

Revision no	Date	Contents	Approved by
00	xx.xx.xxxx	Original	??*

GSFC Approval with Seal and Sign	
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REVISION NUMBER: 00	PREPARED ??*	DATE xx.xx.xxxx
ISSUED BY ??*	APPROVED ??*	

<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> Pl. insert Monogram </div>	QUALITY PLAN AND DATA SHEET FOR PV MODULES	QP No	??*/BHEL/ GSFC 10 MW
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1. PHYSICAL CHARACTERISTICS:

PV MODULE TYPE NO.	XXXX
CONFIGURATION	Single glass laminated type with 72 nos of 156.75-mm multi-crystalline silicon solar cells (12*6) in series configuration
OVERALL MODULE SIZE	9999* 999 * 99 mm
WEIGHT	99 Kg. (Typ.)
SOLAR CELLS	'A' grade solar cells, Make : xxxxx
BILL OF MATERIAL (BOM)	As per IEC 61215 tested materials
FRAME MATERIAL	Anodized Aluminium
JUNCTION BOX (JB)	IP67 Grade
CABLES CONNECTED TO JB	1.2 Metre length, 4 Sq. mm as per TUV Spec. 2pfg 1169/08.2007
CONNECTORS	MC4 Compatible connectors
BYPASS DIODES	3 nos. per junction box
RATING STICKER	Each PV module will be provided with a rating sticker on backside.
RFID Tag	RFID Tag containing PV Module data as below <ul style="list-style-type: none"> a. Name of module manufacturer with country of origin b. Month & year of manufacture of modules c. Name of cell manufacturer with country of origin d. Month & year of manufacture of cells e. IV curve f. Wattage, I_{max}, V_{max}, V_{oc}, I_{sc}, temperature coefficients & fill-factor g. Module model number h. Unique serial number i. Date of obtaining IEC qualification certificates j. Name of test lab issuing IEC certificates
RFID Position	In case outside the laminate (Pasted on back side of the PV module), RFID tag shall contain same module serial number as that laminated inside of the module for traceability.
Packing Box identification	Each carton box will have one wattage PV module and shall be identified with wattage (325 Wp or 330 Wp) on the carton.

2. TYPICAL ELECTRICAL CHARACTERISTICS OF PV MODULES :

TYPICAL ELECTRICAL CHARACTERISTICS	325 Watts	330 Watts
OPEN CIRCUIT VOLTAGE (Voc)	??	??
SHORT CIRCUIT CURRENT (Isc)	??	??
VOLTAGE AT PEAK POWER POINT (Vmp)	??	??
CURRENT AT PEAK POWER POINT (Imp)	??	??
MODULE POWER RATING (Pmax)	??	??
MODULE EFFICIENCY	??	??
FILL FACTOR	??	??

- Note :**
1. No negative tolerance on module power rating (P_{max}).
 2. Supplied modules shall be (5-Watt band) shall be in multiples of 1.615 MW.

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3. OPERATING CONDITIONS:

TEMPERATURE RANGE : - 40 deg C to +85deg C
RELATIVE HUMIDITY : 85%
WIND SPEED (GUST) : 150 km/hr

4. TEMPERATURE CO-EFFICIENTS (% / deg C):

CURRENT : 0.99
VOLTAGE : - 0.99
POWER : - 0.99

5. WARRANTY:

5.1. Product Warranty: The modules are warranted for 10 years for failures due to material defects and workmanship.

5.2. Performance Warranty: 90% of the peak power capacity at the end of 10 years and 80 % at the end of 25 years. Degradation of PV module for first year shall be limited to 3% and shall not be more than 0.7% in any subsequent year.

6. ROUTINE TESTS / FACTORY TESTS BY PV MODULE MANUFACTURER

6.1. Visual Check:

Factory Test Report Format is as per Annexure-I.
Quantity to be inspected: 100%

6.2. Electrical test (I-V characteristics):

Factory Test Report Format is as per Annexure-II.
Quantity to be inspected: 100%

7. WITNESS TESTS / CUSTOMER SAMPLE INSPECTION AT PV Module Manufacturer's works

PV Module Manufacturer shall assist customer/inspection agency to witness the following tests.

7.1. Dimensional and Visual Check

Customer Inspection Format is as per Annexure III.

7.2. Electrical test (I-V test)

Customer Inspection Format is as per Annexure IV.

7.3. IR-HV-IR test and Earth Continuity Test

Customer Inspection Format is as per Annexure V.

7.4 Electro Luminescence (EL) Test

Customer Inspection Format is as per Annexure VI.

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8. SPECIAL WITNESS TESTS:

8.1. Wet Leakage test as per IEC 61215 : 10 nos. per lot

8.2. Mechanical Load test as per IEC 61215 : 1 no. per lot

9. ACCEPTANCE CRITERIA:

Acceptance criteria for the different tests are as follows:

SI no	Test Type and Description	Parameters	Acceptance criteria	Sampling Plan at the time of Witness Test
1	Dimensional check As per assembly drawing	Size of the PV Module: Length Width Height	1970 (± 3) L 990 (±0.2) W 35 (±1) H All dimensions are in mm.	As per ISO 2859 Single Sampling Plan General Inspection Level 1, AQL 2.5
2	Visual check Each PV module shall be checked visually under natural light conditions and with naked eye with direction normal to the PV module as per IEC 61215.	1. Cell breakage 2. Air-bubbles / de-lamination 3. Cell alignment 4. External stray materials 5. Front Surface check 6. RFID tag check	1. There shall be no cell cracks or breakage or visual defects on cells. 2. There shall not be any air bubbles on the cells or de-lamination forming a continuous path between any part of the electrical circuit and the edge of the module. There shall also be no bubbles (air-trapping) or scratches on the back-sheet. 3. No cells overlapping one another & no cell touching the edge frame. 4. W -1 .0mm or L-1.0mm: none allowed 5. L>30mm, or W>0.5mm, or D>2mm;None allowed 6. RFID tag shall contain all module details as required.	As per ISO 2859 Single Sampling Plan General Inspection Level 1 Major Defect - AQL 2.5 Minor Defect - AQL 4.0

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3	<p>I-V test (Electrical Test)</p> <p>I-V characteristics measurement at STC of 100 mW/sq. cm solar insolation (AM 1.5) and at 25 deg. C cell temp</p>	<p>P_{max}</p> <p>Fill factor</p>	<p>P_{max} as per electrical characteristics at page-2. At the time of customer inspection, P_{max} measured shall not be lesser by more than 1 % of the declared power rating.</p> <p>FF >= 0.75</p>	<p>As per ISO 2859 Single Sampling Plan General Inspection Level 1, AQL 2.5</p> <p>Reference module tested from a Test Lab shall be used.</p>
4.	<p>IR-HV-IR test Earth Continuity Test</p> <p>Check the insulation between the shorted terminals of junction box and aluminum frame at 1000 VDC (duration 1 min) before and after HV test. For HV test, apply 3000 V DC for 1 min.</p>	<p>1. Insulation resistance</p> <p>2. Dielectric Breakdown</p> <p>3. Earth Continuity</p>	<p>Measured resistance times module area >40MΩ.m²</p> <p>There shall be no dielectric breakdown</p> <p>There shall be no Ground dis-continuity along the frames.</p>	<p>10 Modules / Lot</p> <p>No rejections acceptable.</p>
5.	<p>EL Test</p> <p>Check the PV modules for any micro cracks, dark spots and shunts.</p>	<p>1. Micro cracks</p> <p>2. Dark Area</p> <p>3. Dead Cell</p>	<p>As per Annexure VI</p>	<p>As per ISO 2859 Single Sampling Plan General Inspection Level 1, AQL 2.5</p>
6.	<p>Mechanical load test</p> <p>2,400 Pa is applied for 1 hour on each face of the module for 3 Cycles on both sides. Visual, IV & IR test to be conducted subsequently.</p>	<p>1. Visual</p> <p>2. Electrical / P_{max}</p> <p>3. Insulation resistance</p>	<p>There shall be no major visual defects.</p> <p>P_{max} degradation shall be no more than 5%.</p> <p>Measured resistance times module area >40MΩ.m²</p>	<p>1 Module / Lot</p> <p>No rejection acceptable.</p>
7.	<p>Wet Leakage test</p> <p>The module is submerged in a shallow tank and 1000 VDC is applied between the shorted output connectors and the water bath solution for 2 minutes.</p>	<p>Insulation resistance</p>	<p>Measured resistance times module area >40MΩ.m²</p>	<p>10 Modules / Lot</p> <p>No rejections acceptable.</p>

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10. PACKING

The modules shall be packed in carton boxes. One carton box shall contain one module power rating (325 Wp or 330 Wp). Module power rating shall be displayed with a sticker on both the longer sides of the carton box. PV Modules in one Pallet / carton box shall be packed such that mismatch losses shall be minimum or current rating difference shall be minimum for PV modules packed in one pallet / carton to minimize mismatch losses.

Bill of Materials *

Sl. No.	Item Description	Type no. / Spec.	Make (Vendor)
1.	156.75 mm multi crystalline silicon solar cells		
2.	Glass		
3.	EVA		
4.	Back Sheet (White colour)		
5.	Interconnect		
6.	Busbar		
7.	Al. frames		
8.	Junction Box with cables and connectors		
9.	Junction box cables		
10.	Junction box connectors		
11.	Silicone Sealant		

* BOM shall be IEC approved within Constructional Data Form (CDF) for Photovoltaic Modules.

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Module Sl. No. position inside the laminate



RFID Tag position outside the laminate



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PV Module Overall assembly Drawing

PART	DESCRIPTION	QTY	UNIT	DATE	BY
1	HF8 TAC				
2	MODULE HATING STRIPPER				
3	PV MODULE SL. NO. STRIPPER				
4	ANODIZED ALUMINUM EDGE FRAME				
5	JUNCTION BOX WITH CABLES & CONNECTORS				
6	BUS BAR				
7	INTERCONNECTS				
8	BACK SHEET				
9	22 Nos. OF 156 mm MULTI CRYSTALLINE SILICON SOLAR CELLS CONNECTED IN SERIES				

SHARAT HEAVY ELECTRICALS LIMITED, ELECTRONICS DIVISION, BANGALORE	SCALE: 1 : 10	FOR APPROVED: SC&PV SPOK 439	FOR APPROVED: REP: 02/24/99	FOR APPROVED: REP: 10/01/00	FOR APPROVED: REP: 10/01/00
DRAWING NO. 3 679 02 00414		TITLE: PHOTOVOLTAC MODULE-L24270P3 156mm Multi Solar Cell (Corner Block Type)		REV. DATE 00	

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ANNEXURE I							
<u>PHOTOVOLTAIC MODULE FACTORY TEST REPORT - VISUAL CHECK</u>							
Project: 10 MW GFSC Solar Power Project, Gujarat Solar Park, Charanka							
BHEL PO No.:							
Customer : GFSC, Gujarat, India				Date:			
Module Type :				Total Qty in nos. :		Total Qty in MW :	
SL. NO.	PV MODULE SERIAL NO.	VISUAL CHECK					
		Free from cell cracks/ breakages / Cell Visual defects (YES/NO)	Free from Air bubbles or delamination; Back sheet bubbles (with air trapping), back sheet scratches (YES/NO)	Free from cells overlapping or cells touching the edge frame (YES/NO)	Free from external stray materials (YES/NO)	Free from glass scratches (YES/NO)	Availability of RFID Tag containing all the module data (YES/NO)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
<u>Tested by :</u>				<u>Approved by :</u>			

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ANNEXURE II								
<u>PHOTOVOLTAIC MODULE FACTORY TEST REPORT - ELECTRICAL CHECK</u>								
Project : 10 MW GFSC Solar Power Project, Gujarat Solar Park, Charanka								
BHEL PO No.:								
Customer : GFSC, Gujarat, India								
Module Type :								
Date:								
Total Qty in nos. :								
Total Qty in MW :								
SL. NO.	PV MODULE SERIAL NO.	OPEN CIRCUIT VOLTAGE (Voc V)	SHORT CIRCUIT CURRENT (Isc A)	VOLTAGE AT PEAK POWER POINT (Vmp V)	CURRENT AT PEAK POWER POINT (Imp A)	MAXIMUM MODULE POWER OUTPUT (Pmax W)	MODULE EFFICIENCY (in %)	FILL FACTOR (FF)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Tested by :					Approved by :			

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ANNEXURE III										
PHOTOVOLTAIC MODULE CUSTOMER INSPECTION & WITNESS TEST REPORT - DIMENSIONAL & VISUAL CHECK										
Project: 10 MW GFSC Solar Power Project, Gujarat Solar Park, Charanka										
BHEL PO No.:										
Customer : GFSC, Gujarat, India										
Module Type :										
Sampling Plan : As per ISO 2859, Single Sampling Plan, General Inspection Level 1										
					Date:					
					Total Qty in nos. :					
					Total Qty in MW :					
SL.NO.	PV MODULE SERIAL NO.	Dimensional Check			VISUAL CHECK					
		LENGTH (in mm)	WIDTH (in mm)	HEIGHT (in mm)	Free from cell cracks/ breakages / Cell Visual defects (YES/NO)	Free from Air bubbles or de- lamination; Back sheet bubbles (with air trapping), back sheet scratches (YES/NO)	Free from cells overlapping or cells touching the edge frame (YES/NO)	Free from external stray materials (YES/NO)	Free from glass scratches (YES/NO)	Availability of RFID Tag containing all the module data (YES/NO)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
Tested by :										
Witnessed by :										

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ANNEXURE IV								
<u>PHOTOVOLTAIC MODULE CUSTOMER INSPECTION & WITNESS TEST REPORT - ELECTRICAL CHECK</u>								
Project : 10 MW GFSC Solar Power Project, Gujarat Solar Park, Charanka								
BHEL PO No.:								
Customer : GFSC, Gujarat, India								
Date:								
Module Type :								
Total Qty in nos. :								
Sampling Plan : As per ISO 2859, Single Sampling Plan, General Inspection Level 1								
Total Qty in MW :								
SL.NO.	PV MODULE SERIAL NO.	OPEN CIRCUIT VOLTAGE (Voc V)	SHORT CIRCUIT CURRENT (Isc A)	VOLTAGE AT PEAK POWER POINT (Vmp V)	CURRENT AT PEAK POWER POINT (Imp A)	MAXIMUM MODULE POWER OUTPUT (Pmax W)	MODULE EFFICIENCY (in %)	FILL FACTOR (FF)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Tested by :						Witnessed by :		

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ANNEXURE V

PHOTOVOLTAIC MODULE CUSTOMER INSPECTION & WITNESS REPORT - HV, IR & CONTINUITY TEST CHECK

Project : 10 MW GFSC Solar Power Project, Gujarat Solar Park, Charanka
 BHEL PO No.:
 Customer : GFSC, Gujarat, India
 Module Type :
 Sampling Plan : 10 nos. per Lot

Date: _____
 Total Qty in nos. : _____
 Total Qty in MW : _____

SL.NO.	PV MODULE SERIAL NO.	HIGH DC VOLATGE APPLIED (in VOLTS)	TIME DURATION (in MINUTES)	IR Before	HV TEST (PASS/FAIL)	IR After	Continuity Test (Pass / Fail)

Tested by : _____
 Witnessed by : _____

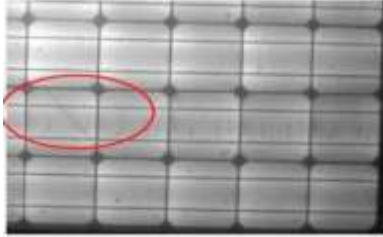



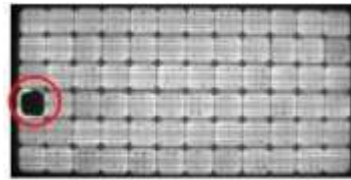

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Annexure VI

Sl.	Defect	EL picture	Acceptance Criteria
1	Micro Crack		≤ 5 Nos – in one module ≤ 2 Nos – in one cell (uncrossed) Single length of crack shall not be more than 30mm (uncrossed)
2	Dark Area		≤ 4 Nos - in one module $\leq 5\%$ - in one cell
3	Grid finger interruption		≤ 4 Nos - in one module $\leq 10\%$ - in one cell
4	Dark Spots		≤ 10 Nos - in one module $\leq 5\%$ - in one cell
5	Dead Cell		Not accepted
6	Fish bone / Tree crack / Cross crack		Not accepted

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ANNEXURE VI

PHOTOVOLTAIC MODULE CUSTOMER INSPECTION & WITNESS TEST REPORT - EL TEST

Project: 10 MW GFSC Solar Power Project, Gujarat Solar Park, Charanka
BHEL PO No.:
Customer : GFSC, Gujarat, India
Module Type :
Sampling Plan : As per ISO 2859, Single Sampling Plan, General Inspection Level 1

Date: _____
Total Qty in nos. : _____
Total Qty in MW : _____

SL.NO.	PV MODULE SERIAL NO.	EL TEST								Over all (Pass / Reject)
		Micro Crack (Yes / No)	Dark Area (Yes / No)	Grid finger interruption (Yes / No)	Dark Spots (Yes / No)	Dead Cell (Yes / No)	Fish bone / Tree crack / Cross crack (Yes / No)			
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Tested by : _____
Witnessed by : _____

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Sampling Plan

(Sampling Plan as Per ISO 2859) -1

Table 1 - Sample size code letters (see 10.1 and 10.2)

Lot size	Special inspection levels				General inspection levels		
	S-1	S-2	S-3	S-4	I	II	III
2 to 8	A	A	A	A	A	A	B
9 to 15	A	A	A	A	A	B	C
16 to 25	A	A	B	B	B	C	D
26 to 50	A	B	B	C	C	D	E
51 to 90	B	B	C	C	C	E	F
91 to 150	B	B	C	D	D	F	G
151 to 280	B	C	D	E	E	G	H
281 to 500	B	C	D	E	F	H	J
501 to 1 200	C	C	E	F	G	J	K
1 201 to 3 200	C	D	E	G	H	K	L
3 201 to 10 000	C	D	F	G	J	L	M
10 001 to 35 000	C	D	F	H	K	M	N
35 001 to 150 000	D	E	G	J	L	N	P
150 001 to 500 000	D	E	G	J	M	P	Q
500 001 and over	D	E	H	K	N	Q	R

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Sample Size & AQL table as per ISO 2859

Table 2-A — Single sampling plans for normal inspection (Master table)

Sample size code letter	Acceptance quality limit, AQL, in percent nonconforming items and nonconformities per 100 items (normal inspection)																											
	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1 000		
	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
A	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
B	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
C	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
D	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
E	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
F	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
G	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
H	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
J	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
K	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
L	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
M	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
N	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
P	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Q	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
R	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

↘ = Use the first sampling plan below the arrow. If sample size equals, or exceeds, lot size, carry out 100 % inspection.
 ↙ = Use the first sampling plan above the arrow.
 Ac = Acceptance number
 Re = Rejection number

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SPECIAL TERMS

The special terms and conditions mentioned below supersedes the general conditions of contract Doc No. SCPV: PV Module: 002- Rev 01, for contradictory clauses if any.

1. Quotation shall be submitted in two part bid
Part 1: Unpriced offer i.e. "Techno-commercial Bid" with filled in BHEL Standard commercial terms and conditions along with purchase specification, integrity pact, etc if any in a sealed envelope and must be super scribed as "**Techno-commercial Bid**" and **RFQ number**.
Part 2: Priced offer i.e. "Price Bid" containing price summary in a separate sealed envelope and must be super scribed "**Price Bid**".
Both these envelopes shall be enclosed in a single sealed envelope super scribed with RFQ number and due date of tender and any other details as called for in the tender document.
2. The **scope of the tender** includes supply of PV modules from tier 1 PV modules manufacturers who are listed in Bloomberg BNEF Q4 2017 report of solar modules as per the enclosed purchase specification with necessary insurance/ bank guarantee.
3. The bidder shall be **Tier-1 manufacturer as per Bloomberg BNEF Q4 2017 report** which is an eligibility criteria to participate in the tender. In this regard, bidders may please note the following
 - BHEL can release PO and establish LC (if any) only in the name of company which is mentioned in **Bloomberg BNEF Q4 2017 report**.
 - Test reports, warranty certificate and insurance policy for performance warranty/ bank guarantee shall be generated in the name of company which is mentioned in **Bloomberg BNEF Q4 2017 report** only.
4. Bidders shall confirm **acceptance of technical specification and manufacturer's quality plan** which are part of the tender document. Any deviation from technical specification or quality plan is liable for rejection, if deviation not agreed by end customer.
5. BHEL standard terms of payment
For Indian bidders:
100% with 45 days credit from the date of receipt of material at BHEL Project site or 15 days credit from the date of submission of complete set of documentation whichever is later
For foreign bidders:
100% through sight draft with 45 days credit from the date of receipt of material at BHEL Project site or 15 days credit from the date of submission of complete set of documentation whichever is later
For any deviations in payment terms, loading factor will be applicable. Please refer Doc No: SCPV: PV Module: 001- Rev 01, Clause G.
6. Terms of delivery :
CIF Nhava Sheva Seaport (For foreign bidders)
Door Delivery Project Site (For Indian bidders)
Project Site, address as below,
10MW (AC) GSFC Solar Power Project at Gujarat solar park,
Village - Charanka, Taluka - Santalpur, Dist - Patan, Gujarat - 385350.
7. **Delivery Schedule:** BHEL requires delivery to be completed within 4 weeks from the date of MQP (Manufacture quality plan) approval by customer and BHEL.

- 8. Evaluation of offers:** L1 vendor (lowest Bidder) will be decided based on 'Cost to BHEL' value after considering the applicable loading factors and other costs including packing & forwarding, applicable duties, taxes, transportation until the site, transit insurance etc if it is in the scope of BHEL.
- 9. Changes in Statutory Levies:** If any rate of Tax are increased or decreased, a new tax is introduced, an existing tax is abolished or any change in interpretation or application of any tax occurs in the course of execution of the contract within the contractual delivery period, which was or will be assessed on the bidder in connection with performance of the contract, an equitable adjustment of the contract price or deduction there from, as the case may be. However, these adjustments would be restricted to direct transactions between BHEL and the bidder/ agent of foreign bidder (if applicable). These adjustments shall not be applicable on procurement of raw materials, intermediary components, etc. by the bidder/ agent.
- 10.** The rate quoted shall be in **price per kilowatt basis** and not per module.
- 11. Price variation clause:** Price variation clause will be applicable for the unit rate in PO to take care of market trend in PV Module price. The unit price in PO will be varied as per the variations in the average price of Poly High Eff Module/ Mono High Eff Module as the case may be, as per www.pvinsights.com, displayed under the heading "Solar PV Module Weekly Spot Price". The reference price will be average price of Poly/ Mono High Eff as on Techno-commercial bid opening date. The unit rate in PO will be allowed to vary (increase/ decrease) in the ratio of 1:1 for variations (increase/ decrease) in average price PV modules prevailing on date of MQP approval with respect to the reference price.

For Example:
Case 1:
Offer price = USD 200 (Assumption)
Pvinsight average price as on technical bid opening date = USD 250 (Assumption)
Pvinsight average price as on MQP approval date by BHEL = USD 240 (Assumption)
Percentage difference in price = -4%
Hence, invoice price shall be 4% lesser from offer price, ie USD 192. PO will be amended accordingly.

Case 2:
Offer price = USD 200 (Assumption)
Pvinsight average price as on technical bid opening date = USD 250 (Assumption)
Pvinsight average price as on MQP approval date by BHEL = USD 255 (Assumption)
Percentage difference in price = 2%
Hence, invoice price shall be 2% higher from offer price, ie USD 204. PO will be amended accordingly.
- 12. Pre-shipment inspection:** Pre-shipment inspection at vendor's works will be carried out by BHEL / BHEL's customer/ Third party agency. Required assistance for testing will have to be provided by the vendor at the time of pre-shipment inspection, without any additional cost implication to BHEL.
- 13.** In case of **changes in scope of the tender** and/ or technical specifications and commercial terms & conditions by BHEL during techno commercial evaluation, the same will be communicated only to the bidders who are participated in the tender. The techno-commercially qualified bidders will be asked for submitting impact price bid, if any is applicable as per BHEL purchase policy and guidelines.

14. Integrity Pact (IP): The bidder shall sign an “INTEGRITY PACT” in the formats enclosed.

(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

1) Shri D.R.S Chaudhary, IAS (Retd.)

E-1/164, Aera Colony, Bhopal- 462 016

Ph: +91 755405 0495

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(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

Note: No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department.

15. Offers with non-acceptance of BHEL terms, are liable for **rejection.**



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 भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Ltd.,
 (A Government of India undertaking)

Electronics Division

PB 2606 , Mysore Road Bangalore , 560026 INDIA

Doc No: SCPV: PV Module: 002- Rev 01

GENERAL COMMERCIAL CONDITIONS FOR CONTRACT

These 'General Commercial Conditions for Contract for Purchase' hereinafter referred to as GCC apply to all enquiries, tenders, requests for quotations, orders, contracts and agreements concerning the supply of goods and the rendering of related services (hereinafter referred to as "deliveries") to Bharat Heavy Electricals Limited and any of its units, regions or divisions (hereinafter referred to as "BHEL" or the Purchaser) or its projects / customers.

Any deviations from or additions to these GCC require BHEL's express written consent. The general terms of business or sale of the vendor shall not apply to BHEL. Acceptance, receipt of shipments or services or effecting payment shall not mean that the general terms of business or sale of the vendor have been accepted.

Orders, agreements and amendments thereto shall be binding if made or confirmed by BHEL in writing. Only the Purchasing department of BHEL is authorized to issue the Purchase Order or any amendment thereof.

Definitions: Throughout these conditions and in the specifications, the following terms shall have the meanings assigned to them, unless the subject matter or the context requires otherwise.

- a) 'The Purchaser' means Bharat Heavy Electricals Limited, Electronics division, Mysore road, Bangalore 560 026, a Unit of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the Companies Act having its registered office at BHEL House, Siri Fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.
- b) 'The vendor' means the person, firm, company or organization on whom the Purchase Order is placed and shall be deemed to include the vendor's successors, representative heirs, executors and administrator as the case may be. It may also be referred to as Seller, Contractor or Supplier.
- c) 'Contract' shall mean and include the Purchase Order incorporating various agreements, viz. tender/ RFQ, offer, letter of intent / acceptance / award, the General Conditions of Contract and Special Conditions of Contract for Purchase, Specifications, Inspection / Quality Plan, Schedule of Prices and Quantities, Drawings, if any enclosed or to be provided by BHEL or his authorized nominee and the samples or patterns if any to be provided under the provisions of the contract.
- d) 'Parties to the Contract' shall mean the 'The Vendor' and the Purchaser as named in the main body of the Purchase Order.
- e) "Bidder" shall mean duly established reputed organisation , manufacturer etc. having requisite financial and technical capability and experience of participating in the bid invited by the purchaser for the tender.
- f) Bid- The term "bid" or "bidding" can also relate to the documented Offer submitted in response to a request for quotation (RFQ) /Tender.

Interpretation:

In the contract, except where the context requires otherwise:

- a) words indicating one gender include all genders;

- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing, and
- d) "Written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

Applicable Conditions:

1. **Price Basis:** All prices shall be firm until the purchase order is executed / completed in all respects. No price variations / escalation shall be permitted unless otherwise such variations / escalations are provided for and agreed by BHEL in writing in the purchase order.
2. **Validity:** The offer will be valid for a period of 90 days from the date of technical bid opening date. Validity beyond 90 days, if required, will be specified in the SCC (special conditions of contract).
3. **Ordering and confirmation of Order:** Vendor shall send the order acceptance on their company letter head within two weeks from the date of Purchase Order or such other period as specified / agreed by BHEL. BHEL reserves the right to revoke the order placed if the order confirmation differs from the original order placed. The acceptance of goods/services/supplies by BHEL as well as payments made in this regard shall not imply acceptance of any deviations.
The purchase order will be deemed to have been accepted if no communication to the contrary is received within two weeks (or the time limit as specified / agreed by BHEL) from the date of the purchase order.
4. **Documentation:** After receipt of Purchase Order, vendor should submit required documents like drawings, bill of materials, datasheets, catalogues, quality plan, test procedure, type test report , O & M Manuals and/or any other relevant documents as per Specification/Purchase Order, as and when required by BHEL/Customer. At any stage within the contract period, the vendor shall notify of any error, fault or other defect found in BHEL's documents /specifications or any other items for reference. If and to the extent that (taking account of cost and time) any vendor exercising due care would have discovered the error, fault or other defect when examining the documents/specifications before submitting the tender, the time for completion shall not be extended. However if errors, omissions, ambiguities, inconsistencies, inadequacies or other defects are found in the vendor's documents, they shall be corrected at his cost, notwithstanding any consent or approval.

5. TERMS OF DELIVERY:

FOR IMPORTED PURCHASE:

Price offered shall be for goods packed and delivered CIF Indian Seaport including packing, forwarding, Handling, Ancillary charges like processing of Sight Draft, negotiation charges of bank, Export declaration, Certificate of origin etc.

Packing shall be Air/Sea worthy, best suitable for trans-shipment and to take care of transit damages. If containerized, no. of containers & size of container shall be mentioned. Packing weight (gross & net) Packing dimensions shall be given prior to shipment to ascertain whether the consignment can be carried on standard cargo in contract or as ODC.

Wooden packing material for all the foreign consignments should be treated as per ISPM-15 & Fumigation / Phytosanitary certificate to be submitted to the freight forwarders/ BHEL along with the invoice, B/L, packing list etc.

FOR INDIGENOUS PURCHASE:

Equipment shall be delivered on “DDP Project site” basis, inclusive of freight, packing, insurance & forwarding charges.

Packing shall be Road / Rail / Air / Sea worthy, best suitable for transshipment and to take care of transit damages. Smaller consignments can be dispatched through Courier services/ RPP with the prior approval of the purchasing Executive.

Deviation for the delivery term is liable for rejection.

6. Penalty:

For delay in delivery: In the event of delay in agreed contractual delivery as per Purchase Order, penalty @ 0.5 % (half percent) per week or part thereof but limited to a max of 10% (ten percent) value of undelivered portion (basic material cost) will be applicable. Delivery will commence from the date of document approval by customer / BHEL or date of issue of manufacturing clearance, whichever is later. The date for which Inspection call is issued by vendor along with test certificates / test reports / Certificate of Conformance / calibration reports, as proof of completion of manufacturing will be treated as date of deemed delivery for penalty calculation. In the absence of furnishing such document indicated above as proof of completion of manufacturing along with inspection call, actual date of inspection will be considered as date of deemed delivery and BHEL will not be responsible for delay in actual date of inspection.

Penalty for delayed documentation/delayed delivery, if applicable, shall be deducted at the time of first payment. If penalty is applicable for duration of less than a week, penalty @ 0.5% (half percent) of the basic material value will be deducted.

7. **Contract variations (Increase or decrease in the scope of supply):** BHEL may vary the contracted scope as per requirements at site. If vendor is of the opinion that the variation has an effect on the agreed price or delivery period, BHEL shall be informed of this immediately in writing along with technical details. Where unit rates are available in the Contract, the same shall be applied to such additional work. Vendor shall not perform additional work before BHEL has issued written instructions / amendment to the Purchase Order to that effect. The work which the vendor should have or could have anticipated in terms of delivering the service(s) and functionality (i.e.) as described in this agreement, or which is considered to be the result of an attributable error on the vendor's part, shall not be considered additional work.
8. **Reverse Auction:** BHEL reserves the right to follow REVERSE AUCTION PROCEDURE (ONLINE BIDDING ON NETWORK) before finalising the Purchase order on technically competent bidders, as per the guidelines given in Annexure II. In case BHEL does not resort to Reverse Auction, the price bids and price impacts (if any) already submitted and available with BHEL shall be opened as per BHEL's standard practice.
9. **Pre Shipment Inspection:** Prior written notice of at least 10 days shall be given along with internal test certificates / COC and applicable test certificates. Materials will be inspected by BHEL-EDN-QS/CQS or BHEL nominated Third Party Inspection Agency (TPIA) or BHEL authorized Inspection Agency or Customer / Consultant or jointly by BHEL & Customer / consultant. All tests have to be conducted as applicable in line with approved Quality plan or QA Checklist or Purchase specification and original reports shall be furnished to BHEL-EDN, Bangalore for verification / acceptance for issue of dispatch clearance. All costs related to inspections & re-inspections shall be borne by vendor. Whether the Contract provides for tests on the premises of the vendor or any of his Sub-contractor/s, vendor shall be responsible to provide such assistance, labour, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special

tests shall be borne by BHEL only if specifically agreed to in the purchase order.

10. **Transit Insurance:** Transit Insurance is in Vendor's scope for all Inclusive value or as specified in RFQ. For imported items with FOB / ex-Works terms contracts, BHEL will provide Insurance.
11. **High Sea Sales (HSS):** Customs clearance of the consignment landed on Indian Sea / Air ports will be done by BHEL based on the original HSS documents provided by vendors. Any delay in submission of complete / correct HSS documents to BHEL may incur demurrage charges. All demurrage charges on account of incomplete / incorrect HSS documents submission by vendor will be to vendor's account and all such charges will be recovered from any of the available vendor bills with BHEL.
12. **Packaging and dispatch:** The Seller shall package the goods safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by Sea / Air / Rail / Road to its destination suitably protected against loss, damage, corrosion in transit and the effect of tropical salt laden atmosphere. The packages shall be provided with fixtures / hooks and sling marks as may be required for easy and safe handling. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols / instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations. The packing, shipping, storage and processing of the goods must comply with the prevailing legislation and regulations concerning safety, the environment and working conditions. Any Imported/Physical Exports items packed with raw / solid wood packing material should be treated as per ISPM – 15 (fumigation) and accompanied by Phytosanitary / Fumigation certificate. If safety information sheets (MSDS – Material Safety Data Sheet) exist for an item or the packaging, vendor must provide this information without fail along with the consignment. Each package must be marked with Consignee name, Purchase order number, Package number, Gross weight and net weight, dimensions (L x B x H) and Seller's name. Packing list of goods inside each package with PO item number and quantity must also be fixed securely outside the box to indicate the contents of each box. Total number of packages in the consignment must also be indicated. Separate packing & identification of items should be as follows.
 1. Main Scope - All items must be tagged with part no. & item description.
 2. Commissioning spares - All items must be tagged with part no. & item description.
 3. Mandatory spares - All items must be tagged with part no. & item description.
13. **Assignment of Rights & Obligations; Subcontracting:** Vendor is not permitted to subcontract the delivery or any part thereof to third party or to assign the rights and obligations resulting from this agreement in whole or in part to third parties without prior written permission from BHEL. Any permission or approval given by the BHEL shall, however, not absolve the vendor of the responsibility of his obligations under the Contract.
14. **Progress report:** Vendor shall render such report as to the progress of work and in such form as may be called for by the concerned purchase officer from time to time. The submission and acceptance of such reports shall not prejudice the rights of BHEL in any manner.
15. **Non-disclosure and Information Obligations: Vendor** shall provide with all necessary information pertaining to the goods as it could be of importance to BHEL. Vendor shall not reveal confidential information that may be divulged by BHEL to Vendor's employees not involved with the tender/ contract & its execution and delivery or to third parties, unless BHEL has agreed to this in writing beforehand. Vendor shall not be entitled to use the BHEL name in advertisements and other commercial publications without prior written permission from BHEL.

16. **Cancellation / Termination of contract:** BHEL shall have the right to completely or partially terminate the agreement by means of written notice to that effect. Termination of the Contract, for whatever reason, shall be without prejudice to the rights of the parties accrued under the Contract up to the time of termination. BHEL shall have the right to cancel/foreclose the Order/ Contract, wholly or in part, in case it is constrained to do so, on account of any decline, diminution, curtailment or stoppage of the business.
17. **Risk Purchase Clause:** In case of failure of supplier, BHEL at its discretion may make purchase of the materials / services NOT supplied / rendered in time at the RISK & COST of the supplier. Under such situation, the supplier who fails to supply the goods in time shall be wholly liable to make good to BHEL any loss due to risk purchase.
In case of items demanding services at site like erection and commissioning, vendor should send his servicemen /representatives within 7 days from the service call. In case a vendor fails to attend to the service call, BHEL at its discretion may also make arrangements to attend such service by other parties at the **RISK & COST** of the supplier. Under such situation the supplier who fails to attend the service shall be wholly liable to make good to BHEL any loss due to risk purchase / service including additional handling charges due to the change.
18. **Shortages:** In the event of shortage on receipt of goods and/or on opening of packages at site, all such shortages shall be made good within a reasonable time that BHEL may allow from such intimation and free of cost.
Transit Damages: In the event of receipt of goods in damaged condition or having found them so upon opening of packages at site, Supplier shall make good of all such damages within a reasonable time from such intimation by BHEL.
19. **Remedial work:** Notwithstanding any previous test or certification, BHEL may instruct the vendor to remove and replace materials/goods or remove and re-execute works/services which are not in accordance with the purchase order. Similarly BHEL may ask the vendor to supply materials or to execute any services which are urgently required for any safety reasons, whether arising out of or because of an accident, unforeseeable event or otherwise. In such an event, Vendor shall provide such services within a reasonable time as specified by BHEL.
20. **Indemnity Clause:** Vendor shall comply with all applicable safety regulations and take care for the safety of all persons involved. Vendor is fully responsible for the safety of its personnel or that of his subcontractor's men / property, during execution of the Purchase Order and related services. All statutory payments including PF, ESI or other related charges have to be borne by the vendor. Vendor is fully responsible for ensuring that all legal compliances are followed in course of such employment.
21. **Product Information, Drawings and Documents:** Drawings, technical documents or other technical information received by Vendor from BHEL or vice versa shall not, without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the Disclosing party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are binding only to the extent that they are by reference expressly included in the contract.
Vendor, as per agreed date/s but not later than the date of delivery, provide free of charge information and drawings which are necessary to permit and enable BHEL to erect, commission, operate and maintain the product. Such information and drawings shall be supplied in as many numbers of copies as may be agreed upon.
All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the Contract shall continue to be the property of the disclosing party.

22. **Intellectual Property Rights, Licenses:** If any Patent, design, Trade mark or any other intellectual property rights apply to the delivery (goods / related service) or accompanying documentation shall be the exclusive property of the Vendor and BHEL shall be entitled to the legal use thereof free of charge by means of a non-exclusive, worldwide, perpetual license. All intellectual property rights that arise during the execution of the Purchase Order/ contract for delivery by vendor and/or by its employees or third parties involved by the vendor for performance of the agreement shall belong to BHEL. Vendor shall perform everything necessary to obtain or establish the above mentioned rights. The Vendor guarantees that the delivery does not infringe on any of the intellectual property rights of third parties. The Vendor shall do everything necessary to obtain or establish the alternate acceptable arrangement pending resolution of any (alleged) claims by third parties. The Vendor shall indemnify BHEL against any (alleged) claims by third parties in this regard and shall reimburse BHEL for any damages suffered as a result thereof.
23. **Force Majeure:** Notwithstanding anything contained in the purchase order or any other document relevant thereto, neither party shall be liable for any failure or delay in performance to the extent said failures or delays are caused by the "Act of God" and occurring without its fault or negligence, provided that, force majeure will apply only if the failure to perform could not be avoided by the exercise of due care and vendor doing everything reasonably possible to resume its performance.
A party affected by an event of force majeure which may include fire, tempest, floods, earthquake, riot, war, damage by aircraft etc., shall give the other party written notice, with full details as soon as possible and in any event not later than seven (7) calendar days of the occurrence of the cause relied upon. If force majeure applies, dates by which performance obligations are scheduled to be met will be extended for a period of time equal to the time lost due to any delay so caused.
- Notwithstanding above provisions, in an event of Force Majeure, BHEL reserves for itself the right to cancel the order/ contract, wholly or partly, in order to meet the overall project schedule and make alternative arrangements for completion of deliveries and other schedules.
24. **Guarantee / Warranty:** Wherever required, and so provided in the specifications / Purchaser Order, the Seller shall guarantee that the stores supplied shall comply with the specifications laid down, for materials, workmanship and performance. The guarantee / warranty period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery. Unless otherwise specifically provided in the Purchase Order, Vendor's liability shall be co terminus with the expiration of the applicable guarantee / warranty period.
25. **Limitation of Liability:** Vendor's liability towards this contract is limited to a maximum of 100% of the contract value and consequential damages are excluded. However the limits of liability will have no effect in cases of criminal negligence or wilful misconduct.
The total liability of Vendor for all claims arising out of or relating to the performance or breach of the Contract or use of any Products or Services or any order shall not exceed the total Contract price.
26. **Liability during guarantee / warranty:** Vendor shall arrange replacement / repair of all the defective materials / services under its obligation under the guarantee / warranty period. The rejected goods shall be taken away by vendor and replaced / repaired. In the event of the vendor's failure to comply, BHEL may take appropriate action including disposal of rejections and replenishment by any other sources at the cost and risk of the vendor.
In case, defects attributable to vendor are detected during first time commissioning or use, vendor shall be responsible for replacement / repair of the goods as required by BHEL at vendor's cost. In all such cases expiry of guarantee / warranty will not be applicable.
27. **Liability after guarantee / warranty period:** At the end of the guarantee / warranty, the Vendor's liability ceases except for latent defects (latent defects are defects / performance issues notices after the guarantee

/ warranty has expired). The Contractor's liability for latent defects warranty for the plant and equipment including spares shall be limited to a period of six months from the end of the guarantee / as specified in RFQ.

28. **Compliance with Laws:** Vendor shall, in performing the contract, comply with all applicable laws. The vendor shall make all remittances, give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the laws in relation to the execution and completion of the contract and for remedying of any defects; and the Contractor shall indemnify and hold BHEL harmless against and from the consequences of any failure to do so.
29. **Settlement of Disputes:** Except as otherwise specifically provided in the Purchase Order, decision of BHEL shall be binding on the vendor with respect to all questions relating to the interpretation or meaning of the terms and conditions and instructions herein before mentioned and as to the completion of supplies/work/services, other questions, claim, right, matter or things whatsoever in any way arising out of or relating to the contract, instructions, orders or these conditions or otherwise concerning the supply or the execution or failure to execute the order, whether arising during the schedule of supply/work or after the completion or abandonment thereof. Any disputes or differences among the parties shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration. Vendor shall continue to perform the contract, pending settlement of dispute(s).
30. **Arbitration Clause:** In case amicable settlement is not reached in the event of any dispute or difference arising out of the execution of the Contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision in any manner touching upon the Contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred by either party to the sole arbitration of an Arbitrator appointed by the Executive Director/ General Manager of the purchasing unit/ region/ division of BHEL. Vendor shall have no objection even if the Arbitrator so appointed is an employee of BHEL or has ever dealt/ had to deal with any matter relating to this Contract. Subject as aforesaid the provisions of the Arbitration and Conciliation Act, 1996 of India or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. It is a term of contract that the party initiating arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each such dispute. The venue for the arbitration shall be Bangalore, India. The award of the arbitrator shall be a speaking award and shall be final, conclusive and binding on all parties to this contract. The cost of arbitration shall be borne equally by the parties. Notwithstanding the existence of any dispute or difference or any reference for the arbitration, the vendor shall proceed with and continue without hindrance the performance of the work under the contract with due diligence and expedition in a professional manner.
31. **Applicable Laws and Jurisdiction of Courts:** Prevailing Indian laws both substantive and procedural, including modifications thereto, shall govern the Contract. Subject to the conditions as aforesaid, the competent courts in BANGALORE alone shall have jurisdiction to consider over any matters touching upon this contract.
32. **General Terms:** That any non-exercise, forbearance or omission of any of the powers conferred on BHEL and /or any of its authorities will not in any manner constitute waiver of the conditions hereto contained in these presents. That the headings used in this agreement are for convenience of reference only. That all notices etc., to be given under the Purchase order shall be in writing, type script or printed and if sent by registered post or by courier service to the address given in this document shall be deemed to have been served on the date when in the ordinary course, they would have been delivered to the addressee.



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 भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Ltd.,
(A Government of India undertaking)
Electronics Division

PB 2606 , Mysore Road Bangalore , 560026 INDIA

Doc No: SCPV: PV Module: 001- Rev 01

INSTRUCTIONS TO BIDDERS (Common for all RFQs)

Bidder is requested to read the instructions carefully and submit their quotation covering all the points:

A. GENERAL INSTRUCTIONS:

1. Any Purchase Order resulting from this enquiry shall be governed by the Instructions to Bidders (document reference: SCPV: PV Module: 001 – Rev 01), General Conditions of Contract (document reference: SCPV: PV Module: 002 - Rev 01) and Special Conditions of Contract, if any, of the enquiry.
2. Any deviations from or additions to the “General Conditions of Contract” or “Special Conditions of Contract” require BHEL’s express written consent. The general terms of business or sale of the bidder shall not apply to this tender.
3. Bidders (also includes the term suppliers / contractors wherever used in this document) are instructed to quote their most competitive price and best delivery, etc. in the offer. Prices should be indicated in both figures & words. **(Please also refer clause 11 under section B)**
4. Regret letter (either through post or by mail) indicating reasons for not quoting must be submitted without fail, in case of non-participation in this tender. If a bidder fails to respond against 3 consecutive tenders for the same item, he will be liable for removal as a registered vendor of BHEL.
5. Procurement directly from the manufacturers shall be preferred. However, if the OEM / Principal insist on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer / supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer / supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from the manufacturer / supplier and his agent, bid received from the agent shall be ignored.
6. Consultant / firm (and any of its affiliates) shall not be eligible to participate in the tender/s for the related goods for the same project if they were engaged for consultancy services for the same project.
7. If an Indian representative / associate / liaison office quotes on behalf of a foreign based bidder, such representative shall furnish compulsorily the following documents:
 - a. Authorization letter to quote and negotiate on behalf of such foreign-based bidder.
 - b. Undertaking from such foreign based bidder that such contract will be honored and executed according to agreed scope of supply and commercial terms and conditions.
 - c. Undertaking shall be furnished by the Indian representative stating that the co-ordination and smooth execution of the contract and settlement of shortages / damages / replacement / repair of imported scope till system is commissioned and handed over to customer will be the sole responsibility of the Indian representative / associates / agent / liaison office.
8. In case of imported scope of supply with delivery terms other than DDP, customs clearance & customs duty payment will be to BHEL account after the consignment is received at Indian Airport / Seaport. Bidders must provide all original documents required for completing the customs clearance along with the shipment. Warehousing charges/ demurrage charges due to incomplete or missing documentation will be recovered

from the supplier's bill. All offers for imported scope of supply must be made from any of the gateway ports (within the country) indicated. **(Refer Annexure I)**

9. The offers of the bidders who are on the banned list and also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of the banned firms is available on BHEL website: **www.bhel.com**
10. Business dealings with bidders will be suspended if they are found to have indulged in any malpractices / misconduct which are contrary to business ethics like bribery, corruption, fraud, pilferage, cartel formation, submission of fake/false/forged documents, poor quality, certificates, information to BHEL or if they tamper with tendering procedure affecting the ordering process or fail to execute a contract, or rejection of 3 consecutive supplies or if their firms / works are under strike / lockout for a long period.

B. GUIDELINES FOR PREPARATION OF OFFER:

1. Quotation shall be submitted in Single Part Bid, Two Part Bid or Three Part Bid, as called for in the tender:
 - **SINGLE PART BID:** Technical and Commercial Bid with prices along with price summary & filled in BHEL Standard Commercial terms and conditions in a single sealed envelope.
 - **TWO PART BID:** Unpriced offer i.e. "Techno-commercial Bid" with filled in BHEL Standard Commercial terms and conditions in a sealed envelope **along with the copy of the "Price Bid" without the prices** should be enclosed in one cover and the cover must be super scribed "**Techno-commercial offer**) and Priced offer i.e. "Price Bid" containing price summary in a separate sealed envelope and must be super scribed "**Price Bid**". Both these envelopes shall be enclosed in a single sealed envelope super scribed with enquiry number due date of tender and any other details as called for in the tender document.
 - **THREE PART BID:** Pre-qualification Bid (Part-I), Techno Commercial Bid with filled in BHEL Standard Commercial terms and conditions (Part-II), and Price Bid (Part-III). All three envelopes shall be enclosed in a single sealed envelope super scribed with enquiry number due date of tender and any other details as called for in the tender document.

If any of the offers (Part I, Part II or Part III) are not submitted before the due date and time of submission at the venue/place specified or if any part of the offer is incomplete the entire offer of the bidder is liable for rejection.

2. Supplier shall ensure to super scribe each envelope with RFQ number, RFQ Date, RFQ Due date and time, Item Description and Project clearly & boldly. Also mention on the envelope whether it is "Techno Commercial Bid" or "Price Bid" or "Pre-Qualification Bid". Please ensure complete address, department name and purchase executive name is mentioned on the envelope (before dropping in the tender box or handing over) so that the tender is available in time for bid opening.
3. BHEL standard Commercial Terms and Conditions shall be duly filled, signed & stamped and must accompany Technical-Commercial offer without fail and should be submitted in original only. Xerox copy will not be accepted.
4. Any of the terms and conditions not acceptable to supplier, shall be explicitly mentioned in the Techno-Commercial Bid. If no deviations are brought out in the offer it will be treated as if all terms and conditions of this enquiry are accepted by the supplier without any deviation.
5. Deviation to this specification / item description, if any, shall be brought out clearly indicating "DEVIATION TO BHEL SPECIFICATION" without fail, as a part of Techno-Commercial Bid. If no deviations are brought out in the offer it will be treated as if the entire specification of this enquiry is accepted without deviation.
6. Suppliers shall submit one set of original catalogue, datasheets, bill of materials, dimensional drawings, mounting details and / or any other relevant documents called in purchase specification as part of Technical

Bid.

7. "Price Bid" shall be complete in all respects containing price break-up of all components along with all applicable taxes and duties, packing & forwarding charges (if applicable), freight charges (if applicable) etc. Once submitted no modification / addition / deletion will be allowed in the "Price Bid." Bidders are advised to thoroughly check the unit price, total price to avoid any discrepancy.
8. In addition, bidder shall also quote for erection & commissioning charges (E&C charges), documentation charges, service charges, testing Charges (type & routine), training charges, service tax, etc. wherever applicable. The price summary must indicate all the elements clearly.
9. Vendors should indicate "lump sum" charges (including To & Fro Fare, Boarding, Lodging, Local Conveyance etc.) for Supervision of Erection, Commissioning and handing over to customer. The quotation shall clearly indicate scope of work, likely duration of commissioning, pre-commissioning checklist and service tax (if any).
10. Wherever bidders require PAC (Project Authority Certificate) for import of raw materials, components required for Mega Power Projects, Export Projects, MNRE Concession or other similar projects wherein supplies are eligible for customs duty benefits, lists and quantities of such items and their values (CIF) has to be mentioned in the offer. Prices must be quoted taking into account of such benefits.
11. All quotations shall be free from corrections /overwriting. Corrections if any should be authenticated with signature and seal. Any typographical error, totaling mistakes, currency mistake, multiplication mistake, summing mistakes etc. observed in the price bids will be evaluated as per **Annexure VI** "Guidelines for dealing with Discrepancy in Words & Figures – quoted in price bid". BHEL decision will be final.

C. GUIDELINES FOR OFFER SUBMISSION:

1. Offers / Quotations must be dropped in tender box before 13.00 Hrs. on or before due date mentioned in RFQ. The offers are to be dropped in the proper slot of the Tender Box kept in our reception area with caption "CE, SC&PV, DEFENCE." Tenders are opened on 3 days in a week (Monday/Wednesday/Friday). Tender must be deposited in the slot corresponding to the day (Monday - Box no.4/Wednesday - Box no. 6 /Friday - Box no.8) while depositing the offer. **(This clause will not be applicable for e-tenders)**
2. E-Mail / Internet / EDI offers received in time shall be considered only when such offers are complete in all respects. In case of offers received through E-mail, please send the offer to the email ID specified in the SCC of the tender. (Refer to SCC document of tender) within time of submission of tender.
3. In cases where tender documents are bulky, or due to some reasons tender documents are required to be submitted by hand or through posts/couriers, the offers are to be handed over either of the two officers whose names are mentioned in the RFQ. (Refer to SCC document of tender)
4. Tenders will be opened on due date, time and venue as indicated in the RFQ in the presence of bidders at the venue indicated in the RFQ. In case of e-procurement, bidders can see tender results till seven days after due date and time.
5. Vendor will be solely responsible:
 - a. For submission of offers before due date and time. Offers submitted after due date and time will be treated as "Late offers" and will be rejected.
 - b. For submission of offers in the correct compartment of the tender box based on the day of due date (Monday/Wednesday/Friday). Please check before dropping your offer in the correct tender box.
 - c. For depositing offers in proper sealed condition in the tender box. If the bidder drops the tender in the wrong tender box or if the tender document is handed over to the wrong person BHEL will not be responsible for any such delays.
 - d. For offers received through email/courier etc., suppliers are fully responsible for lack of secrecy on information and ensuring timely receipt of such offers in the tender box before due date & time.

- e. In case of e-tender, all required documents should be uploaded before due date and time. Availability of power, internet connections, etc. will be the sole responsibility of the vendor. Wherever assistance is needed for submission of e-tenders, help line numbers and executives of service provider of BHEL may be contacted.

Service provider: M-junction

Website address: <https://bheleps.buyjunction.in/>

Helpline no.: 033-66106426/6217/6013/6046/6176 (9:30 am to 5:30 pm)

9163348283/9163348284/9163348285/9163348286/8584008116 (5:30 pm to 8:30 pm)

Purchase Executive / BHEL will not be responsible for any of the activities relating to submission of offer.

D. PROCESSING OFFERS RECEIVED:

1. Any discount / revised offer submitted by the supplier on its own shall be accepted provided it is received on or before the due date and time of offer submission (i.e. Part-I bid). The discount shall be applied on pro-rata basis to all items unless specified otherwise by the bidder.
2. Changes in offers or Revised offers given after Part-I bid opening shall not be considered as a part of the original offer unless such changes / revisions are requested by BHEL.
3. In case there is no change in the technical scope and / or specifications and / or commercial terms & conditions by BHEL, the supplier will not be allowed to change any of their bids after Technical bids are opened (after the due date and time of tender opening of Part-1 Bid).
4. In case of changes in scope and/ or technical specifications and/ or commercial terms & conditions by BHEL and it accounts for price implications from vendors, all techno-commercially acceptable bidders shall be asked by BHEL (after freezing the scope, technical specifications and commercial terms & conditions) to submit the impact of such changes on their price bid. Impact price will be applicable only for changes in technical specification / commercial conditions by BHEL. The impact price must be submitted on or before the cut-off date specified by BHEL and the original price bid and the price impact bid will be opened together at the time of price bid opening. Impact price means only for those items which have been impacted by addition / deletion / changes in the technical specifications or commercial conditions. The impact may be +/- incremental value of the currency in which originally quoted. The impact price bid to be submitted on the cut-off date, time & venue as specified by BHEL. The impact price bid shall be opened along with original price bid.
5. BHEL EDN reserves the right to adopt Reverse Auction or standard Price Bid Opening procedure for price evaluation, at its discretion. This will be decided after completion of technical evaluation of tender. **(Refer Annexure II for Guidelines for Reverse Auction).**
6. Un-opened bids (including price bids) will be returned to the respective bidders after release of PO and receipt of order acknowledgement from the successful bidder
7. Vendor shall accept warranty clause as required in the tender document. Offers not complying with Warranty terms as per RFQ Terms is liable for rejection.
8. After receipt of Purchase Order, supplier should submit required documents like drawings, bill of materials, datasheets, catalogues, quality plan, test procedure, type test report , O & M Manuals and / or any other relevant documents as per Specification / Purchase Order, as and when required by BHEL / Customer.
9. Any deviation to the terms and conditions not mentioned in the quotation by supplier in response to this enquiry will not be considered, if put forth subsequently or after issue of Purchase Order, unless clarification is sought for by BHEL EDN and agreed upon in the Purchase Order.
10. Evaluation shall be on the basis of delivered cost (i.e. "Total Cost to BHEL"). As per RFQ terms. "Total Cost to BHEL" shall include total basic cost, packing & forwarding charges, taxes and duties, freight charges, test charges, insurance, service tax for services, any other cost indicated by vendor for execution of

the contract and loading factors (for non-compliance to BHEL Standard Commercial Terms & Conditions). Benefits arising out of Nil Import Duty on Mega Projects, Physical Imports or such 100% exemptions & MNRE Exemptions (statutory benefits), customer reimbursements of statutory duties (like GST, SGD) will also be taken into account at the time of tender evaluation. (Wherever applicable and as indicated in SCC document of tender)

11. For evaluation of offers in foreign currency, the exchange rate (TT selling rate of SBI) shall be taken as under:

Single part bids:	Date of tender opening
Two/three part bids:	Date of Part-I bid opening
Reverse Auction:	Date of Part-I bid opening

If the relevant day happens to be a bank holiday, then the exchange rate as on the previous working day of the bank (SBI) shall be taken.

12. Ranking (L-1, L-2 etc.) shall be done only for the techno-commercially acceptable offers and on the basis of evaluation of Total Cost to BHEL.

E. INFORMATION ON PAYMENT TERMS:

- All payments will be through Electronic Fund transfer (EFT). Vendor has to furnish necessary details as per BHEL standard format (**Refer Annexure XI**) for receiving all payments through NEFT. (Applicable for Indian vendors only)
- In case of High Sea Sales transaction, customs clearance of the consignment landed on Indian Sea / Air ports will be done by BHEL based on the original HSS documents provided by vendors. All warehousing charges due to delay in submission of complete and or correct HSS documents to BHEL will be to suppliers account only. Such recovery will be made out of any of the available bills.
- Statutory deductions, if any, will be made and the deduction certificate shall be issued. In case vendor does not provide PAN details, the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act. (Applicable for Indian vendors only).
Foreign vendors shall submit relevant details of their bankers like Swift Code, Banker's Name & Address etc.
- Vendors must submit bills & invoices along with required supporting documents in time. Incomplete documentation / delayed submission of invoice / documents will result in corresponding delay in payment.

F. STANDARD PAYMENT TERMS OF BHEL-EDN

i) Purchase Orders for indigenous procurement

100% with 45 days credit from the date of receipt of material at BHEL Project site or 15 days credit from the date of submission of complete set of documentation whichever is later

ii) Purchase orders for import procurement:

100% through sight draft with 45 days credit from the date of receipt of material at BHEL Project site or 15 days credit from the date of submission of complete set of documentation whichever is later

Note: Quotations with "Advance payment" shall be rejected.

G. LOADING FACTORS FOR PAYMENT TERMS & DELAYED DELIVERY:

Loading factors as detailed below will be added to the quoted price (basic) to evaluate the lowest quote for non-compliance of BHEL standard commercial term.

SI No	Deviation on	Nature of Deviation / Offered Terms	Loading %
1.	Payment Terms	Payment against LC with usance of 120 days from MRC date	0.50 %
		Payment against LC with usance of 120 days from BL date	1.75 %
		Payment against LC with usance of 90 days from MRC date	1.75 %
		Payment against LC with usance of 90 days from BL date	3.00 %
		Payment against LC with usance of 60 days from MRC date	3.00 %
		Payment against LC with usance of 60 days from BL date	4.25 %
2.	Penalty for Delayed Delivery	1) Non – Acceptance	10 %
		2) Partial Acceptance (X%)	(10 – X) %

* In case of foreign LC, bank charges shall be to respective accounts. In case of inland LC, all bank charges to beneficiary account. All credit periods will be calculated from date of material receipt at site.

NOTE:

- 1) Payment linked to MRC date is acceptable only if delivery term is DDP/ Door delivery.
- 2) Offer/ s with payment terms other than the standard payment terms indicated at Clause No. F or Deviated Payment Terms with loading indicated at Clause No. G above, are liable for rejection.

H. DOCUMENTS REQUIRED AT THE TIME OF DISPATCH FOR PROCESSING OF BILLS:

Invoice in Triplicate, LR Copy / Bill of Lading, Packing List, PSI Call Letter Copy, Material Receipt Certificate & Warranty Certificate, Copy of Insurance claim or Bank guarantee.

I. PROVISIONS APPLICABLE FOR MSE VENDORS (MICRO AND SMALL ENTERPRISES)

Vendors who qualify as MSE vendors are requested to submit applicable certificates (as specified by the Ministry of Micro, Small and Medium Enterprises) at the time of vendor registration. Vendors have to submit any of the following documents along with the tender documents in the Part I / Technical bid cover to avail the applicable benefits.

- a. Valid NSIC certificate or
- b. Entrepreneur's Memorandum part II (EM II) certificate (deemed valid for 2 years).
- c. EM II certificate with CA certificate (**in the prescribed format given in Annexure VIII**) applicable for the year certifying that the investment in plant and machinery of the vendor is within permissible limits as per the MSME Act 2006 for relevant status where the deemed validity is over.
- d. Documents submitted for establishing the credentials of MSE vendors must be valid as on the date of part I / technical bid opening for the vendors to be eligible for the benefits applicable for MSE vendors. Documents submitted after the Part I / Technical bid opening date will not be considered for this tender.

PURCHASE PREFERENCE FOR MSE VENDORS:

- e. MSE vendors quoting within a price band of L1 + 15% shall be allowed to supply up to 20% of the requirement against this tender provided.

1. The MSE vendor matches the L1 price
2. L1 price is from a non MSE vendor
3. L1 price will be offered to the nearest vendor nearest to L1 in terms of price ranking (L2 - nearest to L1). In case of non-acceptance by the MSE vendor (L2) next ranking MSE vendor will be offered who is within the L1 + 15% band (if L3 is also within 15% band).
4. 20% of the 20% (i.e. 4% of the total enquired quantity) will be earmarked for SC/ST owned MSE firms provided conditions as mentioned in (1) and (2) are fulfilled.
5. In case no vendor under SC / ST category firms are meeting the conditions mentioned in (1) and (2) or have not participated in the tender, in such cases the 4% quantity will be distributed among the other eligible MSE vendors who have participated in the tender.
6. Serial no. 1 to 5 will not be applicable wherever it is not possible to split the tendered quantity / items on account of customer contract requirement, or the items tendered are systems. Such information that tendered quantity will not be split will be indicated in the SCC.

K. INTEGRITY COMMITMENT IN THE TENDER PROCESS, AND EXECUTION OF CONTRACTS:

1. Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the Tender process and execution of the Contract. BHEL will, during the tender process, treat all bidder / suppliers in a transparent and fair manner, and with equity.

2. Commitment by Bidder(s)/ Contractor(s):

- a. The Bidder(s)/ Contractor(s) commit(s) to take all measures to prevent corruption and will not directly or indirectly try to influence any decision or benefit which he is not legally entitled to.
- b. The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding or any actions to restrict competition.
- c. The Bidder(s)/ Contractor(s) will not commit any offence under the relevant Acts. The Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain or pass on to others, any information or document provided by BHEL as part of business relationship.
- d. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to the relevant guidelines issued from time to time by Government of India/ BHEL.

If the Bidder(s) / Contractor(s), before award or during execution of the Contract commit(s) a transgression of the above or in any other manner such as to put his reliability or credibility in question, BHEL is entitled to disqualify the Bidder(s) / Contractor (s) from the tender process or terminate the contract and/ or take suitable action as deemed fit.

PURCHASE EXECUTIVE

Techno commercial bid

BHEL RFQ No. MDSSCPV040 dated 05.11.2018
 Item: PV Module >=325 Wp (Crystalline Silicon)

	Terms and conditions	Bidder's confirmation/ deviation, if any.
1	Terms of payment: (For Indian bidders) 100% with 45 days credit from the date of receipt of material at BHEL Project site or 15 days credit from the date of submission of complete set of documentation whichever is later	Acceptable/ Not acceptable
	Terms of payment: (For Foreign bidders) 100% through sight draft with 45 days credit from the date of receipt of material at BHEL Project site or 15 days credit from the date of submission of complete set of documentation whichever is later	Acceptable/ Not acceptable
2	Terms of Delivery: (For Indian bidders) Door delivery project site. The site addresses as below, 10MW (AC) GSFC Solar Power Project at Gujarat solar park, Village - Charanka, Taluka - Santalpur, Dist - Patan, Gujarat - 385350.	Acceptable/ Not acceptable
	Terms of Delivery: (For Foreign bidders) CIF Nhava Sheva Seaport	Acceptable/ Not acceptable
3	The bidder shall be Tier-1 manufacturer as per Bloomberg BNEF Q4 2017 report which is an eligibility criteria to participate in the tender. In this regard, bidders may please note the following - BHEL can release PO and establish LC (if any) only in the name of company which is mentioned in Bloomberg BNEF Q4 2017 report - Test reports, warranty certificate and insurance policy for performance warranty/ bank guarantee shall be generated in the name of company which is mentioned in Bloomberg BNEF Q4 2017 report only.	Acceptable/ Not acceptable
4	Validity: Quotation should remain valid for a minimum period of 45 days from the RFQ due date.	Acceptable/ Not acceptable
5	Delivery Schedule: BHEL requires delivery to be completed within 6 weeks from the date of MQP (Manufacture quality plan) approval by customer. Note: MQP format is enclosed which need to be duly filled and submitted by the successful bidder.	Acceptable/ Not acceptable
6	Penalty for delayed delivery: 0.5 % of basic material cost of undelivered portion per week, subject to a maximum of 10 %. Loading factor will be applicable for non-acceptance of penalty clause, Non- Acceptance: 10% Partial non Acceptance (X%): (10- X)%	Acceptable/ Not acceptable
7	Acceptance of Reverse Auction: BHEL EDN reserves the right to adopt Reverse Auction at any point of time after technical evaluation, at its discretion. BHEL may also open the price bids at its discretion. Please refer Annexure II for details about reverse auction.	Acceptable/ Not acceptable
8	Price basis: Price is to be quoted on per Kilowatt basis. Purchase order will be placed on "Kilowatt" basis.	Acceptable/ Not acceptable
9	Integrity Pact: The bidder shall sign an "INTEGRITY PACT" in the formats enclosed.	Acceptable/ Not acceptable

10	<p>Pre-shipment inspection: Pre-shipment inspection at vendor's works will be carried out by BHEL / BHEL's customer/ Third party agency. Required assistance for testing will have to be provided by the vendor at the time of pre-shipment inspection, without any additional cost implication to BHEL.</p>	Acceptable/ Not acceptable
11	<p>Warranty: Modules shall be warranted for a minimum period of 25 years in the Bidder's detailed Warranty/ Guarantee certificate.</p>	Acceptable/ Not acceptable
12	<p>Insurance: The PV module power output warranty for 25 years as per the technical specification shall be insured and backed up through an insurance policy by a reputed insurance company which will cover against the PV module power output warranty in case of insolvency or bankruptcy of the PV module manufacturer. The Bidder shall submit a suitable insurance from Third Party.</p>	Acceptable/ Not acceptable
13	<p>Bank Guarantee against PV Module Warranty: The Successful Bidder who is not able to provide insurance of PV modules as specified in above clause (Sl no. 11) shall submit a Bank Gurantee of Rs. 25 Lakh per each megawatt of PV modules or an equivalent amount in international currency (i.e. DC capacity), thru BHEL consortium bank (list annexed) shall be valid for a period of twenty five (25) years and 90 days. The minimum validity of the Bank guarantee shall be five (5) years and shall be renewed by the bidder of their own subsequently every five (5) years prior to thirty (30) days of its expiry. In case the PV module fails to provide power output as per its performance warranty, and if the bidder fails to rectify, replace or repair the PV module, then BHEL shall carry out the necessary rectification, repair or replacement at its own discretion at the risk and cost of the supplier. The cost of such rectification, repair or replacement shall be encashed from the Bank Guarantee against PV Module Warranty. The same shall be replenished by the supplier within thirty (30) day, failing which the entire Bank Guarantee amount shall be encashed and all pending payment shall be withheld by BHEL till such amount is replenished by the supplier. In another instance, if the supplier becomes bankrupt or insolvent, then BHEL shall immediately encash the entire amount of the Bank Guarantee against PV Module Warranty.</p>	Acceptable/ Not acceptable
14	<p>Country of origin: Please specify country of origin. Certificate of origin shall be arranged for each lot of shipment. Port of shipment and country to be specified. Note: Safeguard duty will be applicable as per the notifications issued by Govt of India time to time. Wherver applicable, the same will be considered for arriving cost to BHEL.</p>	<p>Country of origin: Port of shipment:</p>
14	<p>Preference to Make in India: Final result of the tender and award of contract will be subject to the extent of Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 issued by Dept. of Industrial Policy and Promotion, Ministry of Commerce and Industry, Govt. of India.</p>	Acceptable/ Not acceptable
15	<p>Eligibility: Please specify if you are eligible to claim the benefits of Indian vendor for supply of PV Modules to BHEL against Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017. If yes, the required documents evidencing the eligibility as per the order, has to be submitted.</p>	Yes/ No
16	<p>BHEL Guidelines for Indian Agents of Foreign Suppliers: Supplier shall adhere to "BHEL Guidelines for Indian Agents of Foreign Suppliers" in case the supplier has Indian Agent.</p>	Acceptable/ Not acceptable

Signature of the tenderer with seal

Unpriced bid

BHEL RFQ No. MDSSCPV040 dated 05.11.2018

Supplier:

Offer ref:

SI No.	PV Module >= 325 Wp (Crystalline Silicon)	
1	Quantity	12922.00
2	Unit	KW
3	Quoted	Yes/ No
4	HSN/SAC Code	
5	Currency	
6	Percentage of Taxes and duties applicable	
7	Whether taxes and duties are Inclusive/ Exclusive in the offer	

Signature of the tenderer with seal

Price bid

BHEL RFQ No. MDSSCPV040 dated 05.11.2018

Supplier:

Offer ref:

SI No.	PV Module \geq 325 Wp (crystalline Silicon)	
1	Quantity	12922.00
2	Unit	KW
3	Currency	
4	Unit price	
5	Taxes and duties applicable	
6	Total	

Note: Please mention unit price and total price in both figures and words.

Signature of the tenderer with seal

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India) hereinafter referred to as “The Principal”, which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in

order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the separate “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” framed by the Principal.

Section 4 – Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his sub-contractors a commitment consistent with this Integrity Pact. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal.
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or

take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.

8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.

8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal
(Office Seal)

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place-----

Date-----

Witness: _____
(Name & Address) _____

Witness: _____
(Name & Address) _____

ANNEXURE - I
LIST OF INTERNATIONAL GATEWAY AIRPORTS

SCHEDULE NO	COUNTRY	CURRENCY CODE	AIRPORT
D01	UK	GBP	LONDON (HEATHROW)
D02	UK	GBP	NEW CASTLE
D03	UK	GBP	OXFORD. CHETLAM
D04	UK	GBP	BRISTOL. WELLINGBOROUGH
D05	UK	GBP	BIRMINGHAM
DO6	UK	GBP	EAST MIDLANDS
D07	UK	GBP	MANCHESTER
D08	UK	GBP	LEEDS
D09	UK	GBP	GLASGOW
D10	FRANCE	EURO	PARIS (ROISSY) & LYON
D11	SWEDEN	EURO	STOCKHOLM
D12	SWEDEN	EURO	GOTHENBERG & MALMO
D13	ITALY	EURO	ROMA, MILAN
D14	ITALY	EURO	TURIN, BOLOGNA, FLORENCE
D15	NETHERLANDS	EURO	AMSTERDAM, ROTTERDAM
D16	AUSTRIA	EURO	VIENNA, LINZ, GRAZ
D17	BELGIUM	EURO	ANTWERP, BRUSSELS
D18	DENMARK	DKK	COPENHAGEN
D19	JAPAN	JPY	TOKYO, OSAKA
D20	SINGAPORE	SGD	SINGAPORE
D21	CANADA	CAD	TORONTO
D22	CANADA	CAD	MONTREAL
D23	USA	USD	NEW YORK, BOSTON
D24	USA	USD	CHICAGO
D25	USA	USD	SAN FRANCISCO, LOS ANGELES
D26	USA	USD	ALANTA, HOUSTON
D27	GERMANY	EURO	MUNICH, KOLN, DUSSELDORF, HANNOVER, HAMBURG, STUTTGART, DAMSTADT, MANIHIEM, NURUMBERG
D28	GERMANY	EURO	FRANKFURT
D29	GERMANY	EURO	BERLIN
D30	SWITZERLAND	SFR	BASLE, ZURICH, GENEVA
D31	SPAIN	EURO	BARCELONA
D32	AUSTRALIA	AUD	SYDNEY
D33	AUSTRALIA	AUD	MELBOURNE
D34	AUSTRALIA	AUD	PERTH
D35	CZECH	EURO	PRAGUE
D36	HONG KONG	HKD	HONG KONG
D37	NEW ZELAND	NZD	AUCKLAND
D38	RUSSIA	USD	MOSCOW
D39	SOUTH KOREA	USD	KIMPO INTERNATIONAL, INCHEON
D40	FINLAND	EURO	HELSINKI
D41	ROMANIA	EURO	BUCHAREST
D42	NORWAY	EURO	OSLO
D43	IRELAND	EURO	DUBLIN
D44	ISRAEL	USD	TEL AVIV
D45	UAE	USD	DUBAI
D46	OMAN	USD	MUSCAT
D47	EGYPT	USD	CAIRO
D48	TAIWAN	USD	TAIPEI
D49	UKRAINE	USD	KIEV
D50	CHINA	USD	SHANGHAI, SHENZHEN
D51	PHILIPINES	USD	MANILA
D52	MALAYSIA	USD	KUALALUMPUR, PE NANG
D53	CYPRUS	USD	LARNACA
D54	SOUTH AFRICA	USD	JOHANNESBERG, DURBAN
D55	SLOVAKIA	EURO	BARTISLOVA
D56	SAUDI ARABIA	SAR	RIYADH
D57	TURKEY	EURO	ISTANBUL
D58	THAILAND	USD	BANGKOK
D59	BRAZIL	USD	SAO PAULO, RIO DE JANEIRO

ANNEXURE-II
GUIDELINES FOR REVERSE AUCTION PROCEDURE

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of “online sealed bid” by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Compliance form before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL’s standard practice.
12. Bidders shall be required to read the “Terms and Conditions” section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the “Business Rules of Reverse Auction”, which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.

FRAUD PREVENTION POLICY:

The bidder along with its associate/collaborators/sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

Fraud Prevention policy and List of Nodal Officers shall be hosted on BHEL website, vendor portals of Units/regions intranet.

ANNEXURE-V
BHEL MEMBER BANKS (LIST OF CONSORTIUM BANKS)

BANK GUARANTEE (BG) SHALL BE ISSUED FROM THE FOLLOWING BANKS ONLY:

	Nationalised Banks		Nationalised Banks
1	Allahabad Bank	19	Vijaya Bank
2	Andhra Bank		Public Sector Banks
3	Bank of Baroda	20	IDBI
4	Canara Bank		Foreign Banks
5	Corporation Bank	21	CITI Bank N.A
6	Central Bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Ltd. (HSBC)
8	Indian Overseas Bank	24	Standard Chartered Bank
9	Oriental Bank of Commerce		
10	Punjab National Bank	26	J P Morgan
11	Punjab & Sindh Bank		Private Banks
12	State Bank of India	27	Axis Bank
13	State Bank of Hyderabad	28	The Federal Bank Limited
14	Syndicate Bank	29	HDFC Bank
15	State Bank of Travancore	30	Kotak Mahindra Bank Ltd
16	UCO Bank	31	ICICI Bank
17	Union Bank of India	32	IndusInd Bank
18	United Bank of India	33	Yes Bank

Note:

- All BGs must be issued from BHEL consortium banks listed above.
- BHEL may accept BG from other Nationalised Banks also which are not listed above.
- BG will not be accepted from Scheduled Banks and Co-operative Banks.
- In case BG is issued from a bank located outside Indian territory and is issued in foreign currency, the BG must be routed through and confirmed by any one of the above mentioned consortium banks or any of the Indian Public Sector Banks.
- This list is subject to changes. Hence vendors are requested to check this list every time before issuing BGs.

DISCREPANCY IN WORDS & FIGURES – QUOTED IN PRICE BID

Following guidelines will be followed in case of discrepancy in words & figures-quoted in price bid:

- (a) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.
- (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- (d) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

BENEFITS FOR MSE SUPPLIERS AS PER MSMED ACT 2006 AND PUBLIC PROCUREMENT POLICY 2012

MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of Acknowledgement in EM II).

Or

Valid NSIC certificate or EM II certificate along with attested copy of CA certificate (Format enclosed: ANNEXURE VIII) where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited).

Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid).

Non-submission of such documents will lead to consideration of their bid at par with other bidders.

No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazette officer.

CERTIFICATE BY CHARTERED ACCOUNTANT ON LETTER HEAD

This is to certify that M/s
.....(Hereinafter referred to as `Company`) having
its registered office at is registered under MSMED Act 2006, (Entrepreneur
Memorandum No ((Part-II) dtd Category:
(Micro/Small). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the
latest audited financial year **as per MSMED Act 2006 is as follows:**

1. For Manufacturing Enterprises: Investment in plant and machinery (i.e., original cost excluding land
and building and the items specified by the Ministry of Small Industries vide its notification No.S.O.1722
(E) dated October 5, 2006:

Rs.Lacs.

2. For Service Enterprises: Investment in equipment (original cost excluding land and building
and furniture, fittings and other items not directly related to the service rendered or as may be
notified under the MSMED Act, 2006:

Rs.Lacs.

The above investment of Rs. Lacs in within permissible limit of Rs..... Lacs
for.....Micro / Small (Strike off which is not applicable) Category under MSMED
Act 2006.

(or)

The company has been graduated from its original category (Micro/Small) (Strike off which is not
applicable) and the date of graduation of such enterprise from its original category is
.....(dd/mm/yy) which is within the period of 3 years from the date of graduation of such enterprise
from its original category as notified vide S.O.No.3322(E) dated 01.11.2013 published in the gazette
notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership Number -

Seal of Chartered Accountant

In case of intrastate movement i.e. supply within same state and VAT is applicable, the vendor shall furnish the respective BHEL's nodal agency TIN no. and address in their invoice.

List of Statewise Nodal Officers with Contact Details

Region	State	Nodal Unit responsible for all other units except those in column 4	Contact Details- Landline No.	E-mail	TIN No.	CST No.
1	2	3		7	8	9
Norther States	Jammu & Kashmir	PSNR	0120-2510488/2416452	rahulb@bhelpsnr.co.in / a.chadha@bhelpsnr.co.in	01291101313	
	Himachal Pradesh	PSNR			02011000622	
	Punjab	PSNR			03451148722	
	Haryana	PSNR			06962606884	
	Rajasthan	PSNR			08232903345	
	Uttar Pradesh	PSNR	0120-2416536	rahulb@bhelpsnr.co.in / smittal@bhelpsnr.co.in	09365800914	
	Uttarakhand	Hardwar	01334-285449	alok@bhelhwr.co.in	05001757277 Dated 30th Sep 2005	5000030 Dated 13/03/1965
	Delhi	TBG	0120-6748429	skjindal@bhel.in	07472001760	07472001760
Western States	Madhya Pradesh	Bhopal	0755-2503231	meeta@bhelbpl.co.in	23573600001 (HEL/05/01/0001/S dated 15/11/1979 under MPCT)	HEL/05/01/0004/C dated 15/11/1979
	Chattisgarh	PSWR	0712-3048609	m Gupta@bhelpswr.co.in	22173202974	
	Gujarat	PSWR	0265-2370321	bhavin@bhelpswr.co.in	24190101571	
	Maharashtra	ROD Mumbai	022-22126061/22187850	mahajani@bhel.in	27060300130V	27060300130C
	Daman & Diu	EDN	080-26998724 / 26998830	theerthagiri@bheledn.co.in	25000009902	
Southern States	Orissa	PSSR	044-28286773	sparida@bhelpsr.co.in / lakshmi@bhelpsr.co.in	21031301916	
	Tamil Nadu	Trichy	0431-2577757/ 2577229	mrsao@bheltry.co.in / bharaths@bheltry.co.in	33243560005	239383 dt.11.6.91
	Kerala	PSSR	044-28286773	lakshmi@bhelpsr.co.in	32072043622	
	Karnataka	EDN	080-26998724 / 26998830	theerthagiri@bheledn.co.in	29180069268	00850081
	Telangana	HPEP RC, Puram	040-23185406/ 040-23182238	chand@bhelhyd.co.in / sbsv@bhelhyd.co.in	36360151179	
	Andhra Pradesh	HPVP, Vizag	0891-6681298	sarmaass@bhpv.com	37418632431	
	Puducherry	PSSR				
Eastern States	West Bengal	PSER	033-23216130-3238	amitavac@bhelpsr.co.in	19200936019	19200936213
	Bihar	PSER	0612-2231275	rakesh@bhelpsr.co.in	10010994046	10010994046
	Jharkhand	PSER	06549-266351 (Sh. Parmanand Swaroop)/06534-292179 (Sh. K.K. Ajeet)	pswaroop@bhelpsr.co.in (Bokaro) kk.ajit@bhelpsr.co.in (Koderma/Abhijeet/North Karanpura) manishk.jain@bhelpsr.co.in (Chandrapura) kpsubbu@bhelpsr.co.in (Chandrapura)	20352205642 (Bokaro) 20082005255 (Maithon) 20512405410 (Koderma) 20122200394 (Chandrapura) 20620905730 (Adhunik) 20650507026 (Abhijeet) 20452110016 (North Karanpura)	TG-729(C)
	Mizoram	PSER	033-23216130-3249	anindya@bhelpsr.co.in	15501465017	
	Arunachal Pradesh	PSER	033-23216130-3249	anindya@bhelpsr.co.in	12020122182	Not Applied
	Assam	PSER	033-23216130-3249	anindya@bhelpsr.co.in	18790101415	18179903204
	Tripura	PSER	03821-265209	mkmahato@bhelpsr.co.in	16060947071	16060947273
	Sikkim	PSER				
	Meghalaya	PSER				
	Manipur	PSER				
Nagaland	PSER					

**Electronic Funds Transfer (EFT) OR
Paylink Direct Credit Form**

Please Fill up the form in **CAPITAL LETTERS** only.

TYPE OF REQUEST(Tick one): _____ CREATE _____ CHANGE

BHEL Vendor / Supplier Code:	<input type="text"/>
Company Name :	<input type="text"/>
Permanent Account Number(PAN):	<input type="text"/>
Address	<input type="text"/>
	<input type="text"/>

City: <input type="text"/>	PINCODE <input type="text"/>	STATE <input type="text"/>
----------------------------	------------------------------	----------------------------

Contact Person(s)	<input type="text"/>
Telephone No:	<input type="text"/>
Fax No:	<input type="text"/>
e-mail id:	<input type="text"/>

1 Bank Name:	<input type="text"/>
2 Bank Address:	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
3 Bank Telephone No:	<input type="text"/>
4 Bank Account No:	<input type="text"/>
5 Account Type: Savings/Cash Credit	<input type="text"/>
6 9 Digit Code Number of Bank and branch appearing on MICR cheque issued by Bank	<input type="text"/>
7 Bank swift Code(applicable for EFT only)	<input type="text"/>
8 Bank IFSC code(applicable for RTGS)	<input type="text"/>
9 Bank IFSC code(applicable for NEFT)	<input type="text"/>

- A I hereby certify that the particulars given above are true, correct and complete and that I, as a representative for the above named Company, hereby authorise BHEL, EDN, Bangalore to electronically deposit payments to the designated bank account.
- B If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL / transferring Bank responsible.
- C This authority remains in full force until BHEL, EDN, Bangalore receives written notification requesting a change or cancellation.
- D I have read the contents of the covering letter and agree to discharge the responsibility expected of me as a participant under ECS / EFT.

Date:

Authorised Signatory:

Designation:

Telephone NO. with STD Code

Company Seal

Bank Certificate

We certify that _____ has an Account No _____ with us and we confirm that the bank details given above are correct as per our records.

Date:

(.....)

Place:

Signature

Please return completed form along with a blank cancelled cheque or photocopy thereof to:

Bharath Heavy Electricals Ltd,

Attn:

Electronics Division, Mysore Road,

BANGALORE - 560 026

In case of any Query, please call : 080-26998xxx / 2674xxxx or fax no. 080-2674xxxx