

# **Bharat Heavy Electricals Ltd.,**

(A Government of India undertaking)

## **Solar Business Division**


Prof C N Rao Circle, Opp IISC, Malleshwaram, Bangalore-560012

### **Open Tender**

Sealed quotations are invited under two part bid system for manufacturing and supply of Monocrystalline DCR PV Module as per BHEL technical specification.

RFQ NO and date	<b>SPKSCP071 dated 11.06.2021</b>
RFQ due date & time	22.06.2021 up to 14:00 hrs (IST)
Date, Time & Venue of Part-I Bid Opening	22.06.2021 after 14:30 hrs (IST) BHEL is seeking the offer from all vendors in two-part bid system in soft copies and same can be sent to our company email I'd technicalbid-epd@bhel.in [technicalbid(hyphen)epd(attherate)bhel(dot)in] for submitting technical bid. pricebid-epd@bhel.in [pricebid(hyphen)epd(attherate)bhel(dot)in] for submitting price bid.
Date, Time & Venue of Price Bid opening	Will be intimated later for technically & commercially qualified bidders
Address for Communication & Contact Person in BHEL	Mr. S.Pankaj Kumar / Mr. Vivek Kumar Yadav, MM Department, BHEL Solar Business Division, Email: <a href="mailto:spankaj@bhel.in">spankaj@bhel.in</a> , <a href="mailto:vivekyadav@bhel.in">vivekyadav@bhel.in</a> Telephone number: +91 8126333426 (M) +91 9449039232 (M)

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.


	<b>PURCHASE SPECIFICATION GROUP: PHOTOVOLTAICS</b>	Spec. No	PS-439-420
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### TECHNICAL SPECIFICATION FOR SUPPLY OF MONOCRYSTALLINE SILICON PV MODULES Henrietta (Phase - II), MAURITIUS

REVISION DETAILS: (00)	PREPARED CMH		DATE  16.09.2020
	APPROVED SR	ISSUED ENGG	

 <b>A4-11</b>	<b>PURCHASE SPECIFICATION GROUP: PHOTOVOLTAICS</b>	<b>Spec. No</b>	<b>PS-439-420</b>
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### 1. PRE-QUALIFICATION CRITERIA (PQC) :


Sl. No	Particulars	Bidder's confirmation
1.	The offer shall be quoted only by the original PV module manufacturer with module manufacturing capacity of 50 MW / annum.	PV module supplier name: Manufacturing Plant Location: Manufacturing capacity / annum : Website: (Please mention name of PV module manufacturer, capacity, complete address & contact details with email address. Please enclose self declaration letter for PV module manufacturing capacity)
2.	PV modules offered shall be of DCR type (Solar cells and PV Modules of Indian make).	Yes / No Solar cell make that will be used :  Pl. enclose tie-up letter with Indian Solar cell manufacturer for supply of solar cells
3.	During technical evaluation, Credentials of vendors will be submitted to BHEL's customer for approval. Only those vendors, who are technically qualified and approved by BHEL's customer before price bid opening /RA, will be considered for further procurement processing.	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 crystalline photovoltaic module with 72 nos of cells in 12X6 series configuration or 144 cells in 24X6 configuration.</p> <p>The module construction and bill of material shall be as per vendor's approved IEC certification.</p> <p><b>Please enclose:</b></p> <p><b>i. Module overall assembly drawing with mounting holes</b></p> <p><b>ii. Data sheet with typical electrical characteristics, I-V curves, temperature coefficients etc.</b></p>
1.a	DCR PV Module	The modules for this project are of DCR type. Hence, only Solar cells of Indian make to be used in the module and modules to be manufactured and supplied by Indian PV module manufacturer.
2	Power Output	360 to 385 Watts, in 5 Watt band only. No negative power tolerance will be accepted.
3	System Voltage	Modules shall be suitable for 1500V DC System Voltage application.
4	Efficiency	Cell efficiency 21% (min) under STC
5	Fill Factor	70 % (min)
6	Temp coefficient of Power Pmax (%)	-0.39% / °C or better
7	Operating Conditions	SPV module shall perform satisfactorily in humidity up to 85% with ambient temperatures between 0° C & + 55° C, shall capable of resisting damage when subject to hailstorms of a maximum diameter of 28mm with impact speed of 86KM/h. Also, SPV module shall withstand adverse climatic conditions, such as gust speed of 280 kmph.
8	IEC Certifications	<p>The PV modules supplied shall follow IEC standards as below.</p> <ol style="list-style-type: none"> <li>1. IEC 61215-1:2016 (Design Qualification and Type Approval-Part 1)</li> <li>2. IEC 61215-1-1:2016 (Design Qualification and Type Approval-Part 1-1)</li> <li>3. IEC 61215-2:2016 (Design Qualification and Type Approval-Part 2)</li> <li>4. IEC 61730-1:2016 (Safety Qualification – Part 1)</li> <li>5. IEC 61730-2:2016 (Safety Qualification – Part 2)</li> <li>6. IEC 62804-1:2015- (Test methods for the detection of PID - Part 1)</li> <li>7. IEC 61701:2011 (Salt Mist Corrosion testing)</li> <li>8. EN 50380 – Data sheet and name plate information of photovoltaic module.</li> </ol>

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		<p>9. IEC61853 -1 ( PV module performance testing and energy testing Part-1 : Irradiance and temperature performance measurements and power rating.)</p> <p>10. IEC 60364-4-41 (Protection against electric shock)</p> <p>Vendors shall use Bill of materials for manufacture of PV modules as per subset of approved CDF of IEC Certificates.</p> <p><b>All IEC Certificates to be submitted with tender.</b></p>
9	Module Safety Class	Safety Class – II
10	BILL OF MATERIALS	
10.1	Solar cells	<p><b>Type : Mono Crystalline solar cells</b></p> <p>Pl. indicate</p> <p><b>Cell Source :</b></p> <p><b>Size of Cells :</b></p> <p><b>Cell efficiency :</b></p> <p><b>No. of busbars</b></p> <p><b>Enclose a copy of Solar cell data sheet with electrical parameters.</b></p>
10.2	EVA	Fast cure type, UV resistant, Gel content > 70 %.
10.3	Glass	High transmission (> 90 %), low iron, toughened glass with minimum thickness of 3.2 mm and bending less than 0.3%. The modules shall be capable of resisting damage when subjected to hailstorms of a maximum diameter of 28 mm with impact speed of 86 km/h. The bidder shall have to furnish a certificate to ensure that the front glass surface is capable of withstanding such impact.
10.4	Back Sheet	<p>The back sheet used in the crystalline silicon based modules shall be of 3 layered structure. The thickness of back sheet should be of minimum 300 microns with water vapour transmission rate less than 2.0 g/ m<sup>2</sup>/day (38°C at 90% RH). The Back sheet can be fluoro polymer based or of any other well proven technology.</p> <p>The backsheet shall have globally benchmarked durability properties on Moisture barrier, Tensile Strength (Machine Direction &amp; Transverse Direction), Elongation retention and UV stability and shall be able to withstand system voltage of 1500 V.</p>
10.5	PV Module Frame	Corrosion resistant, anodized Aluminum. The anodizing thickness shall be 15 microns or better. The frame shall be designed to withstand a gust speed of 280 kmph. Detailed installation manual including special clamping arrangement, If any, to be submitted.
10.6	Junction box	IP67 grade with 3 nos. of bypass diodes, UV resistant & weather-proof. The module junction box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type. The module junction

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		<p>boxes shall in compliance with IEC 60670 and be of class II insulation &amp; IEC 62790:2014, of material able to withstand abnormal heat and fire up to 960°C, in compliance with IEC 60695-2-11 and rated insulation 1500 Vdc. Moreover, since module side of the DC PV system remains alive during the day, a clear visible warning sign should be provided to inform anyone working on the junction box.</p> <p>Junction box shall have two 4 sq mm UV resistant cables of minimum 1.2 metre length and plug-in connectors (male and female). Cables shall be of solar grade and shall conform to specification EN 50618.</p>
10.7	Adhesive for framing, junction-box fixing and potting	As per manufacturer's IEC test report
10.8	RFID	<p>Each PV module deployed must use a Radio Frequency identification (RFID) tag for traceability. RFID shall either be placed inside the laminate or behind name plate sticker or behind bar code label pasted on the back glass of PV module and must be able to withstand harsh environmental conditions during the module lifetime.</p> <p>RFID tag shall contain the following information:</p> <ol style="list-style-type: none"> <li>Name of module manufacturer with country of origin</li> <li>Month &amp; year of manufacture of modules</li> <li>Name of cell manufacturer with country of origin</li> <li>Month &amp; year of manufacture of cells</li> <li>IV curve</li> <li>Wattage, <math>I_{max}</math>, <math>V_{max}</math>, <math>V_{oc}</math>, <math>I_{sc}</math>, &amp; fill factor</li> <li>Module model number</li> <li>Unique serial number</li> <li>Date of obtaining IEC qualification certificates</li> <li>Name of test lab issuing IEC certificates</li> <li>Other relevant information etc. on traceability of solar cells and module as per IOS 9000 series</li> </ol>
10.9	Nameplate	<p>Each module shall be provided with a name plate label (sticker) containing the following information:</p> <ol style="list-style-type: none"> <li>Name of module manufacturer</li> <li>Module model number</li> <li>Serial number</li> <li>Polarity Terminal Leads</li> <li>Safety Class</li> </ol>

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		f. Application Class g. Overall Dimension (W x L x D) h. Weight in Kg i. $P_{max}$ , $V_{oc}$ , $I_{sc}$ , $I_{max}$ & $V_{max}$ j. System Voltage k. Relevant standards and certifying lab name l. Date of obtaining IEC qualification certificates m. Warnings, if any n. Other relevant information, etc  Nameplate shall be clearly visible and shall not be hidden by equipment wiring. It shall be durable for the entire life of panel.
10.10	BOM as per CDF of IEC Certificate	Solar cells and module materials shall be used as per approved CDF as per IEC Certificate. <b>Enclose copy of approved CDF as per IEC Certificate.</b>
10.11	RFID Reader	One number RFID reader (gun type) has to be supplied free of cost by the bidder which has to be compatible to read the module I-V data from the RFID Tag & download the data to Computer. All necessary associated Software, Cables and accessories are to be provided free of cost along with the RFID reader.
10.12	.PAN File	Third Party verified .PAN file for each module wattage offered shall be provided for carrying out PVSYS calculations at our end.
10.13	Mounting hole Pitch	<b>Pl. provide mounting hole pitch details.</b> <b>Horizontal :</b> <b>Vertical :</b> <b>Mounting hole size :</b>
10.14	Earthing holes	Earthing holes to be provided on both the shorter arms of PV module frames.
10.15	I-V curves and temperature coefficients	The bidder shall provide the sample solar PV module electrical characteristics including current-voltage (I-V) performance curves and temperature coefficients of power, voltage and current. <b>Enclose Sample I-V performance curve of for highest wattage of modules offered.</b> <b>Temperature coefficient of Power (<math>P_{max}</math>) :</b> <b>Temperature coefficient of Voltage (<math>V_{oc}</math>) :</b> <b>Temperature coefficient of Current (<math>I_{sc}</math>) :</b>

### 3. QUALITY ASSURANCE

Module Quality Plan, Data Sheet and GTP shall be subject to customer's approval. Each lot of modules shall be subject to Pre Shipment Inspection (PSI) by BHEL and BHEL customer or any third party.

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Quality plan will include the following:

- I. Incoming Quality Checks on bought out item
- II. In-process Quality Checks
- III. Sample tests on final product by the customer

#### **4. WARRANTY**

**Product Warranty shall be for 10 years and Performance Warranty shall be for 25 years.**

Solar PV modules used in solar power plants/ systems must be warranted for the product Workmanship for a period of minimum 10 years. Further, they shall also be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years from the completion of the trial run. Modules that do not meet the above criteria shall be replaced free of cost at BHEL's/customer's sole discretion.

#### **5. BANK GUARANTEE FOR POWER OUTPUT WARRANTY**


The Successful Bidder shall submit a Bank Guarantee for 10% of the contract value through BHEL consortium bank and shall be valid for a period of Ten (10) years and 90 days. The minimum validity of the Bank guarantee shall be Two (2) years and shall be renewed by the bidder of their own subsequently every Two (2) 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 export seaworthy carton boxes made from triple-strength corrugated cardboard and resting on a wooden or plywood base. The PV modules packed in a carton box shall be of same power rating band only (360 Wp to 385Wp with 5Wp band). Carton box and Pallets shall be adequately designed to prevent damage or deterioration during transportation to site in remote road conditions, handling and storage in site till the time of its installation. The carton box should display the manufacturer's name, number of modules, type, serial numbers, module wattage etc. Modules found damaged at the time of opening of the cartons in the project site shall be replaced free of cost by the module manufacturer.

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## 7. GENERAL CONDITIONS


- PV Modules shall be manufactured at the vendor's works only.
- Manufacturing clearance shall be given only after approval of Data Sheet, Bill of Material, manufacturing quality plan, Pre-Shipment inspection plan by BHEL's customer.

## 8. ENCLOSURES :

Sl. No.	Document
1.	Self-declaration letter for PV module manufacturing capacity 50MW per annum
2.	Signed copy of BHEL Specification PS-439-420 Rev. 00 for confirming to supply as per BHEL Specification.
3.	Tie-up letter with Indian Solar cell manufacturer for supply of solar cells
4.	IEC 61215-1, IEC 61215-1-1, IEC 61215-2 , IEC 61730-1 & 2, IEC61701, IEC61853 -1, IEC 60364-4-41 and IEC 62804 test certificates.
5.	Approved CDF (Bill of Materials) of PV modules as per IEC certificates.
7.	Over all PV module assembly drawing indicating mounting hole pitch & data sheet for PV modules.
8.	Third party verified .PAN files for each wattage of Monocrystalline PV modules (360 to 385Wp with 5Wp band )
9.	Data sheet for Solar cells used for manufacturing PV modules.
10.	Bill of Material for PV Modules that shall be used for this contract
11.	PV module installation and O&M manual
12.	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. Confirmation by the vendor :**

Sl. No.	Item	Acceptance by the Module manufacturer (Yes / No)
1.	PV Module model number and overall dimension:	
2.	Mono Crystalline PV Modules with power output 360Wp to 385Wp in 5 watts bands.	
3.	Mono Crystalline PV Modules suitable for 1500V System Voltage application	
4.	Availability of IEC 61215-1, IEC 61215-1-1, IEC 61215-2, IEC 61730-1 & 2, IEC61701, IEC61853 -1, IEC 60364-4-41 and IEC 62804 test certificates and IEC Test reports with CDF.	
5.	Junction box cable length : 1.2 Metres minimum	
6.	RFID Tag inside or outside the laminate	
7.	Supply of 1 no. of hand held RFID reader with accessories	
8.	Adherence to Manufacturing Quality Plan and Pre-Shipment Inspection as per customer	
9.	Bill of materials as per subset of the CDF of the IEC Certificates	
10.	Submission of Bank Guarantee for Power Performance warranty of PV modules	

**10. DEVIATION SHEET**

Sl. No.	Particulars	Bidder's Confirmation
1.	<b>Confirmation to BHEL Specification</b>  <b>PS- 439- 420 Rev. 00 in toto</b>	<p style="text-align: center;"><b>Yes / No</b></p> <p style="text-align: center;"><i>Please indicate deviations, if any.</i></p>

\_\_\_\_\_  
Signature of Tenderer with stamp

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## Unpriced bid -Indian Bidder

BHEL RFQ No. SPKSCPV071 dated 11.06.2021

Supplier:

Offer ref:

SI No.	EL0679040765 -Monocrystalline DCR PV Module -Mauritius	
1	Quantity	10026
2	Unit	KW
3	Quoted	Yes/ No
4	HSN/SAC Code	
5	Currency	INR
6	Percentage of Taxes/ duties applicable for Indian vendor on PV Modules only	
7	Whether taxes and duties are Inclusive/ Exclusive in the unit price	

Note: 1. Please mention unit price and total price in both figures and words.

2. Taxes applicable on the PO quantity only shall be paid/reimbursed by BHEL.  
Any other cost incurred will be to vendor's account.

3. Delivery for indian bidder is Free on road (FOR) Nhava Sheva/ Mumbai Sea port

Signature of the tenderer with seal

**Price bid -Indian Bidder**

**BHEL RFQ No. SPKSCPV071 dated 11.06.2021**

**Supplier:**

**Offer ref:**

<b>SI No.</b>	<b>EL0679040765 -Monocrystalline DCR PV Module -Mauritius</b>	
<b>1</b>	<b>Quantity</b>	<b>10026</b>
<b>2</b>	<b>Unit</b>	<b>KW</b>
<b>3</b>	<b>Currency</b>	<b>INR</b>
<b>4</b>	<b>Unit price</b>	
<b>5</b>	<b>Unit price in words</b>	
<b>6</b>	<b>Percentage of Taxes/ duties applicable for Indian vendor on PV Modules only</b>	
<b>7</b>	<b>Total for 10026 KW</b>	
<b>8</b>	<b>Total in words</b>	
<b>9</b>	<b>Whether taxes are Inclusive/ Exclusive in the unit price</b>	

**Note: 1. Please mention unit price and total price in both figures and words.**

**2. Taxes applicable on the PO item/ quantity only shall be paid/reimbursed by BHEL. Any other cost incurred will be to vendor's account.**

**3. Delivery for indian bidder is Free on road (FOR) Nhava Sheva/ Mumbai Sea port**

**Signature of the tenderer with seal**



Bidder's Contact details	
BHEL RFQ No:	SPKSCPV071 dated 11.06.2021
Bidder Name:	
Offer Reference No:	
If already registered with BHEL, vendor code :	
Registered Office Address:	
Telephone No:	
Email:	
Ordering Address:	
Telephone No:	
Email:	
Manufacturing plant Address:	
Telephone No:	
Email:	
Contact person Name :	
Telephone No:	
Mobile No:	
Email :	
Contact personin India ( If any)	
Telephone No:	
Mobile No:	
Email :	
Bank Details	

**Techno commercial bid**

**BHEL RFQ No. SPKSCPV071 dated 11.06.2021**

**Item: Monocrystalline DCR PV Module --Mauritius**

	<b>Terms and conditions</b>	<b>Bidder's confirmation/ deviation, if any.</b>
1	<b>Terms of payment: (For Indian bidders)</b> 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	<b>Acceptable/ Not acceptable</b>
	<b>Terms of payment: (For Foreign bidders)-Not applicable</b> 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	<b>Acceptable/ Not acceptable</b>
2	<b>Terms of Delivery: (For Indian bidders)</b> FOR INDIGENOUS VENDORS: Free On Road Basis to Nhava Sheva/ Mumbai Seapor  Note: Transit insurance to be covered up to FOR Nhava Sheva/ Mumbai Seaport.	<b>Acceptable/ Not acceptable</b>
	<b>Terms of Delivery: (For Foreign bidders) -Not applicable</b>  <b>Sl.no. 1 - 10026 KW</b>	<b>Acceptable/ Not acceptable</b>
3	<b>Validity:</b> Quotation should remain valid for a minimum period of 45 days from the RFQ due date.	<b>Acceptable/ Not acceptable</b>
4	<b>Delivery Schedule:</b> Sl.no. 1 - 10026 KW– within 12 weeks from manufacturing clearance date  Note: The delivery schedule will be same for each vendors even in case of splitting of RFQ quantity on more than one vendor.	<b>Acceptable/ Not acceptable</b>
5	<b>Penalty for delayed delivery:</b> 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)%	<b>Acceptable/ Not acceptable</b>
6	<b>Order Splitting: Not applicable</b>	<b>Acceptable/ Not acceptable</b>
7	<b>Acceptance of Reverse Auction/ Price bid:</b> BHEL will finalize the tender by opening of price bid of all techno-commercially approved bidders to arrive at L1.	<b>Acceptable/ Not acceptable</b>
8	<b>Price basis:</b> Price is to be quoted on per Kilowatt basis. Purchase order will be placed on “Kilowatt” basis.	<b>Acceptable/ Not acceptable</b>
9	<b>Integrity Pact:</b> The bidder shall sign an “INTEGRITY PACT” in the formats enclosed.	<b>Acceptable/ Not acceptable</b>
10	<b>Pre-shipment inspection:</b> 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. On successful completion of pre-shipment inspection/ inspection waiver, BHEL will issue material dispatch clearance certificate (MDCC) after which the vendor can proceed to the material dispatch. However, the vendor has to ensure the material dispatch (BL date/ LR date) within 15 days from date of MDCC. In case BHEL/ customer are unable to come for physical inspection at vendor works, BHEL/ customer may engage third party inspection agency. Hence all charges for third party inspection at vendor works to be borne by vendor.	<b>Acceptable/ Not acceptable</b>
11	<b>Warranty:</b> As per BHEL specifications for each item  Since it is an export project, seaworthy packing to be ensured.	<b>Acceptable/ Not acceptable</b>
12	<b>Insurance/ PBG for warranty :</b> As per BHEL specifications for each item	
12	<b>Country of origin: (For foreign bidders only)</b> 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: Any custom duty will be applicable as per the notifications issued by Govt of India time to time. Wherever applicable, the same will be considered for arriving cost to BHEL.	<b>Country of origin:</b> <b>Port of shipment:</b>

13	<p><b>Eligibility under Preference to Make in India Order:</b> For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017, 11.12.2018, 29.05.2019, 04.06.2020 &amp; 16.09.2020, and subsequent Orders issued by the respective nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO /WO against this this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respective of this procurement, same shall be applicable.</p>	<p><b>Yes/No, If yes, required documents to be submitted</b></p>
14	<p><b>BHEL Guidelines for Indian Agents of Foreign Suppliers:</b> Supplier shall adhere to “BHEL Guidelines for Indian Agents of Foreign Suppliers” in case the supplier has Indian Agent.</p>	<p><b>Acceptable/ Not acceptable</b></p>
15	E-way bill to be generated by vendor before dispatch of goods as per dispatch instructions provided by BHEL.	<p><b>Yes/No</b></p>
16	Any vendor who has been banned by BHEL or against whom action due to non performance has been initiated by BHEL are not eligible for participation. Such offers will not be considered for evaluation and will be rejected.	<p><b>Yes/No</b></p>
17	<p>Declaration required under Rule 144(xi) of General Financial Rules, 2017 amendment dt 23.07.2020 issued by Ministry of Finance, Govt. of India.Refer Annexure-X for “Restrictions under Rule 144(Xi) of General Financial Rules,2017 amendment dt:23.07.2020”.</p> <p>The Bidder shall mandatorily submit Declaration as per format enclosed as part of tender(ANNEXURE-A)Model certificate to be submitted as per attached format.</p>	<p><b>Acceptable/ Not acceptable</b></p>
18	Documents to be submitted for claiming MSE status:Option 1(valid till 31.03.2021):submission of Udyog Aadhar Memorandum along with CA certificate as per ANNEXURE VIII of NIT.Option 2:Submission of Udyam Registration certificate along with CA certificate as per Annexure-VIII(A) of NIT.	<p><b>Yes/No</b></p>
19	<p><b>GST ITC:</b> 1.E-invoicing under GST is being implemented w.e.f. 1st October 2020 for all the taxable person having turnover more than Rs. 500 Crore. It has been specified by the Govt that it is mandatory to mention a valid unique Invoice reference number (IRN) and QR code as generated from Govt. portal on a Tax invoice. Based on such information, GST ITC as claimed by BHEL in GST Returns shall be matched with the corresponding details uploaded by supplied in E-invoicing system.2.In case the vendor delays or fails to provide all the documents as per the Purchase order at the time of submitting Tax invoice to BHEL, any subsequent financial loss to BHEL on account of vendor shall be to vendor’s account. BHEL has further right to take necessary steps to protect its interest at the time of release of payment.</p>	<p><b>Acceptable/ Not acceptable</b></p>
20	<p><b>TCS:</b> Please note that with the recent changes in Tax regime and introduction of Sec206C(1H) on sale of goods with effect from 01.10.2020 the vendors in line with the provisions of the said section are to collect TCS @0.075% from 01.10.2020 upto 31.03.2021 and 0.1% from there on Invoice value.The following details are to be noted when vendor is raising TCS claim in line with provisions of Sec206C(1H)1.Vendor should raise /levy TCS in the Tax Invoice itself. No separate debit note will be accepted.2.Vendor should indicate his Pan# and Tan # in the Tax invoice.3.In the purchase order Pan# of BHEL shall appear.4.Vendor should remit the TCS so collected from BHEL and provide TCS certificates with invoice no., invoice date, Amount etc. breakup details.5.If by any chance vendor is not remitting /not able to submit TCS certificates to BHEL on time then the TCS amount with penalty if any applicable will be recovered from vendor in his available bills.6.No TCS is to be levied if TDS is applicable for the invoice transaction.(e.g. O&amp;M cases, Service bills).7.No TCS in case of Export/Import transactions.8.TCS is applicable only for invoices dated 01.10.2020 and afterwards only.</p>	<p><b>Acceptable/ Not acceptable</b></p>
21	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.	<p><b>Acceptable/ Not acceptable</b></p>
22	GeM Seller ID shall be mandatory before placement of order of the successful bidder.	<p><b>Acceptable/ Not acceptable</b></p>
23	<p><b>Special conditions of contract (SCC):</b> In addition to the ITB and GCC stipulated in the tender document, the terms and conditions indicated under bidding forms shall be treated as "Special Conditions of Contract (SCC). In case of Conflict between General Conditions of Contract (GCC) available in Tender document and Special Conditions of Contract (SCC) stipulated under bidding forms, SCC will prevail over GCC.</p>	<p><b>Acceptable/ Not acceptable</b></p>
24	<p><b>UNLOADING :</b> Unloading at site is under BHEL scope.</p>	<p><b>Acceptable/ Not acceptable</b></p>
25	<p><b>Change in tender condition:</b> Any changes in the tender conditions, specification etc or in splitting ratio based on the MSE act /Make in India policy or due to any other reason, intimation will be given only to the vendors who have participated in this tender, hence it is mandatory that vendors should participate in the tender.</p>	<p><b>Acceptable/ Not acceptable</b></p>

Signature of the tenderer with seal

**SPECIAL CONDITIONS OF CONTRACT**

The special terms and conditions mentioned below supersedes the general conditions of contract Doc No. SCPV: PV Module: 002- Rev 02, for contradictory clauses if any.

**1. Quotation shall be submitted in Two part bid,**

**A) Mode of offer Submission / Opening of Bids :**

i. Due to Covid-19, lockdown existing and non-availability of proper courier and postal service, many vendors who are interested to participate in the tender informed BHEL that they are unable to submit hardcopy/paper bid in the tender box. Hence BHEL is seeking the offer from all vendors in two-part bid system in soft copies and same can be sent to our company email I'd

technicalbid-epd@bhel.in [technicalbid(hyphen)epd(atthe)rate)bhel(dot)in]

for submitting technical bid.

pricebid-epd@bhel.in [pricebid(hyphen)epd(atthe)rate)bhel(dot)in]

for submitting price bid.

- Email subject indicating " Vendor name (Principal) – SPKSCP070 – Technical bid" consisting of technical details, PQC documents, commercial terms and conditions. If the size of email is bigger than allowed limit, kindly send email in parts clearly indicating in the subject as part-1,2,3 etc.

- Another email subject indicating " Vendor name (Principal) – SPKSCP070 - Price bid"

where in the price bid to be submitted as an attachment (format available in the tender document).

- In case offer received in a single mail, offer may be treated as single part bid and both technical /price bid will be opened.

ii. Email is protected and will be opened by tender opening committee on due date and time.

iii. Note: Please ensure submission of offer before the due date and time. No other mode of submission is permitted. Later offers will be rejected.

**2. Bidders shall confirm **acceptance of technical specification** which is part of the tender document. Any deviation from technical specification can be rejected at BHEL's discretion.**

**3. 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: Not applicable**

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

**4. Terms of delivery :**

**For Indian bidders - Free On Road (FOR) Basis to Nhava Sheva/ Mumbai Seaport**

Note: Transit insurance to be covered up to FOR Nhava Sheva/ Mumbai Seaport.

**For foreign bidders – Not applicable**

**Sl.no. 1 - 10026 KW –**

**5. Delivery Schedule: BHEL requires delivery schedule as below:**

**Sl.no. 1 - 10026 KW– within 12 weeks from manufacturing clearance date**

Note: The delivery schedule will be same for each vendors even in case of splitting of RFQ quantity on more than one vendor.

**6. Splitting :** Not applicable

**7. Price variation clause** -Not applicable for this tender

**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.

Evaluation/Price bid/RA will be done on item level.

The evaluation currency for this tender shall be INR.

**9. Preference to Make in India:** For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017, 11.12.2018, 29.05.2019, 04.06.2020 & 16.09.2020, and subsequent Orders issued by the respective nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO /WO against this this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respective of this procurement, same shall be applicable.

**10. 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.

**11.** The rate quoted shall be in **price per kilowatt basis** and not per module.

**12. Pre-shipment inspection:** Pre-shipment inspection at vendor's works will be carried out by BHEL / BHEL's customer/ Third party agency (Buyer's representative). The cost of inspection/ pre-dispatch inspection/ in-stage inspection (Exclusive of buyer's representatives TA/DA) shall be borne by the vendor. Travel expenses for the representatives for such inspections shall be borne by the buyer.

However, in case re-inspection is necessitated on account of non-acceptance of item(s) due to failure on Factory Acceptance Test(s), the cost of associated travel and accommodation borne by the buyer shall be on account of the vendor. The vendor shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required by the Inspector.

On successful completion of pre-shipment inspection/ inspection waiver, BHEL will issue material dispatch clearance certificate (MDCC) after which the vendor can proceed to the material dispatch. However, the vendor has to ensure the material dispatch (BL date/ LR date) within 15 days from date of MDCC.

**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 have 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. Warranty:** As per BHEL specifications for each item

**15. Insurance/PBG:** As per BHEL specifications for each item

**16. 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. A panel of Independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.

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.

Details of IEM for this tender is furnished below:

SI No.	IEM	Address	Phone & Email
1.	Shri Arun Chandra Verma, IPS (Retd.)	Flat No. C -1204, C Tower, Amrapali, Platinum Complex, Sector 119, Noida (U.P.)	<a href="mailto:acverma1@gmail.com">acverma1@gmail.com</a>
2.	Shri Virendra Bahadur Singh, IPS (Retd.)	H. No. B-5/64, Vineet Khand, Gomti Nagar, Lucknow - 226010	<a href="mailto:vbsinghips@gmail.com">vbsinghips@gmail.com</a>

(b) 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. For clarifications/ issues related to the tender, please contact:

SI No.	Contact person	Address	Phone & Email
1.	Mr. S.Pankaj Kumar	MM Department, BHEL Solar Business Division, Prof C N Rao Circle, Opp IISC, Malleshwaram Bangalore-560 012. INDIA	Ph:+91-8126333426 <a href="mailto:spankaj@bhel.in">spankaj@bhel.in</a>
2.	Mr. Vivek Yadav		Ph: +91- 9449039232 <a href="mailto:vivekyadav@bhel.in">vivekyadav@bhel.in</a>

**17.** Offers with non-acceptance of BHEL terms, can be rejected on BHEL's discretion.

**18.** For this procurement, the local content to categorize a supplier as a Class-I local supplier/ Class-II local supplier/ Non-local supplier and purchase preference to Class-I local supplier, is as defined in Public procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent Orders issued by the Nodal Ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of price bid/s against this NIT.

Any Indian Bidder intending to avail the benefits shall submit the requisite documents as per the aforesaid orders.

**19.** The Bidder shall mandatorily submit Declaration as mentioned below, under Rule 144(xi) of General Financial Rules, 2017 amendment dt 23.07.2020 issued by Ministry of Finance, Govt. of India. The declaration to be submitted on Company Letter head duly signed and sealed by authorised signatory, for ascertaining the eligibility of offer in the tender.

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered."

(Where applicable, evidence of valid registration by the Competent Authority shall be attached).  
The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).

Refer Model certificate annexure for details.

- 20.** In case BHEL/ customer are unable to come for physical inspection at vendor works, BHEL/ customer may engage third party inspection agency. Hence all charges for third party inspection at vendor works to be borne by vendor.
- 21.** In place of EDN, Bangalore, it may be read as SBD Bangalore.
- 22.** Tender opening place to be replaced as below:  
BHEL EPD/SBD Tender box (Reception of EPD/SBD)  
C/o. AGM/MM  
M/s BHARAT HEAVY ELECTRICALS LTD., SOLAR BUSINESS DIVISION  
Prof CNR Rao Circle, IISc Post, Malleswaram, Bangalore- 560 012
- 23.** Complete set of acceptable documents to be submitted within 10 days from the date of purchase order.  
Delay in submission of documents, penalty clause as applicable for late delivery shall be applicable.
- 24.** GeM Seller ID shall be mandatory before placement of order of the successful bidder.
- 25.** Packing to be as per standards attached AA0490004- Seaworthy Packing & AA0490009-Export Packing since it is a export project.

\*\*\*\*

**Certificate by statutory auditor or cost auditor of the company (in the case of companies)**

**or**

**from a practicing cost account or the practicing chartered accountant (in respect of supplies other than companies) on their letter head**

In line with latest Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017, P-45021/2/2017-PP (BE-II) dated 28.05.2018, P-45021/2/2017-PP (BE-II) dated 29.05.2019 & P-45021/2/2017-PP (BE-II) dated 16.09.2020 we hereby certify that

.....

(Supplier name) are local supplier meeting requirement of minimum local content     % defined in as above orders for the material against Enquiry No.

**SPKSCPV071 dtd. 12.06.2021 for supply of Monocrystalline DCR PV Module.**

Details of location at which local value addition will be made is as follows:

.....

.....

.....

We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Seal and Signature of Authorized  
signatory with date



## **Declaration Under Cartel Formation**

### **RFQ NO:SPKSCPV071: SUPPLY OF MONOCRYSTALLINE PV MODULES**

I \_\_\_\_\_, authorized representative of M/s \_\_\_\_\_(bidder to enter company name)hereby declares that the company will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). 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. In case, the company is found having indulged in above activities, suitable action can be taken by BHEL as per extant policies/ guidelines.

Authorized signatory with date

## SPECIAL INSTRUCTIONS

1. Suppliers are requested to read the NIT conditions fully before quoting for the tender along with this Special Instructions .
2. BHEL encourages “SIGHT DRAFT WITH 45 DAYS CREDIT PAYMENT TERM” for foreign vendors and “payment with 45 days credit” for indigenous vendors. After receipt of offers , BHEL may reject offers quoted with LC terms by foreign vendors and inland LC terms by indigenous vendors during commercial terms freezing. BHEL’s decision is FINAL and any vendor who has not participated in this tender cannot claim about BHEL’s decisions at later stage. All decisions will be intimated to participated vendors only and hence BHEL’s decisions will NOT be binding on NON QUOTED vendors since it is OPEN TENDER.
3. After manufacturing clearance is issued and completing production as per BHEL requirement, vendors have to submit test reports/ flash data for proof of material readiness along with inspection call.
4. Inspection call received without test reports/ flash data will not be considered as proof for material readiness and in such cases actual inspection date at vendor’s works only will be considered or date of receipt of test reports only will be considered.
5. After making draft invoice, it has to be sent to BHEL before generating actual invoice. Only after BHEL’s concurrence actual invoice to be generated.
6. After quoting in the tender and after participation in RA or price bid opening, vendor cannot withdraw their offer at any stage. Vendor is bind by NIT and PO prices and terms & conditions
7. Before or after award of the contract if any vendor is withdrawing their offer or backout at any stage, it will be viewed very seriously by BHEL and BHEL will be forced to take necessary action for **“Suspension of Business dealing with BHEL”** as per BHEL’s Purchase Policies , procedure and

guidelines and if needed BHEL may take legal action against the default vendors. Also alternate procurement action will be initiated by BHEL in order to meet project commissioning and to meet customer contract commitments. Hence **“RISK and COST” will be invoked** as per our purchase policies ,guidelines and procedure. BHEL being a GOVT OF INDIA( UNDERTAKING COMPANY), any withdrawal by vendors will be treated as **“sabotaging the tender”** and hence all actions will be initiated like informing other PSUs in India, Indian and Foreign Embassy regarding sabotaging our tender and recommend for actions etc .

Hence, please be cautious and take utmost care before quoting.

(G PONNUGURUPACKIAM)  
AGM/HOD-SCPV-MM

## **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 Indian Penal Code (IPC) and Prevention of Corruption 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 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. 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.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

## **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 Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

## **Section 4 - Compensation for Damages**

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent 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 Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 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 /Subcontractors**

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 in line with Non- disclosure agreement.
- 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 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption 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.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

## **Section 9 - Pact Duration**

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified 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  
 जी.पोन्नगुरुपाक्याम, अ.म.प्र./एस.सी. एवं पी.वी. (एम.एम)  
 G.PONNUGURUPACKIAM, AGM/SC&PV (MM)  
 BHEL-EDN, MYSORE ROAD, BENGALURU-560026  
 (Office Seal)

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

Place BANGALORE

Date \_\_\_\_\_

Witness: Ramachandra  
 (Name & Address) \_\_\_\_\_  
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# CORPORATE STANDARD

AA0490009

Rev. No. 02

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## EXPORT PACKING

(PACKING INSTRUCTIONS FOR GENERAL COMPONENTS / ASSEMBLIES / EQUIPMENT)

### 1 GENERAL

This standard lays down packing instructions for export packing of components/assemblies/equipment to be dispatched against Customer's contracts, for which there are no special instructions issued by the Engineering Departments. For Seaworthy Packing refer standard AA0490004 wherever applicable.

The components/assemblies need to be packed suitably to avoid physical damage & corrosion during transit for storage. For specific applications, the concerned engineering department shall issue a product standard. Reference of this standard, must appear in the Shipping list/Packing List.

### 2 SCOPE

This procedure gives minimum guidelines for export packing to be complied with for packing of components/assemblies/equipment. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for periods more than one year.

### 3 WOOD SPECIFICATION FOR PACKING:

- a) The wood shall conform to specification AA51401.

In addition to the above the following has to be met:

The standard requires the use of debarked wood in the construction of compliant wood packaging material. Debarked wood is defined in the ISPM 15

- b) Ply Wood planks as per specification IS:303 Gr. "MR" Type A,B are used for the sides, top & bottom of the packing cases.
- c) Ply Wood of marine grade as per IS:710 for packing of control equipment and for support batten pinewood to be used as per specification AA51401.

### 4 TYPE OF PACKING:

The following types of packing have been standardized for packing of general components/assemblies.

- 'OP' - Open Type
- 'PP' - Partially Packed
- 'CP' - Crate Packing - Components/Equipment requiring physical protection
- 'CQ' - Case Packing - Small medium Components/ Assemblies/ Equipment which require corrosion & physical protection
- 'CR' - Case Packing - Electrical Components/Assemblies which require special packing viz. Water Proof, Shock Proof, etc.

### DESCRIPTION OF TYPES OF PACKING

The various types of packing, as standardized above, are described below.

Revisions:

**APPROVED:**PROCEDURAL GUIDELINES COMMITTEE –  
PGC (Packing)

Rev. No. 02

Amd. No.

Reaffirmed

Prepared

Issued

Dt. of 1<sup>st</sup> Issue

Dt: 28-08-2018

Dt:

Year:

HEP, Bhopal

Corp. R&amp;D

31-05-2018

**4.1 'OP' - Open Type**

In case, of components which are not affected by water & dust & do not require special protection &, are generally not machined, shall be sent as open packages. However these components may be sent in crates, wherever necessary.

**4.2 PP' - Partially Packed**

Components which need special protection, at selected portions only, shall be dispatched partially packed. Machined surfaces should not be allowed to come directly in contact with the wood. Such surfaces after application of TRP should be protected with Multi-layered cross laminated plastic film to AA51420.

**4.3 'CP' - Crate Packing – General**

Assemblies/Components which need only physical protection from the point of view of handling shall be dispatched duly packed in crates.

**4.4 'CQ' - Case Packing - Machined Components/Assemblies/Equipment**

- a) Small & Medium sized components/assemblies/equipment due to size/weight & to avoid handling, and pilferage, problems shall be packed in Case/Containers.
- b) Wherever required adequate quantity of silica gel to AA55619 or VCI Powder/ Tablets, packed in thin muslin cloth cotton bags shall be suitably placed.
- c) Small machines/components of less weight shall be provided with suitable cushioning. Wood Wool/Expanded Polyethylene Foam Sheet, if used, shall be sandwiched between polyethylene sheets and sealed.
- d) The components inside the case shall be entirely covered with Multi-layered cross laminated plastic film to AA51420, where-ever required.

**4.5 'CR' - Case Packing - Electrical & Electronic Components/Assemblies**

Delicate components likely to be damaged e.g. Gauges, Instruments etc. are to be wrapped in waxed paper or polyethylene air bubble film and packed in cartons.

- a) Adequate quantity of Silica gel to AA55619 packed in cotton bags, of 100 grams each are to be suitably placed in the cartons. The cartons shall be entirely covered with Multi-layered cross laminated plastic film to AA51420, before being packed in the cases.
- b) VCI Powder/Tablets can be used as an alternative to Silica Gel to AA55619.
- c) Empty space in the cartons shall be filled with small chips of Expanded Polystyrene (Thermocole), Wood Wool etc. Polyethylene air bubble film shall conform to IS 12787/AA51420 Expanded polystyrene (Thermocole) shall conform to AA51416.
- d) The cartons shall be manufactured from corrugated Fibre Board, meeting requirements of AA51414.

**4.6 Special Packing**

Components requiring special packing (as per customer/contractual/ engineering requirements) not included in this specification shall be covered by product standards.

**5 PREPARATION OF PACKING CASE:**

- 1) Export items are to be packed in sea-worthy wooden/Ply board cases.
- 2) The base of the case shall be made of wooden battens for planks giving necessary reinforcement, such that the bottom of the equipment is at a height of 100 to 200mm from the ground level depending upon size & weight of equipment. However for packing cases of smaller size equipment can be at a height of 40mm from the ground level.
- 3) The four sides & top cover shall be lined, from inside with multi-layered cross-laminated polyethylene sheet of 90GSM as per AA51420 and tacked at suitable places.

Whenever specified the top cover will have a layer of multi-layered cross laminated polyethylene sheet of 90 GSM over the cover. This should project about 100 - 250mm on all sides.



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It is preferable to have a single piece of the above Multi-layered cross laminated polyethylene sheet fixed on the four sides. In case jointing is unavoidable, it should be done by overlapping of approximately 100mm.

- 4) Put the job on the base and wherever necessary may be screwed / fastened.
- 5) In case of delicate component Packing Viz. Electrical & Electronic components for instruments/assemblies, a rubber sheet, Self-expanded polyethene foam sheet as per AA51423, preferably 10mm thick, shall be fixed on to the base to act as cushioning to the equipment.
- 6) Place the Components/cartons with corrosion inhibitors duly applied wherever necessary for place suitably, thin muslin cloths bags containing 100grams (approx.) of activated Blue Silica Gel to AA55619, wherever necessary. Alternatively VCI Powder or Tablet may be used.
- 7) In case, depression is formed, at the top, after the equipment is lowered, provide ply board/wooden batons.
- 8) Whole Equipment shall be covered and sealed with Multi-layered cross-laminated Polyethylene sheet to AA51420.
- 9) For indoor panels/equipment, provide suitable packing batons with covering of Thermocole/ expanded soft polyethylene foam/polyethylene air bubble film wrapped with suitable cords, to avoid cutting of the polyethylene sheet so that finished surface is not damaged.
- 10) Empty space in the box shall be filled with adequate cushioning material e.g. Thermocole Chips, Wood Wool etc. to avoid movement for shocks. Alternatively put wooden blocks/batons wherever necessary.
- 11) The inner side of the top cover shall be lined with M.L.C. laminated polyethylene sheet of at least 90GSM, which shall project approximately 25 to 150mm depending upon the size of the case on all sides of the top cover shall be provided below the top cover. This projection, after nailing the top cover, shall be folded over, on the sides of the crates & tacked, to, prevent ingress of water from the top.
- 12) For specific applications requiring additional protection the packing cases are covered with GI sheet on outside for sides and top; inside for bottom as per specification AA10166, thickness of G.I. sheet shall be 0.25mm.
- 13) For specific applications requiring inspection, additional inspection window has to be provided for custom clearance for export jobs.

### 6 SEALED PACKING:

Components sub-assemblies and assemblies sensitive to climatic conditions shall be packed seal tight. All the openings of the sensitive components, sub-assemblies and assemblies shall be blanketed to prevent the ingress of dust and moisture.

The components sub-assemblies and assemblies are completely covered with 2 layers of M.L.C. laminated poly film. All sharp corners and edges are to be protected by rubber mats to prevent the polyethylene sheet from damage. Top surface of the case shall be free from dents to prevent rain water pockets.

Certain special precautions are required for seal tight packing of specific item have to be covered by product standard.

### 7 OTHER PACKING MATERIAL

#### 7.1 Volatile Corrosion Inhibitor (VCI) Paper as per AA51406:

- a) Un-protected surfaces of steel and cast iron components, tools bearing, shaft seals etc. are covered with VCI paper. VCI paper has been impregnated with corrosion inhibitors which by evaporation and chemical conversion protect metals in an enclosed area against corrosion.
- b) 7m<sup>3</sup> VCI paper is necessary for 1 m<sup>3</sup> of packed item approximately as per AA51406.

#### Application Limitation:

VCI paper shall not be used for components made of aluminium, aluminium alloys as well as Zinc, copper, brass, cadmium and silver. VCI powder is sprinkled inside the piping components ends shall be protected with end cover as specified in plant standards, drawings.

**7.2 Moisture Absorber:**

Silica gel is used for this purpose to protect the contents over sufficiently long time from corrosion. At the time of use, silica gel should be so dried that its colour becomes dark blue. These shall be filled in small cotton bags. Before sealing the equipment, the silica gel bags should be kept inside the polyethylene film cover at different locations. The quantity of silica gel depends on the dimension of the polyethylene sheet as well as transit and storage time.

**7.3 Sling Plate:**

Sling plate shall be provided to prevent damage to the packing box during lifting. Size of the sling plate shall be selected depending upon the net weight of the consignment.

**7.4 Packing Slip Holders:**

Two nos. of packing list with suitable protecting cover shall be fixed one inside and the other outside of the packing box as per specification AA7240901.

**7.5 Nails**

The length and diameter of the nails depends upon the size of planks

**7.6 Strapping Strips:**

These are used for strapping the boxes. Suitable size of box strapping strip can be used as per size and weight of consignment. The material shall be free from rust.

**7.7 Brackets:**

These brackets are used for nailing to the corners of cubicle boxes. The brackets shall be of "L" shape, suitable holes shall be provided towards the end of each side for screwing /nailing.

**7.8 Fasteners:**

Bolts, double nuts, spring washers of suitable size will have to be used for packing of some special items like transformers, reactors, breakers, etc., to hold the job to the bottom plank of the box.

**7.9 Polyethylene Sheet:**

The polyethylene sheets are used to make covers to the jobs individually. multi-layered cross laminated polyethylene sheet as per AA 51420 can be used for packing of jobs.

**7.10 Expanded Poly Foam Sheet and Air Bubble Film:**

This item is used for covering the delicate items, Expanded Polyethylene Foam Sheet as per specification AA51423 and air bubble film as per specification AA51426

**7.11 Thermocol (Expanded Polystyrene) Sheets:**

This is used for covering delicate items. This material shall be as per spec. no AA51416

**7.12 Cotton Bags:**

These are used for holding silica gel.

**7.13 Marking Ink:**

The ink used normally is black in color. In some special cases other color also will have to be used. The ink shall be non-fading/indelible and non-washable by water

**7.14 Polyethylene Bags:**

These are to be used for keeping the, Packing slips. The bag shall be of size 70 mm X 100 mm (minimum).

**7.15 Mechanical Latching Clamps:**

For specific items self locking clamps can also be used on need basis in conjunction with or apart from regular bolt and nut fixing arrangement, if needed.



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### 8 DESIGN OF PACKING BOXES

Design/drawing of packing boxes shall be prepared based on actual weight and size of the equipment and shall be covered by concern product standards.

### 9 GENERAL PRECAUTIONS:

- 1) While fixing nails during packing, necessary care shall be taken to ensure that materials used for protection inside the case e.g. paper, polyethylene sheet, coir etc. do not get damaged.
- 2) Sling protection brackets to be provided on cases wherever required.
- 3) It shall be ensured that all stencil marks external, front & rear sides of the casing shall be of water proof Material to prevent obliteration in transit.
- 4) For packing of small/delicate items - Item may be wrapped properly with M.L.C. laminated polyethylene and wrapped item may be further wrapped with air bubble film as per spec. AA51426, these curtains will be subsequently packed in wooden/ply boxes as at clause 7.
- 5) The various caution signs shall be marked with stencil on both sides of the packing box.
- 6) Instructions on handling, storage, preservation, representation and transport of export order components at works and site shall be covered by product standards.

### 10 MARKING

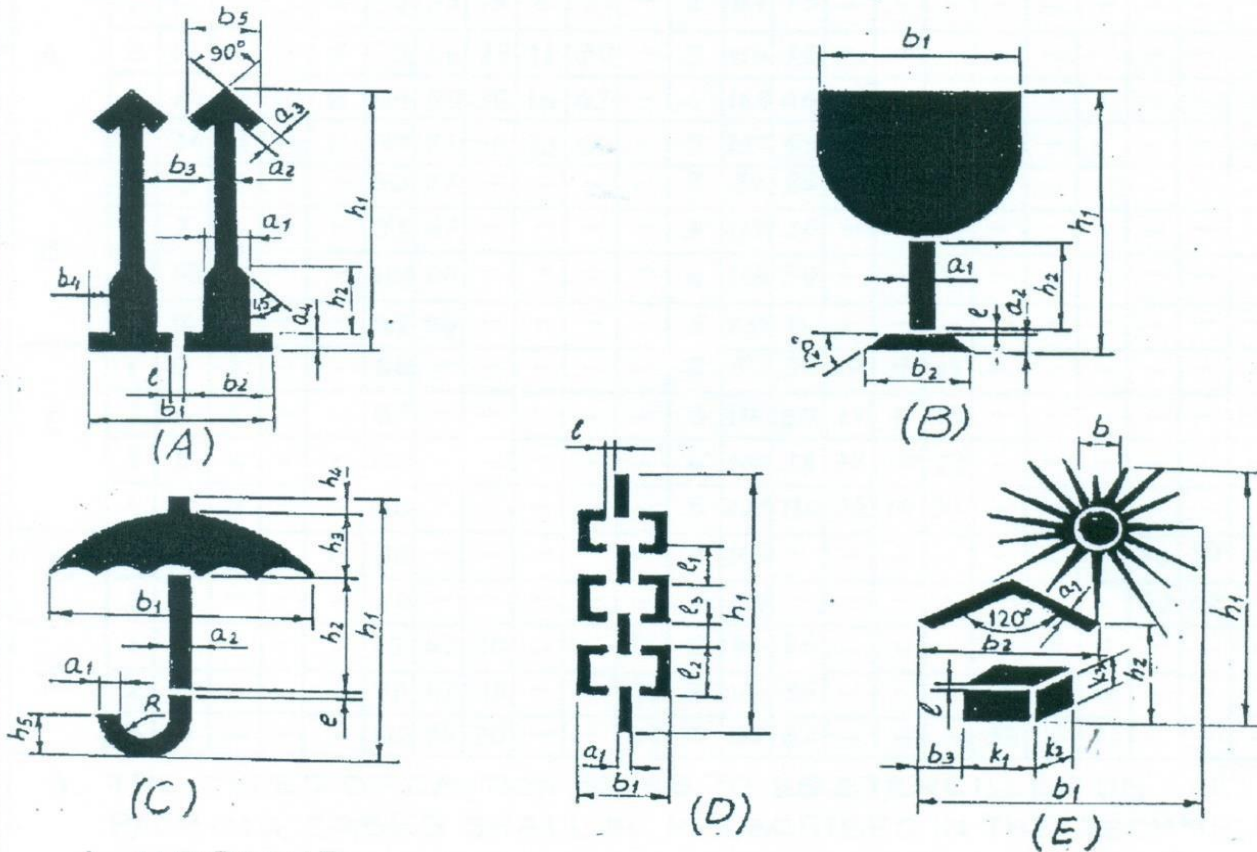
The following details are to be marked on the packing cases.

- a) Address of consignee.
- b) Purchase Order No.
- c) Description of item or title of packing list.
- d) Case identification Number.
- e) Net Weight.
- f) Gross Weight.
- g) Dimensions of box
- h) Marking showing upright position.
- i) Marking showing sling position.
- j) Marking showing umbrella (i.e. for machines/components to be stored under covered storage).



## MARKINGS ON PACKING CASES

1. THIS PLANT STANDARD PRESCRIBES THE VARIOUS CAUTION SIGNS AND OTHER MARKINGS ON PACKING CASES.
2. DIMENSIONS IN THE TABLE 1 SHALL BE USED FOR MAKING STENCILS ONLY.



- A. UPRIGHT
- B. FRAGILE
- C. PROTECTION FROM FALLING OR CONDENSING MOISTURE.
- D. SLINGING POSITION
- E. PROTECTION FROM DIRECT RADIATIONS.

CENTER OF GRAVITY



Figure 1 – Markings

DESIGN- ATION		DIMENSIONS IN mm.																							
		$\alpha_1$	$\alpha_2$	$\alpha_3$	$\alpha_4$	$b_1$	$b_2$	$b_3$	$b_4$	$b_5$	$b$	$l$	$h_1$	$h_2$	$h_3$	$h_4$	$h_5$	$K_1$	$K_2$	$K_3$	$l_1$	$l_2$	$l_3$	R	
A	1	12	5	5	4	52	25	19	8	21	-	2	84	23	-	-	-	-	-	-	-	-	-	-	
	2	17	7	7	6	75	36	29	11	30	-	3	119	33	-	-	-	-	-	-	-	-	-	-	
	3	24	10	10	8	104	50	38	16	42	-	4	168	46	-	-	-	-	-	-	-	-	-	-	
	4	34	14	14	11	147	71	59	23	60	-	5	239	65	-	-	-	-	-	-	-	-	-	-	
B	1	5	5	-	-	50	33	-	-	-	-	2	84	25	-	-	-	-	-	-	-	-	-	-	
	2	7	7	-	-	71	47	-	-	-	-	3	119	36	-	-	-	-	-	-	-	-	-	-	
	3	10	10	-	-	100	66	-	-	-	-	4	168	50	-	-	-	-	-	-	-	-	-	-	
	4	14	14	-	-	142	94	-	-	-	-	5	239	71	-	-	-	-	-	-	-	-	-	-	
C	1	4	3	-	-	66	-	-	-	-	-	2	80	39	19	5	11	-	-	-	-	-	-	6	
	2	6	4	-	-	85	-	-	-	-	-	3	114	55	27	7	16	-	-	-	-	-	-	9	
	3	8	6	-	-	120	-	-	-	-	-	4	160	78	38	10	22	-	-	-	-	-	-	12	
	4	11	9	-	-	170	-	-	-	-	-	5	227	110	54	14	31	-	-	-	-	-	-	17	
D	1	6	-	-	-	30	-	-	-	-	-	4	148	-	-	-	-	-	-	-	30	30	10	-	
	2	9	-	-	-	42	-	-	-	-	-	5	209	-	-	-	-	-	-	-	42	42	14	-	
E	1	3	-	-	-	69	47	10	-	-	16	2	91	26	-	-	-	17	8	11	-	-	-	-	
	2	4	-	-	-	98	67	15	-	-	23	3	128	33	-	-	-	24	11	16	-	-	-	-	
	3	6	-	-	-	138	94	20	-	-	32	4	182	62	-	-	-	34	16	22	-	-	-	-	

Black and Red Marking Ink to IS:1234 "Ink, Stencil, Oil Base, For Marking Porous Surfaces" or duplicating ink stencilling, oil base for marking porous surfaces.

All cases containing fragile items are to be stencilled with red marking and stencilling paint/ink

**"HANDLE WITH CARE", "FRAGILE DO NOT TURN OVER".**

Besides the caution signs the product information's shall be stencilled of letters with 13mm to 50mm height.

Incase of consignment consists of more than one package; each package shall carry its package no as given in shipping list. All caution signs shall be stencilled in higher quality full glossy out door finishing paint red in colour (AA56126). All other markings shall be carried out in black enamel (AA56126).

Caution signs & other markings shall be stencilled on both the end shooks & the side shooks. Caution sign (for slinging) shall be stencilled only on side shooks at the appropriate place.

Note: Incase the size of package is small for using the stencils, and then hand written letters/figures shall be allowed.

## 11 PROCEDURE FOR HANDLING OF COMPONENTS

The purpose of this procedure is to protect the quality of the components/equipment while handling in various stages of manufacturing packing & despatching.

- 1) Adequate care shall be taken in handling the material, and components to avoid damage during receipts, storage issue manufacture & despatch operations.
- 2) Appropriate material handling equipment like fork lifters, cranes etc. Shall be used where needed.
- 3) Lifting by crane and transportation by trolley of critical items and large components like rotors castings etc. Shall be done carefully.

- 4) For critical items, where specified, special handling fixtures shall be used for lifting.
- 5) Slings and shackles used for lifting the components/equipment shall be checked for fitness and suitability before use.
- 6) Slings used on machined surfaces shall be suitably padded. No slings shall be used on journal surfaces.
- 7) Precision machined components like blades, catches, rollers etc. Shall be lifted using suitable wooden pallets.

#### 8) **HANDLING OF COMPONENTS ON RECEIPT/DESPATCH:**

Before loading/unloading a packing case from the carrier look for the following shipping instructions painted on the packing case.

- The markings showing the upright position.
  - The markings showing the sling position
  - Markings showing the fragile contents.
  - Other required markings as per CI.No:10
- a) Appropriate cranes and slings should be used for different components/ cases. Slings should normally make an angle as minimum as possible (width wise) but in no case more than 15°.
  - b) Handling and lifting should be done without jerks or impacts.
  - c) Immediately after receipt of the goods, the packing should be examined all-round for any sign of damage. If necessary, lift the cover or a number of boards of the case so as to make the contents visible. In the event of sealed packing being used the plastic sheeting should not be damaged. It is imperative that the packing material is restored in original condition after the inspection.
  - d) On receipt of the equipment it should be checked with the shipping list and missing or damage if any should be reported immediately. It is important to arrange for immediate examination to determine the extent of the damage, the cause of the damage and where applicable the person or persons responsible for the damage. According to general practice when transporting by railway or by road vehicle the carrier concerned should be immediately called upon (within specified periods) for jointly establishing a statement of the damage. This is essential as a basis for a subsequent claim and possible damage report to the insurance company.
  - e) Protective coating applied on machined surfaces should not be disturbed. The plastic covering should be put back carefully so that it prevents ingress of dust and moisture. Some packing may have vapour phase inhibitor (VPI) paper enclosed inside the packing cases. This should be restored to its original place as far as possible.
  - f) Silica gel and such other chemicals kept in the box as desiccants and indicators should also be left in the box itself.

## 12 Treatment of Wood & Application and use of the mark

For seaworthy export packing, treatment of wood has to be carried out as below subject to BHEL Engg & QC approval.

As per customer requirement for export packing, wood to be treated as applicable should be done as per International Standards for Phytosanitary Measures ISPM: 15 to control the growth stages viz. egg to adult of structural insects (beetles, borers, bugs, fleas, flies, lice, moths, roaches, termites) and other pests (mice, rats, spiders) etc. in stored products.

The specified marks applied to wood packaging material treated in accordance with ISPM 15 must conform to the requirements described in Annex 2 of ISPM 15.

### 12.1 Heat treatment using a conventional steam or dry kiln heat chamber (treatment code for the mark: HT)

When using conventional heat chamber technology, the fundamental requirement is to achieve a minimum temperature of 56 °C for a minimum duration of 30 continuous minutes throughout the entire profile of the wood (including its core).





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This temperature can be measured by inserting temperature sensors in the core of the wood. Alternatively, when using kiln-drying heat chambers or other heat treatment chambers, treatment schedules may be developed based on a series of test treatments during which the core temperature of the wood at various locations inside the heat chamber has been measured and correlated with chamber air temperature, taking into account the moisture content of the wood and other substantial parameters (such as species and thickness of the wood, air flow rate and humidity). The test series must demonstrate that a minimum temperature of 56 °C is maintained for a minimum duration of 30 continuous minutes throughout the entire profile of the wood.

Treatment schedules should be specified or approved by the National Plant Protection Organisation (NPPO). Treatment providers should be approved by the NPPO.

### 12.2 Heat treatment using dielectric heating (treatment code for the mark: DH)

Where dielectric heating is used (e.g. microwave), wood packaging material composed of wood not exceeding 20 cm when measured across the smallest dimension of the piece or the stack must be heated to achieve a minimum temperature of 60 °C for 1 continuous minute throughout the entire profile of the wood (including its surface). The prescribed temperature must be reached within 30 minutes from the start of the treatment.

Treatment schedules should be specified or approved by the NPPO.

### 12.3 Methyl bromide treatment (treatment code for the mark: MB)

Wood packaging material containing a piece of wood exceeding 20 cm in cross-section at its smallest dimension must not be treated with methyl bromide.

The fumigation of wood packaging material with methyl bromide must be in accordance with a schedule specified or approved by the NPPO (National Plant Protection Organisation) that achieves the minimum concentration-time product (CT) over 24 hours at the temperature and final residual concentration specified in Table 1. This CT must be achieved throughout the profile of the wood, including its core, although the concentrations would be measured in the ambient atmosphere. The minimum temperature of the wood and its surrounding atmosphere must not be less than 10 °C and the minimum exposure time must not be less than 24 hours. Monitoring of gas concentrations must be carried out at a minimum at 2, 4 and 24 hours from the beginning of the treatment. In the case of longer exposure times and weaker concentrations, additional measurement of the gas concentrations should be recorded at the end of fumigation.

If the CT is not achieved over 24 hours, corrective action needs to be taken to ensure the CT is reached; for example, the treatment is restarted or the treatment time extended for a maximum of 2 hours without adding more methyl bromide to achieve the required CT (see the footnote to Table 2).

**Table 1 – Minimum CT over 24 hours for wood packaging material fumigated with methyl bromide**

Temperature (°C)	CT (g·h/m <sup>3</sup> ) over 24 h	Minimum final concentration (g/m <sup>3</sup> ) after 24 h#
21.0 or above	650	24
16.0 – 20.9	800	28
10.0 – 15.9	900	32

# In circumstances when the minimum final concentration is not achieved after 24 hours, a deviation in the concentration of ~5% is permitted provided additional treatment time is added to the end of the treatment to achieve the prescribed CT.

One example of a schedule that may be used for achieving the specified requirements is shown in Table 3.

**Table 2 – Example of a treatment schedule that achieves the minimum required CT for wood packaging material treated with methyl bromide (initial doses may need to be higher in conditions of high sorption or leakage)**

Temperature (°C)	Dosage (g/m <sup>3</sup> )	Minimum concentration (g/m <sup>3</sup> ) at:		
		2 h	4 h	24 h
21.0 or above	48	36	31	24
16.0 – 20.9	56	42	36	28
10.0 – 15.9	64	48	42	32

Treatment providers should be approved by the NPPO.

#### 12.4 Marking

The specified marks applied to wood packaging material treated in accordance with ISPM 15 must conform to the requirements described in ISPM 15.

### 13 PROVISION FOR INSPECTION:

This clause is applicable only where contractual requirement of customer is there. For other packings this is not applicable.

Each transportable packing's shall have provision for inspection by customer authority etc. during transport from origin of dispatched until destination. This inspection may require opening of the package and subsequently closing it again. For this purpose, suitable designed opening with bolted cover shall be provided. Such an opening shall be clearly marked as "OPENING" with clear instruction for opening & closing written on this cover. For large consignment, the size of the opening shall be suitable to facilitate entry of personnel.

### 14 REFERRED STANDARDS (Latest publications including amendments):

- |            |             |             |             |
|------------|-------------|-------------|-------------|
| 1) AA51401 | 2) IS:303   | 3) IS:710   | 4) AA10166  |
| 5) ISPM:15 | 6) AA51420  | 7) AA51423  | 8) 55619    |
| 9) AA51406 | 10) AA51416 | 11) AA51426 | 12) AA56126 |



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### SEAWORTHY PACKING (PACKING INSTRUCTIONS FOR GENERAL COMPONENTS / ASSEMBLIES / EQUIPMENT)

#### 1 GENERAL

This standard lays down packing instructions for seaworthy packing of Components /Assemblies/ Equipment to be dispatched against Customer's contracts, for which there are no special instructions issued by the Engineering Departments.

The Components/Assemblies need to be packed suitably to avoid physical damage & corrosion during transit for storage. For specific applications the concerned engineering department shall issue a product standard. Reference of this standard, must appear in the Shipping list/Packing List.

#### 2 SCOPE

This procedure gives minimum guidelines for seaworthy packing to be complied with for packing of Components /Assemblies / Equipment. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for periods more than one year.

#### 3 CROSS REFERRED SPECIFICATION

- |   |                |
|---|----------------|
| - Multi-layered cross laminated plastic film                                  | : AA51420      |
| - Packing Wood  | : AA51401      |
| - Silica gel  | : AA55619      |
| - Thermocole  | : AA51416      |
| - Packing slip holders  | : AA7240901    |
| - Corrugated Fibre Board  | : AA51414      |
| - Rubber sheet  | : AA59001      |
| - VCI paper   | : AA51406      |
| - High quality full glossy out door finishing paint                           | : AA56126      |
| - Polyethylene air bubble film  | : IS 12787     |
| - Structural steel - standard quality (plates, sections, strips flats & bars) | : AA10108      |
| - International Standards For Phytosanitary Measures No. 15                   | : ISPM-15:2009 |

#### 4 WOOD SPECIFICATION FOR PACKING

The wood shall conform to specification AA51401.

For export packing wood in addition to the above the following has to be met:

The standard requires the use of debarked wood in the construction of compliant wood packaging material. Debarked wood is defined in the ISPM 5.

#### 5 TYPE OF PACKING

The following 5 types of packings have been standardized for packing of General Components /Assemblies.

Revisions:			<b>APPROVED:</b> PROCEDURAL GUIDELINES COMMITTEE – PGC (Packing)		
Rev. No. 02	Amd. No.	Reaffirmed	Prepared	Issued	Dt. of 1 <sup>st</sup> Issue
Dt: 27-07-2018	Dt:	Year:	HPEP, Hyderabad	Corp. R&D	17-08-2013



- ‘OP’ - Open Type
- ‘PP’ - Partially Packed
- ‘CP’ - Crate Packing - Components/Equipment requiring physical protection
- ‘CQ’ - Case Packing - Small medium Components/ Assemblies/ Equipment which require corrosion & physical protection
- ‘CR’ - Case Packing - Electrical Components/Assemblies which require special packing viz. Water Proof, Shock Proof, etc.

## 6 DESCRIPTION OF TYPES OF PACKING

The various types of packing, as standardized above, are described below.

### 6.1 ‘OP’ - Open Type

In case, of components which are not affected by water & dust & do not require special protection &, are generally not machined, shall be sent as open packages. However these components may be sent in crates, wherever necessary.

### 6.2 ‘PP’ - Partially Packed

Components which need special protection, at selected portions only, shall be dispatched partially packed. Machined surfaces should not be allowed to come directly in contact with the wood. Such surfaces after application of TRP should be protected with Multi-layered cross laminated plastic film to AA51420.

### 6.3 ‘CP’ - Crate Packing – General

Assemblies/Components which need only physical protection from the point of view of handling shall be dispatched duly packed in crates.

### 6.4 ‘CQ’ - Case Packing - Machined Components/Assemblies/Equipment

- a) Small & Medium sized components/assemblies/equipment due to size/weight & to avoid handling, and pilferage, problems shall be packed in Case/Containers.
- b) Wherever required adequate quantity of silica gel to AA55619 or VCI Powder/ Tablets, packed in thin muslin cloth cotton bags shall be suitably placed.
- c) Small machines/components of less weight shall be provided with suitable cushioning. Wood Wool/Expanded Polyethylene Foam Sheet, if used, shall be sandwiched between polyethylene sheets and sealed.
- d) The components inside the case shall be entirely covered with Multi-layered cross laminated plastic film to AA51420, where-ever required.

### 6.5 ‘CR’ - Case Packing - Electrical & Electronic Components/Assemblies

Delicate components likely to be damaged e.g. Gauges, Instruments etc. are to be wrapped in waxed paper or polyethylene air bubble film and packed in cartons.

- a) Adequate quantity of Silica gel to AA55619 packed in cotton bags, of 100 grams each are to be suitably placed in the cartons. The cartons shall be entirely covered with Multi-layered cross laminated plastic film to AA51420, before being packed in the cases.
- b) VCI Powder/Tablets can be used as an alternative to Silica Gel to AA55619.
- c) Empty space in the cartons shall be filled with small chips of Expanded Polystyrene (Thermocole), Wood Wool etc. Polyethylene air bubble film shall conform to IS 12787/AA51420 Expanded polystyrene (Thermocole) shall conform to AA51416.
- d) The cartons shall be manufactured from corrugated Fibre Board, meeting requirements of AA51414.

### 6.6 Special Packing

Components requiring special packing (as per customer/contractual/ engineering requirements) not included in this specification shall be covered by product standards.



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### 7 PREPARATION OF PACKING CASE

- 1) Cases and crates with gross weight up to 1,000 kgs. shall be provided with bottom cleats of min. 40 mm thicknesses to ensure clearance for handling by forklift. Cases and crates exceeding gross weight of 1,000 kgs. shall be provided with skid runners, number and size according to weight of package.
- 2) The base of the case shall be made of wooden batons for planks giving necessary reinforcement, such that the bottom of the equipment is at a height of 100 to 200 mm from the ground level depending upon size & weight of equipment. However for packing cases of smaller size equipment can be at a height of 40 mm from the ground level.
- 3) In case of 'CR1 - Packing Viz. Electrical & Electronic components for instruments/assemblies, a rubber sheet, Self-expanded polyethylene foam sheet, preferably 10 mm thick, shall be fixed on to the base to act as cushioning to the equipment.
- 4) The four sides, shall be lined, from inside with multi-layered cross-laminated polyethylene sheet of 90GSM as per AA51420 and tacked at suitable places.  
  
Whenever specified the top cover will have a layer of multi-layered cross laminated polyethylene sheet of 90 GSM over the cover. This should project about 100 - 250mm on all sides.  
  
It is preferable to have a single piece of the above Multi-layered cross laminated polyethylene sheet fixed on the four sides. In case jointing is unavoidable, it should be done by overlapping of approximately 100mm.
- 5) Place the Components/cartons with corrosion inhibitors duly applied wherever necessary for place suitably, thin muslin cloths bags containing 100 grams (approx.) of activated Blue Silica Gel to AA55619, wherever necessary. Alternatively VCI Powder or Tablet may be used.
- 6) In case, depression is formed, at the top, after the equipment is lowered, provide ply board/wooden batons.
- 7) Cover the whole equipment with polyethylene sheet of at least 100 micron thickness, on all sides preferably by a single piece.
- 8) For indoor panels/equipment, provide suitable packing batons with covering of Thermocole/expanded soft polyethylene foam/polyethylene air bubble film wrapped with suitable cords, to avoid cutting of the polyethylene sheet so that finished surface is not damaged.
- 9) Empty space in the box shall be filled with adequate cushioning material e.g. Thermocole Chips, Wood Wool etc. to avoid movement for shocks. Alternatively put wooden blocks/batons wherever necessary.
- 10) The inner side of the top cover shall be lined with polyethylene sheet, of at least
- 11) 100 micron thickness, which shall project approximately 25 to 150 mm depending upon the size of the case on all sides of the top cover shall be provided below the top cover. This projection, after nailing the top cover, shall be folded over, on the sides of the crates & tacked, to, prevent ingress of water from the top.
- 12) For specific requirement of packing the cases are to be provided with Tongue and Groove joints.

### 8 STEEL CONTAINERS

Steel containers for packing can be used in case of repeated supplies of the same equipment. Empty steel containers are to be returned back from customer's end and to be reused for the next supplies.

The containers are to be made of structural steel as per AA10108 with proper reinforcement with I, C and T Sections.

#### Following precautions are to be taken during packing:

- Put the Components/Assemblies/Equipment in the steel container properly. Cover the Components/Assemblies/Equipment with polythene.
- To arrest the movement in the steel container necessary wooden Blocks/Batons may be put.
- Put cover on steel, container and Bolt Properly.



## 9 SEALED PACKING

Components sub-assemblies and assemblies sensitive to climatic conditions shall be packed seal tight. All the openings of the sensitive components, sub-assemblies and assemblies shall be blanketed to prevent the ingress of dust and moisture.

The components sub-assemblies and assemblies are completely covered with 2 layers of polyethylene sheet. All sharp corners and edges are to be protected by rubber mats to prevent the polyethylene sheet from damage. Top surface of the case shall be free from dents to prevent rain water pockets.

## 10 SLING PLATE

Sling plate shall be provided to prevent damage to the packing box during lifting. Size of the sling plate shall be selected depending upon the net weight of the consignment.

## 11 PACKING SLIP HOLDERS

Two nos. steel packing slip holders, specification no. AA7240901 containing the packing list, sealed in thick polyethylene film, shall be fixed one inside and the other outside the packing box.

## 12 Volatile Corrosion Inhibitor (VCI) Paper

- a) Un-protected surfaces of steel and cast iron components, tools bearing, shaft seals etc. are covered with VCI paper. VCI paper has been impregnated with corrosion inhibitors which by evaporation and chemical conversion protect metals in an enclosed area against corrosion.
- b) 7 m<sup>3</sup> VCI paper is necessary for 1 m<sup>3</sup> of packed item approximately as per AA51406.

### Application Limitation:

VCI paper shall not be used for components made of aluminium, aluminium alloys as well as Zinc, copper, brass, cadmium and silver.

VCI powder is sprinkled inside the piping components ends shall be protected with end cover as specified in plant standards, drawings.

## 13 Moisture Absorber

Silica gel is used for this purpose to protect the contents over sufficiently long time from corrosion. At the time of use, silica gel should be so dried that its colour becomes dark blue. These shall be filled in small cotton bags. Before sealing the equipment, the silica gel bags should be kept inside the polyethylene film cover at different locations. The quantity of silica gel should not be less than 1.0 kg per cubic metre volume of the packing box



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### 14 GENERAL PRECAUTIONS

- a) While fixing nails during packing, necessary care shall be taken to ensure that materials used for protection inside the case e.g. paper, polyethylene sheet, coir etc. do not get damaged.
- b) Sling protection brackets to be provided on cases wherever required.
- c) It shall be ensured that all stencil marks external, front & rear sides of the casing shall be of water proof Material to prevent obliteration in transit.
- d) The various caution signs shall be marked with stencil on both sides of the packing box.
- e) Do not pack any other Mechanical items with this case (do not use any other non-permitted packing materials).

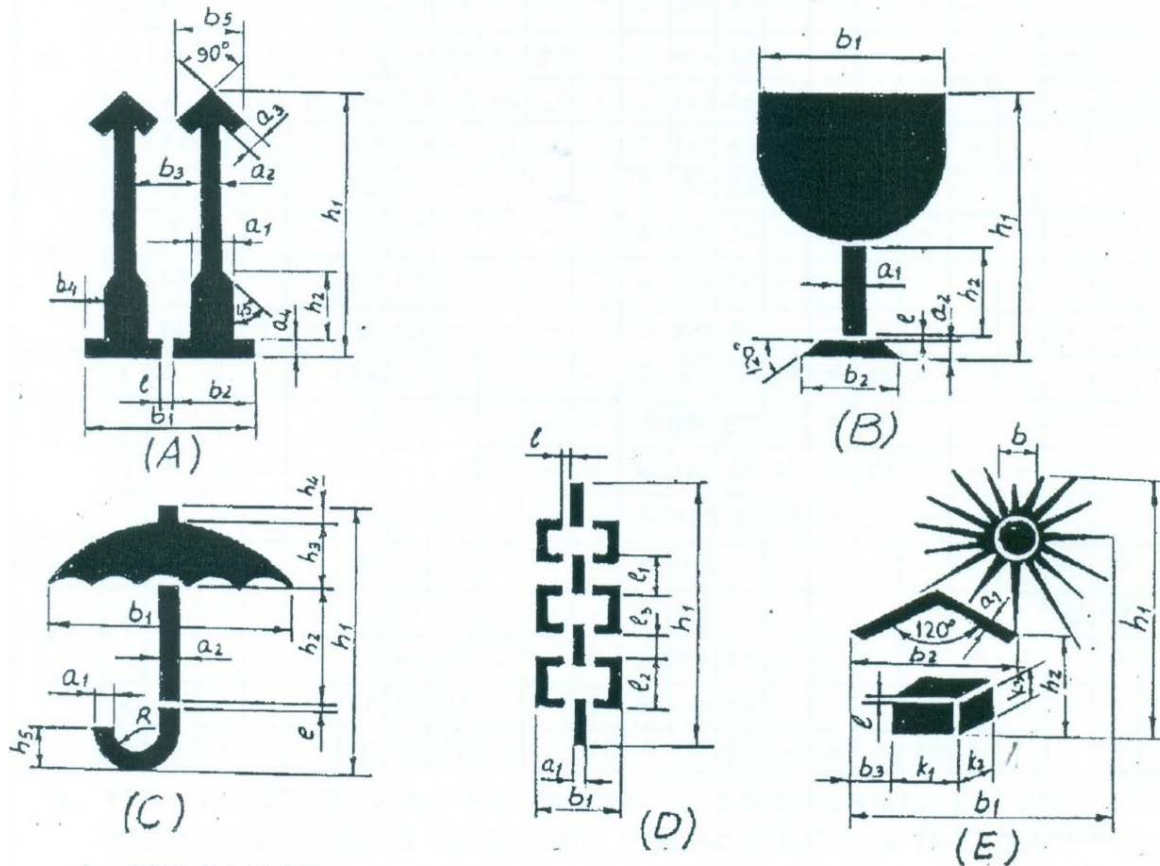
#### THE FOLLOWING DETAILS ARE TO BE MARKED ON THE PACKING CASES.

- a) Address of consignee.
- b) Purchase Order No./ SO No/WO No.
- c) Description of item or title of packing list.
- d) Case identification Number/ Packing List No.
- e) Net Weight.
- f) Gross Weight.
- g) Dimensions of box
- h) Marking showing upright position.
- i) Marking showing sling position.
- j) Marking showing umbrella (i.e. for machines/components to be stored under covered storage.
- k) Loading and unloading precautions



## MARKINGS ON PACKING CASE S

1. THIS PLANT STANDARD PRESCRIBES THE VARIOUS CAUTION SIGNS AND OTHER MARKINGS ON PACKING CASES.
2. DIMENSIONS IN THE TABLE 1 SHALL BE USED FOR MAKING STENCILS ONLY.



- A. UPRIGHT  
 B. FRAGILE  
 C. PROTECTION FROM FALLING OR CONDENSING MOISTURE.  
 D. SLINGING POSITION  
 E. PROTECTION FROM DIRECT RADIATIONS.

Figure 1



Figure 2



Table 1

DESIGN- ATION		DIMENSIONS IN mm.																							
		a <sub>1</sub>	a <sub>2</sub>	a <sub>3</sub>	a <sub>4</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	b <sub>5</sub>	b	ℓ	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub>	K <sub>1</sub>	K <sub>2</sub>	K <sub>3</sub>	ℓ <sub>1</sub>	ℓ <sub>2</sub>	ℓ <sub>3</sub>	R	
A	1	12	5	5	4	52	25	19	8	21	-	2	84	23	-	-	-	-	-	-	-	-	-	-	-
	2	17	7	7	6	75	36	29	11	30	-	3	119	33	-	-	-	-	-	-	-	-	-	-	-
	3	24	10	10	8	104	50	38	16	42	-	4	168	46	-	-	-	-	-	-	-	-	-	-	-
	4	34	14	14	11	147	71	59	23	60	-	5	239	65	-	-	-	-	-	-	-	-	-	-	-
B	1	5	5	-	-	50	33	-	-	-	-	2	84	25	-	-	-	-	-	-	-	-	-	-	-
	2	7	7	-	-	71	47	-	-	-	-	3	119	36	-	-	-	-	-	-	-	-	-	-	-
	3	10	10	-	-	100	66	-	-	-	-	4	168	50	-	-	-	-	-	-	-	-	-	-	-
	4	14	14	-	-	142	94	-	-	-	-	5	239	71	-	-	-	-	-	-	-	-	-	-	-
C	1	4	3	-	-	66	-	-	-	-	-	2	80	39	19	5	11	-	-	-	-	-	-	-	6
	2	6	4	-	-	85	-	-	-	-	-	3	114	55	27	7	16	-	-	-	-	-	-	-	9
	3	8	6	-	-	120	-	-	-	-	-	4	160	78	38	10	22	-	-	-	-	-	-	-	12
	4	11	9	-	-	170	-	-	-	-	-	5	227	110	54	14	31	-	-	-	-	-	-	-	17
D	1	6	-	-	-	30	-	-	-	-	-	4	148	-	-	-	-	-	-	-	30	30	10	-	-
	2	9	-	-	-	42	-	-	-	-	-	5	209	-	-	-	-	-	-	-	42	42	14	-	-
E	1	3	-	-	-	69	47	10	-	-	16	2	91	26	-	-	-	17	8	11	-	-	-	-	-
	2	4	-	-	-	98	67	15	-	-	23	3	128	33	-	-	-	24	11	16	-	-	-	-	-
	3	6	-	-	-	138	94	20	-	-	32	4	182	62	-	-	-	34	16	22	-	-	-	-	-

Black and Red Marking Ink to IS: 1234 "Ink, Stencil, Oil Base, For Marking Porous Surfaces" or duplicating ink stencilling, oil base for marking porous surfaces.

All cases containing fragile items are to be stencilled with red marking and stencilling paint/ink.

**"HANDLE WITH CARE", "FRAGILE DO NOT TURN OVER".**

Besides the caution signs the product information shall be stencilled of letters with 13mm to 50mm height.

In case of consignment consists of more than one package, each package shall carry its Package No. as given in shipping list. All caution signs shall be stencilled in higher quality full glossy out door finishing paint red in colour (AA56126). All other markings shall be carried out in black enamel (AA56126).

Caution signs & other markings shall be stencilled on both the end shooks & the side shooks. Caution sign (for slinging) shall be stencilled only on side shooks at the appropriate place.

Note: In case the size of package is small for using the stencils, then hand written letters/figures shall be allowed.



## 15 PROCEDURE FOR HANDLING OF COMPONENTS

The purpose of this procedure is to protect the quality of the components/equipment while handling in various stages of manufacturing packing & despatching.

- 15.1** Adequate care shall be taken in handling the material, and components to avoid damage during receipts, storage issue manufacture & despatch operations.
- 15.2** Appropriate material handling equipment like fork lifters, cranes etc. Shall be used where needed.
- 15.3** Lifting by crane and transportation by trolley of critical items and large components like rotors castings etc. Shall be done carefully.
- 15.4** For critical items, where specified, special handling fixtures shall be used for lifting.
- 15.5** Slings and shackles used for lifting the components/equipment shall be checked for fitness and suitability before use.
- 15.6** Slings used on machined surfaces shall be suitably padded. No slings shall be used on journal surfaces.
- 15.7** Precision machined components like blades, catches, rollers etc. Shall be lifted using suitable wooden pallets.

### 15.8 HANDLING OF COMPONENTS ON RECEIPT/DESPATCH:

Before loading/unloading a packing case from the carrier look for the following shipping instructions painted on the packing case.

- The markings showing the upright position.
- The markings showing the sling position
- Markings showing the fragile contents.
- Other required markings as per Clause No. 12

- 15.8.1** Appropriate cranes and slings should be used for different components/ cases. Slings should normally make an angle as minimum as possible (width wise) but in no case more than 15°.
- 15.8.2** Handling and lifting should be done without jerks or impacts.
- 15.8.3** Immediately after receipt of the goods, the packing should be examined all-round for any sign of damage. If necessary, lift the cover or a number of boards of the case so as to make the contents visible. In the event of sealed packing being used the plastic sheeting should not be damaged. It is imperative that the packing material is restored in original condition after the inspection.
- 15.8.4** On receipt of the equipment it should be checked with the shipping list and missing or damage if any should be reported immediately. It is important to arrange for immediate examination to determine the extent of the damage, the cause of the damage and where applicable the person or persons responsible for the damage. According to general practice when transporting by railway or by road vehicle the carrier concerned should be immediately called upon (within specified periods) for jointly establishing a statement of the damage. This is essential as a basis for a subsequent claim and possible damage report to the insurance company.
- 15.8.5** Protective coating applied on machined surfaces should not be disturbed. The plastic covering should be put back carefully so that it prevents ingress of dust and moisture. Some packing may have vapour phase inhibitor (VPI) paper enclosed inside the packing cases. This should be restored to its original place as far as possible.
- 15.8.6** Silica gel and such other chemicals kept in the box as desiccants and indicators should also be left in the box itself.

## 16 GI SHEET

The packing cases are covered with GI sheet on outside for sides and top; inside for bottom as per the Figure-3 (GI sheet covering is applicable for all closed type of wooden packing).



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### 17 Treatment of Wood & Application and use of the mark

For seaworthy export packing, treatment of wood has to be carried out as below subject to BHEL Engg & QC approval.

As per customer requirement for export packing, wood to be treated as applicable should be done as per International Standards for Phytosanitary Measures ISPM: 15 to control the growth stages viz. egg to adult of structural insects (beetles, borers, bugs, fleas, flies, lice, moths, roaches, termites) and other pests (mice, rats, spiders) etc. in stored products.

The specified marks applied to wood packaging material treated in accordance with ISPM 15 must conform to the requirements described in Annex 2 of ISPM 15.

#### 17.1 Heat treatment using a conventional steam or dry kiln heat chamber (treatment code for the mark: HT)

When using conventional heat chamber technology, the fundamental requirement is to achieve a minimum temperature of 56 °C for a minimum duration of 30 continuous minutes throughout the entire profile of the wood (including its core).

This temperature can be measured by inserting temperature sensors in the core of the wood. Alternatively, when using kiln-drying heat chambers or other heat treatment chambers, treatment schedules may be developed based on a series of test treatments during which the core temperature of the wood at various locations inside the heat chamber has been measured and correlated with chamber air temperature, taking into account the moisture content of the wood and other substantial parameters (such as species and thickness of the wood, air flow rate and humidity). The test series must demonstrate that a minimum temperature of 56 °C is maintained for a minimum duration of 30 continuous minutes throughout the entire profile of the wood.

Treatment schedules should be specified or approved by the National Plant Protection Organisation (NPPO). Treatment providers should be approved by the NPPO.

#### 17.2 Heat treatment using dielectric heating (treatment code for the mark: DH)

Where dielectric heating is used (e.g. microwave), wood packaging material composed of wood not exceeding 20 cm when measured across the smallest dimension of the piece or the stack must be heated to achieve a minimum temperature of 60 °C for 1 continuous minute throughout the entire profile of the wood (including its surface). The prescribed temperature must be reached within 30 minutes from the start of the treatment.

Treatment schedules should be specified or approved by the NPPO.

#### 17.3 Methyl bromide treatment (treatment code for the mark: MB)

Wood packaging material containing a piece of wood exceeding 20 cm in cross-section at its smallest dimension must not be treated with methyl bromide.

The fumigation of wood packaging material with methyl bromide must be in accordance with a schedule specified or approved by the NPPO (National Plant Protection Organisation) that achieves the minimum concentration-time product (CT) over 24 hours at the temperature and final residual concentration specified in Table 1. This CT must be achieved throughout the profile of the wood, including its core, although the concentrations would be measured in the ambient atmosphere. The minimum temperature of the wood and its surrounding atmosphere must not be less than 10 °C and the minimum exposure time must not be less than 24 hours. Monitoring of gas concentrations must be carried out at a minimum at 2, 4 and 24 hours from the beginning of the treatment. In the case of longer exposure times and weaker concentrations, additional measurement of the gas concentrations should be recorded at the end of fumigation.

If the CT is not achieved over 24 hours, corrective action needs to be taken to ensure the CT is reached; for example, the treatment is restarted or the treatment time extended for a maximum of 2 hours without adding more methyl bromide to achieve the required CT (see the footnote to Table 2).

**CORPORATE STANDARD****Table 2 – Minimum CT over 24 hours for wood packaging material fumigated with methyl bromide**

Temperature (°C)	CT (g·h/m <sup>3</sup> ) over 24 h	Minimum final concentration (g/m <sup>3</sup> ) after 24 h#
21.0 or above	650	24
16.0 – 20.9	800	28
10.0 – 15.9	900	32

# In circumstances when the minimum final concentration is not achieved after 24 hours, a deviation in the concentration of ~5% is permitted provided additional treatment time is added to the end of the treatment to achieve the prescribed CT.

One example of a schedule that may be used for achieving the specified requirements is shown in Table 3.

**Table 3 – Example of a treatment schedule that achieves the minimum required CT for wood packaging material treated with methyl bromide (initial doses may need to be higher in conditions of high sorption or leakage)**

Temperature (°C)	Dosage (g/m <sup>3</sup> )	Minimum concentration (g/m <sup>3</sup> ) at:		
		2 h	4 h	24 h
21.0 or above	48	36	31	24
16.0 – 20.9	56	42	36	28
10.0 – 15.9	64	48	42	32

Treatment providers should be approved by the NPPO.

**17.4 Marking**

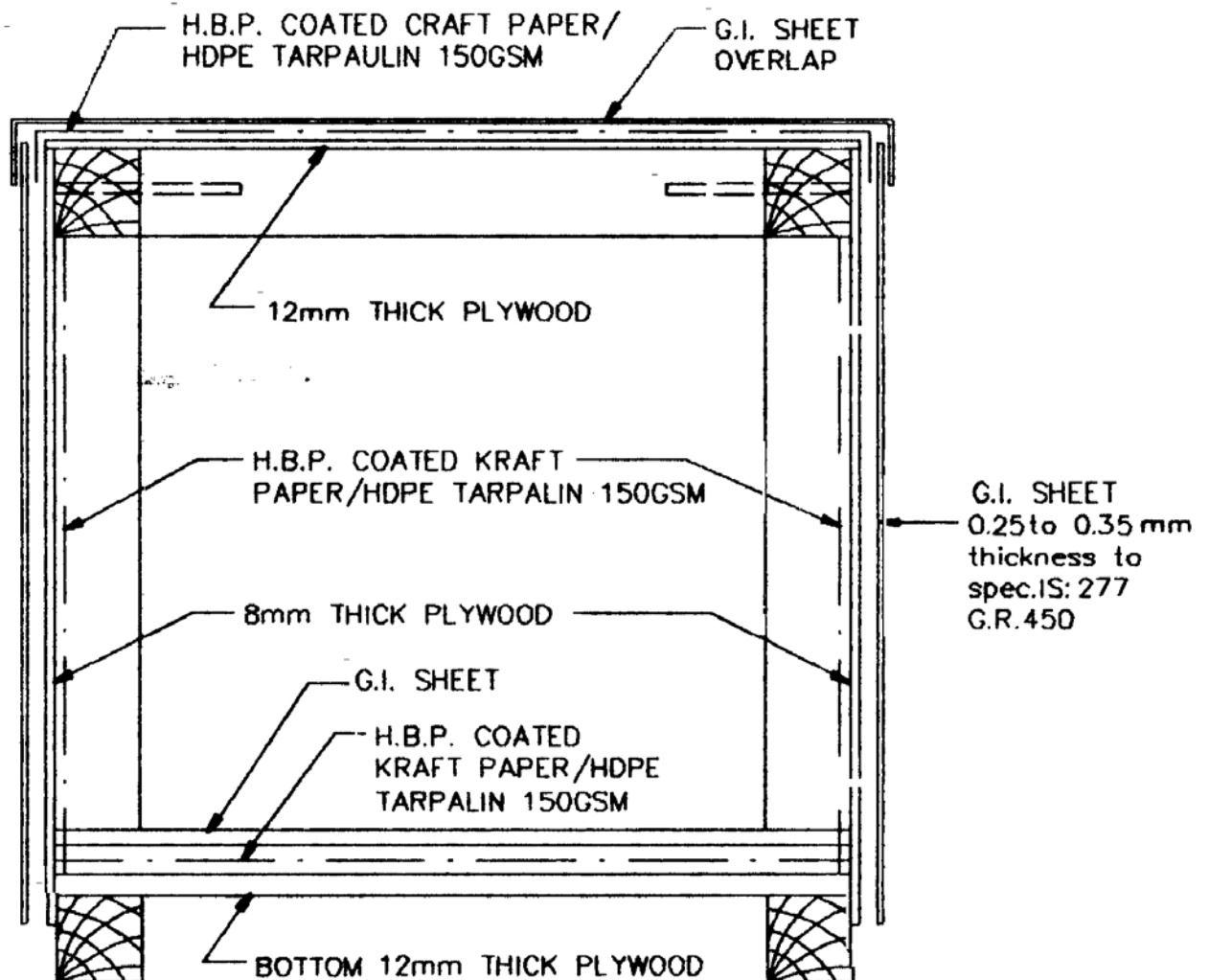
The specified marks applied to wood packaging material treated in accordance with ISPM 15 must conform to the requirements described in ISPM 15.

**18 PROVISION FOR INSPECTION**

This clause is applicable only where contractual requirement of customer is there. For other packings this is not applicable.

Each transportable packing's shall have provision for inspection by customer authority etc. during transport from origin of dispatched till destination. This inspection may require opening of the package and subsequently closing it again. For this purpose suitable designed opening with bolted cover shall be provided. Such an opening shall be clearly marked as "OPENING" with clear instruction for opening & closing written on this cover. For large consignment the size of the opening shall be suitable to facilitate entry of personnel.





CLOSED PACKING CASE WITH  
G.I.SHEET SHOWING LAYERS  
OF PACKING MATERIALS

Figure 3

### Annex III

#### **Model Clause /Certificate to be inserted in tenders etc.**

*(While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.)*

#### Model Clauses for Tenders

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
  - a. An entity incorporated, established or registered in such a country; or
  - b. A subsidiary of an entity incorporated, established or registered in such a country; or
  - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - d. An entity whose *beneficial owner* is situated in such a country; or
  - e. An Indian (or other) agent of such an entity; or
  - f. A natural person who is a citizen of such a country; or
  - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The *beneficial owner* for the purpose of (iii) above will be as under:
  1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation—

    - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

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- b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
  3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
  4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
  5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. *[To be inserted in tenders for Works contracts, including Turnkey contracts]* The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders (for transitional cases as stated in para 3 of this Order)

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."*

Model Certificate for Tenders

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the*

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*Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

Model Certificate for Tenders for Works involving possibility of sub-contracting

*“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

Model Certificate for GeM:

*“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

12/12

\*\*\*\*\*



F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

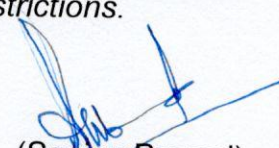
161, North Block,  
New Delhi  
23rd July, 2020

**Office Memorandum**

**Subject: Insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017**

Rule 144 of the General Financial Rules 2017 entitled 'Fundamental principles of public buying', has been amended by inserting sub-rule (xi) as under:

*Notwithstanding anything contained in these Rules, Department of Expenditure may, by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.*

  
(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To,

- (1) Secretaries of All Ministries/ Departments of Government of India
- (2) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi



F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

161, North Block,  
New Delhi  
23rd July, 2020

**Order (Public Procurement No. 1)**

**Subject: Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017**

Attention is invited to this office OM no. 6/18/2019-PPD dated 23<sup>rd</sup> July 2020 inserting Rule 144 (xi) in GFRs 2017. In this regard, the following is hereby ordered under Rule 144 (xi) on the grounds stated therein:

**Requirement of registration**

1. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annex I**.
2. This Order shall not apply to (i) cases where orders have been placed or contract has been concluded or letter/notice of award/ acceptance (LoA) has been issued on or before the date of this order; and (ii) cases falling under **Annex II**.

**Transitional cases**

3. Tenders where no contract has been concluded or no LoA has been issued so far shall be handled in the following manner: -
  - a) *In tenders which are yet to be opened, or where evaluation of technical bid or the first exclusionary qualificatory stage (i.e. the first stage at which the qualifications of tenderers are evaluated and unqualified bidders are excluded) has not been completed:* No contracts shall be placed on bidders from such countries. Tenders received from bidders from such countries shall be dealt with as if they are non-compliant with the tender conditions and the tender shall be processed accordingly.
  - b) *If the tendering process has crossed the first exclusionary qualificatory stage:* If the qualified bidders include bidders from such countries, the



entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.

- c) As far as practicable, and in cases of doubt about whether a bidder falls under paragraph 1, a certificate shall be obtained from the bidder whose bid is proposed to be considered or accepted, in terms of paras 8, 9 and 10 read with para 1 of this Order.

#### Incorporation in tender conditions

- 4. In tenders to be issued after the date of this order, the provisions of paragraph 1 and of other relevant provisions of this Order shall be incorporated in the tender conditions.

#### Applicability

- 5. Apart from Ministries / Departments, attached and subordinate bodies, notwithstanding anything contained in Rule 1 of the GFRs 2017, this Order shall also be applicable
  - a. to all Autonomous Bodies;
  - b. to public sector banks and public sector financial institutions; and
  - c. subject to any orders of the Department of Public Enterprises, to all Central Public Sector Enterprises; and
  - d. to procurement in Public Private Partnership projects receiving financial support from the Government or public sector enterprises/ undertakings.
  - e. Union Territories, National Capital Territory of Delhi and all agencies/ undertakings thereof

#### Definitions

- 6. "Bidder" for the purpose of this Order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
- 7. "Tender" for the purpose of this Order will include other forms of procurement, except where the context requires otherwise.
- 8. "Bidder from a country which shares a land border with India" for the purpose of this Order means



- a) An entity incorporated, established or registered in such a country; or
- b) A subsidiary of an entity incorporated, established or registered in such a country; or
- c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d) An entity whose *beneficial owner* is situated in such a country; or
- e) An Indian (or other) agent of such an entity; or
- f) A natural person who is a citizen of such a country; or
- g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

9. "Beneficial owner" for the purpose of paragraph 8 above will be as under:

- (i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- a. "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
- b. "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

- (ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

- (iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

- (iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

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(v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

10. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons.

#### Sub-contracting in works contracts

11. In works contracts, including turnkey contracts, contractors shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 8 above. This shall not apply to sub-contracts already awarded on or before the date of this Order.

#### Certificate regarding compliance

12. A certificate shall be taken from bidders in the tender documents regarding their compliance with this Order. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

#### Validity of registration

13. In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

#### Government E-Marketplace

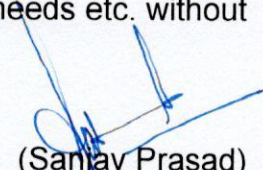
14. The Government E-Marketplace shall, as soon as possible, require all vendors/ bidders registered with GeM to give a certificate regarding compliance with this Order, and after the date fixed by it, shall remove non-compliant entities from GeM unless/ until they are registered in accordance with this Order.

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Model Clauses/ Certificates

15. Model Clauses and Model Certificates which may be inserted in tenders / obtained from Bidders are enclosed as **Annex III**. While adhering to the substance of the Order, procuring entities are free to appropriately modify the wording of these clauses based on their past experience, local needs etc. without making any reference to this Department.

  
(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To

- (1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.
- (2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.
- (3) Secretary DPIIT with a request to initiate action as provided under Annex I
- (4) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

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## Annex I: Competent Authority and Procedure for Registration

- A. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)\*.
- B. The Registration Committee shall have the following members\*:
- i. An officer, not below the rank of Joint Secretary, designated for this purpose by DPIIT, who shall be the Chairman;
  - ii. Officers (ordinarily not below the rank of Joint Secretary) representing the Ministry of Home Affairs, Ministry of External Affairs, and of those Departments whose sectors are covered by applications under consideration;
  - iii. Any other officer whose presence is deemed necessary by the Chairman of the Committee.
- C. DPIIT shall lay down the method of application, format etc. for such bidders as stated in para 1 of this Order.
- D. On receipt of an application seeking registration from a bidder from a country covered by para 1 of this Order, the Competent Authority shall first seek political and security clearances from the Ministry of External Affairs and Ministry of Home Affairs, as per guidelines issued from time to time. Registration shall not be given unless political and security clearance have both been received.
- E. The Ministry of External Affairs and Ministry of Home Affairs may issue guidelines for internal use regarding the procedure for scrutiny of such applications by them.
- F. The decision of the Competent Authority, to register such bidder may be for all kinds of tenders or for a specified type(s) of goods or services, and may be for a specified or unspecified duration of time, as deemed fit. The decision of the Competent Authority shall be final.
- G. Registration shall not be granted unless the representatives of the Ministries of Home Affairs and External Affairs on the Committee concur\*.
- H. Registration granted by the Competent Authority of the Government of India shall be valid not only for procurement by Central Government and its agencies/ public enterprises etc. but **also for procurement by State Governments and their agencies/ public enterprises etc. No fresh registration at the State level shall be required.**

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- I. The Competent Authority is empowered to cancel the registration already granted if it determines that there is sufficient cause. Such cancellation by itself, however, will not affect the execution of contracts already awarded. Pending cancellation, it may also suspend the registration of a bidder, and the bidder shall not be eligible to bid in any further tenders during the period of suspension.
- J. For national security reasons, the Competent Authority shall not be required to give reasons for rejection / cancellation of registration of a bidder.
- K. In transitional cases falling under para 3 of this Order, where it is felt that it will not be practicable to exclude bidders from a country which shares a land border with India, a reference seeking permission to consider such bidders shall be made by the procuring entity to the Competent Authority, giving full information and detailed reasons. The Competent Authority shall decide whether such bidders may be considered, and if so shall follow the procedure laid down in the above paras.
- L. Periodic reports on the acceptance/ refusal of registration during the preceding period may be required to be sent to the Cabinet Secretariat. Details will be issued separately in due course by DPIIT.

[\*Note:

- i. In respect of application of this Order to procurement by/ under State Governments, all functions assigned to DPIIT shall be carried out by the State Government concerned through a specific department or authority designated by it. The composition of the Registration Committee shall be as decided by the State Government and paragraph G above shall not apply. However, the requirement of **political and security clearance as per para D shall remain and no registration shall be granted without such clearance.**
- ii. Registration granted by State Governments shall be valid only for procurement by the State Government and its agencies/ public enterprises etc. and shall not be valid for procurement in other states or by the Government of India and their agencies/ public enterprises etc.]

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## Annex II: Special Cases

- A. Till 31<sup>st</sup> December 2020, procurement of medical supplies directly related to containment of the Covid-19 pandemic shall be exempt from the provisions of this Order.
- B. *Bona fide* procurements made through GeM without knowing the country of the bidder till the date fixed by GeM for this purpose, shall not be invalidated by this Order.
- C. *Bona fide* small procurements, made without knowing the country of the bidder, shall not be invalidated by this Order.
- D. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this Order and without reference to the Competent Authority. Exceptions to this shall be decided in consultation with DEA.
- E. This Order shall not apply to procurement by Indian missions and by offices of government agencies/ undertakings located outside India.

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### **Annex III**

#### **Model Clause /Certificate to be inserted in tenders etc.**

*(While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.)*

#### **Model Clauses for Tenders**

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
  - a. An entity incorporated, established or registered in such a country; or
  - b. A subsidiary of an entity incorporated, established or registered in such a country; or
  - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - d. An entity whose *beneficial owner* is situated in such a country; or
  - e. An Indian (or other) agent of such an entity; or
  - f. A natural person who is a citizen of such a country; or
  - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The *beneficial owner* for the purpose of (iii) above will be as under:
  1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation—

    - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

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- b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
  3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
  4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
  5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. *[To be inserted in tenders for Works contracts, including Turnkey contracts]* The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders (for transitional cases as stated in para 3 of this Order)

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."*

Model Certificate for Tenders

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the*

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*Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

Model Certificate for Tenders for Works involving possibility of sub-contracting

*“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

Model Certificate for GeM:

*“I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]”*

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**No.11/05/2018-Coord.  
Government of India  
Ministry of Power**

**Shram Shakti Bhawan, New Delhi  
Dated the 28<sup>th</sup> July, 2020**

**ORDER**

**Sub: Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of Power Sector.**

**Ref: Department for Promotion of Industry and Internal Trade (DPIIT) Notification No.P-45021/2/2017-PP (BE-II) dated 4<sup>th</sup> June, 2020.**

The Government of India, Department for Promotion of Industry and Internal Trade (DPIIT) issued Public Procurement (Preference to Make in India), Order 2017 for encouraging 'Make in India' and promoting manufacturing and production of goods and services in India with a view to enhancing income and employment. Further, DPIIT vide order No.P-45021/2/2017-PP (BE-II) dated 4<sup>th</sup> June, 2020, have issued the revised Public Procurement (Preference to Make in India) Order 2017.

2. In the light of the Public Procurement (Preference to Make in India) Order 2017, this Ministry had notified purchase preference (linked with local content) for Hydro and Transmission sector vide Order No.11/05/2018-Coord. dated 20.12.2018, for Thermal sector vide Order dated 28.12.2018 and for Distribution sector vide Order dated 17.03.2020. Further, a combined order dated 04.04.2020 was also issued.

3. In furtherance of Para 19 of the DPIIT Notification No.P-45021/2/2017-PP(BE-II) dated 04.06.2020 and in supersession of all the aforementioned orders issued by this Ministry, the following has been decided:

- i. For the purpose of this order, the definitions of various terms used in the order, and provisions relating to (i) Eligibility of 'Class-I local supplier'/'Class-II local supplier'/'Non-local suppliers' for different types of procurement, (ii) purchase preference, (iii) exemption to small purchases, and (iv) margin of purchase preference, shall be the same as in DPIIT order dated 04.06.2020, referred to above and extracts of the same given at **Appendix**.
- ii. In procurement of all goods and services or works in respect of which there is sufficient local capacity and local competition as in **Annexure-I**, only "Class-I local supplier", shall be eligible to bid irrespective of purchase value.
- iii. In procurement of all goods, services or works not covered by sub-para 3(ii) above, and with estimated value of purchases less than Rs.200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global Tender Enquiry (GTE) shall not be issued except with the approval of the competent authority as designated by Department of Expenditure. Only 'Class-I local supplier' and 'Class-II local supplier' shall be eligible to bid in procurement undertaken by procuring entities, except when Global Tender Enquiry has been issued. In Global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'.
- iv. For the purpose of this order, 'Works' means all works as per Rule 130 of GFR-2017, and will also include 'turnkey works', Engineering, Procurement and Construction (EPC) contracts and service contracts including System Integrator (SI) contracts. This order shall be applicable to Tariff Based Competitive Bidding (TBCB) projects also.

4. The list of items, in respect of which, local capacity with sufficient competition exists as per **Annexure-I**, will be reviewed at regular intervals with a view to increase number of items in this list.

5. Purchase preference shall be given to local suppliers in accordance with **para 3A** of DPIIT Order dated 04.06.2020, and extracts of the same given at **Appendix**.

6. Further, it has been decided to constitute a committee for independent verification of self-declarations and auditor's / accountant's certificates on random basis and in the case of complaints. The composition of the committee is given below:

Chairperson	Member (Planning), CEA
Member	Chief Engineer (PSETD), CEA
Member	Chief Engineer (HETD), CEA
Member	Chief Engineer (TETD), CEA
Member	Chief Engineer (DP&R), CEA
External Expert	As may be co-opted by CEA
Convener	Chief Engineer (R&D), CEA

7. Further, it has also been decided to constitute a committee to examine the grievances in consultation with stakeholders and recommend appropriate actions to the Competent Authority in MOP. The composition of the Committee is given below:

Chairperson	Chairperson, CEA
Member	Member (Hydro), CEA
Member	Member (Power System), CEA
Convener	Member (Thermal), CEA

8. The complaint fee of Rs.2 Lakh or 1% of the value of the local item being procured (subject to maximum of Rs.5 Lakh), whichever is higher, shall be paid in the form of online transaction or Demand Draft, drawn in favour of DDO, CEA. In case the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.

9. All other conditions, not stipulated in this order, shall be as laid down in the DPIIT's order No.P-45021/2/2017-PP (BE-II) dated 04.06.2020.

10. This order shall be applicable in respect of the procurements made by all attached or subordinate offices or autonomous body under the Ministry of Power, Government of India including Government Companies as defined in the Companies Act, and /or the States and Local Bodies making procurement under all Central Schemes/ Central Sector Schemes where the Scheme is fully or partially funded by Government of India. The aforesaid orders shall also be applicable in respect of funding of capital equipment by PFC/ REC.

11. Procuring entities as defined in the DPIIT's Order dated 04.06.2020 are advised to revise their tender documents fully complying with the said DPIIT's Order and the subsequent Orders that would be issued in this regard by DPIIT/this Ministry from time to time.

12. All tenders for procurement by Central Government Agencies have to be certified for compliance of the PPP-MII Order by the concerned procurement officer of the Government Organization before uploading in the portal.

13. In pursuance of the provision of para 13 of the DPIIT Order, 2020, equipment used in the power sector which are manufactured under license from foreign manufacturers holding intellectual property rights and where there is a transfer of technology agreement are listed as under **Annexure-II**. However, Annexure-II will undergo regular review to check for those items in the list for which sufficient local manufacturing capacity and competition have got developed and which meet minimum local content of 50% now, so that these items become eligible for inclusion in Annexure-I of this order and the provisions as contained in para 3 above of this order start becoming applicable in respect of these items too.

14. In order to further encourage Make in India initiative and promote manufacturing and production of goods and services in India, general guidelines as enclosed at **Annexure-III** may be adopted in an appropriate manner according to the circumstances by the procuring entities in their tendering process.

15. This issues with the approval of Hon'ble MoS (IC) for Power and NRE.



(R.K. Das)

Under Secretary to the Government of India  
Tel. No.011-23752495

To:

1. All Ministries/ Departments of Government of India (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. PS to PM, Prime Minister's Office
4. Vice Chairman, NITI Aayog
5. Chief Secretaries of all States/UTs
6. Director General, Comptroller and Auditor General of India
7. Secretary, DPIIT, Chairman of Standing Committee for implementation of Public Procurement Order, 2017
8. Joint Secretary, DPIIT, Member-Convener of Standing Committee for implementation of Public Procurement Order, 2017
9. Chairperson, CEA
10. CMDs of CPSEs/ Chairmen of DVC & BBMB/ MD of EESL
11. All JSs/ EA, MoP



**Extracts of important provisions contained in DPIIT Order No.P-45021/2/2017-PP (BE-II) dated 4<sup>th</sup> June, 2020**

**1. Definitions:**

**'Local content'** means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

**'Class-I local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under said Order.

**'Class-II local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Order.

**'Non-Local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this Order.

**'L 1'** means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

**'Margin of purchase preference'** means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L 1 for the purpose of purchase preference.

**'Procuring entity'** means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

**'Works'** means all works as per Rule 130 of GFR- 2017, and will also include *turnkey works* '.

**2. Eligibility of 'Class-I local supplier'/ 'Class-II local supplier'/ 'Non-local suppliers' for different types of procurement**

- (a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.
- (b) In procurement of all goods, services or works, not covered by 2(a) above, and with estimated value of purchases less than Rs.200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global Tender Enquiry shall not be issued except with the approval of competent authority as designated by Department of Expenditure. Only 'Class-I local supplier' and 'Class-II local supplier', as defined under the Order, shall be eligible to bid in procurements undertaken by procuring entities, except when Global Tender Enquiry has been issued. In Global Tender Enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'.
- (c) For the purpose of this Order, works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.



### 3. Purchase Preference

- (a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.
- (b) In the procurements of goods or works, which are covered by para 2(b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
  - i. Among all qualified bids, the lowest bid will be termed as L 1. If L 1 is 'Class-I local supplier', the contract for full quantity will be awarded to L 1.
  - ii. If L 1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L 1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L 1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L 1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L 1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L 1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L 1 bidder.
- (c) In the procurements of goods or works, which are covered by para 2(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
  - i. Among all qualified bids, the lowest bid will be termed as L 1. If L 1 is 'Class-I local supplier', the contract will be awarded to L 1.
  - ii. If L 1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L 1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L 1 price.
  - iii. In case such lowest eligible 'Class-I local supplier' fails to match the L 1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L 1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L 1 price, the contract may be awarded to the L 1 bidder.
- (d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

### 4. Exemption of small purchases: Procurements where the estimated value to be procured is less than Rs.5 Lakh shall be exempt from this Order. However, it shall be ensured by procuring entities that **procurement is not split for the purpose of avoiding the provisions of this Order.**

### 5. Margin of Purchase Preference: The margin of purchase preference shall be 20%.



ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್  
भारत हेवी इलेक्ट्रिकल्स लिमिटेड

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

Solar Business Division

Prof C N Rao circle, Opp IISC, Malleshwaram, Bangalore ,  
560012 INDIA

Doc No: SCPV: PV Module: 002- Rev 02

### **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~~ Solar Business Division, Prof C N Rao Circle, Opp IISC, Malleshwaram, Bangalore, 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, can be rejected at discretion of BHEL.

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 will go for reverse auction and will 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.
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-SBD-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 SBD 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, labor, 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 noticed 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 & Conciliation Clause:**

- a) In case of contractors/vendors /consultants other than Public Sector Enterprise (PSE) or a Government Department: The parties shall attempt to settle any disputes or difference arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, or in connection with this contract through friendly discussions. In case no amicable settlement can be reached between the parties through such discussions, in respect of any dispute; then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL –EDN/SBD. Such Sole Arbitrator appointed, shall conduct the arbitration in English language.

The Arbitrator shall pass a reasoned award and the award of the Arbitration shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Bangalore. The cost of arbitration shall be borne as decided by the Arbitrator upon him entering the reference.

Subject to the Arbitration Clause as above, the Courts at Bangalore alone shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the parties shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and efficiency in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

- b) in case of Contract with contractors/vendors /consultants when they are a Public Sector Enterprise (PSE) or a Government Department: In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either party for Arbitration to the Sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any Party aggrieved by such Award may make further reference for setting aside or revision of the Award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so

authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.”

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.
33. **BHEL 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 your notice.



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Doc No: SCPV: PV Module: 001- Rev 02

**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 02), General Conditions of Contract (document reference: SCPV: PV Module: 002 - Rev 02) 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. Any bidders, against whom, action due to non-performance has been initiated by BHEL are not eligible for participating in the tender. Such offers will not be considered.
11. 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, can be rejected at discretion of BHEL.

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: ABC Procure

Website address: <https://bhel.abcprocure.com/EPROC/>

**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~~ SBD 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.
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, can be rejected at discretion of BHEL.
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~~ SBD 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, Surcharge/ Cess, 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.

The evaluation currency for this tender shall be INR.

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

#### **E. INFORMATION ON PAYMENT TERMS:**

1. 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)
2. 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.
3. 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.
4. 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-SBD**

##### **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 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.	Penalty for Delayed Delivery	1) Non – Acceptance	10 %
		2) Partial Acceptance ( X% )	(10 – X) %

**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 certificate or Bank guarantee.

**I. BANK GUARANTEE (BG) / PERFORMANCE BANK GUARANTEE (PBG):**

Bank guarantee (BG) / Performance bank guarantee (PBG) will be applicable as called in the tender documents. Such PBG shall be valid for a period of Warranty Period + claim period of 3 months for a value equal to 10 % of the basic value of the purchase order. No deviation for the duration of PBG / BG will be permitted.

- a. PBG shall be from any of the BHEL consortium of bankers
- b. PBGs from nationalized banks are also acceptable.
- c. PBG should be sent directly by the bank to the dealing executive mentioned in the purchase order located at the address mentioned in the purchase order. PBG should be in the format indicated. No deviation to these formats will be allowed.
- d. Confirmation from any of the BHEL consortium of banks or any of the Indian Public Sector Banks is essential for the acceptance of PBGs issued by foreign banks (located outside India).
- e. Expired BGs / PBGs will be returned only after expiry of the claim period or on completion of the contractual obligation.

In case vendor does not accept for submission of PBG, the vendor can be rejected on commercial grounds

**J. 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 25% of the requirement against this tender provided. Minimum of 3% reservation for women owned MSEs within the above mentioned 25% reservation.
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. 25% of the 25% (i.e. 6.25% 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 6.25% 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.

**ANNEXURE-III**

**BANK GUARANTEE FOR PERFORMANCE SECURITY**

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited <sup>1</sup> (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at \_\_\_\_\_ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at \_\_\_\_\_ <sup>2</sup> hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....<sup>3</sup> valued at Rs.....<sup>4</sup> ( Rupees -----)/FC.....(in words.....) for .....<sup>5</sup> (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to .....% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, ....., (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- ( Rupees -----) without any demur, immediately on a demand from the Employer, .

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

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

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including.....<sup>6</sup> and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the .....<sup>7</sup> we shall be discharged from all liabilities under this guarantee thereafter.

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>8</sup>
- b) This Guarantee shall be valid up to .....<sup>9</sup>
- c) Unless the Bank is served a written claim or demand on or before .....<sup>10</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.



We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

<sup>1</sup> NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

<sup>2</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

<sup>3</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>4</sup> PROJECT/SUPPLY DETAILS

<sup>5</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>6</sup> VALIDITY DATE

<sup>7</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>8</sup> BG AMOUNT IN FIGURES AND WORDS.

<sup>9</sup> VALIDITY DATE

<sup>10</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

**1. In Case of Bank Guarantees submitted by Foreign Vendors-**

- a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
- b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
  - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
  - b.2 **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
  - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
  - b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.

## **ANNEXURE- IV**

### **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

### List of Consortium Banks

Sl. No	Nationalised Banks	Sl. No	Public Sector Banks
1	State Bank of India	18	IDBI
2	Allahabad bank		
3	Andhra bank	Sl. No	Private banks
4	Bank of Baroda	19	Axis Bank
5	Canara Bank	20	HDFC
6	Corporation bank	21	ICICI
7	Central bank	22	The Federal Bank Limited
8	Indian Bank	23	Kotak Mahindra Bank
9	Indian Oversea Bank	24	Indusind Bank
10	Oriental bank of Commerce	25	Yes Bank
11	Punjab National Bank		
12	Punjab & Sindh Bank	Sl. No	Foreign banks
13	Syndicate Bank	26	CITI Bank N.A
14	UCO Bank	27	Deutsche Bank AG
15	Union Bank of India	28	HSBC
16	United Bank of India	29	Standard Chartered Bank
17	Vijaya Bank	30	J P Morgan

**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.



## **ANNEXURE VII**

### **Provisions Applicable for MSE (Micro and Small Vendors)**

Benefits/facilities as applicable for Micro and Small Enterprises (MSEs) shall be available to MSEs registered with Government designated authorities as per the Purchase & Price Preference Policy of the Government subject to them becoming eligible otherwise.

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 to avail the applicable benefits:

- a. Attested copy of valid NSIC certificate or
- b. Attested copy of either Entrepreneur's Memorandum part II (EM II) certificate/Udyog Aadhar certificate having deemed validity (five years from the date of issue of acknowledgement in EM II/Udyog Aadhar) or
- c. EM II/ Udyog Aadhaar certificate along with attested copy of a CA certificate (Format enclosed at Annexure VIII) where deemed validity of EM II certificate/ Udyog Aadhar certificate of five years have 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-I in case of two-part bid and three-part bid).

Documents have to be notarized/attested by a Gazetted officer and must be valid as on the date of part I bid opening for the vendors to be eligible for the benefits applicable for MSE vendors. Please note that no benefit shall be applicable if any deficiency in the above required documents are not submitted before the price bid opening/Reverse Auction. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal.

Bidders to however note the documents that shall be furnished in order to establish credentials as MSE vendor should be as per the extant statutory requirements specified by the Ministry of Micro, Small and Medium Enterprises.

### **Evaluation of Offer for MSEs**

- A) MSE vendors quoting within a price band of L1 + 15% shall be allowed to supply up to 25% of the requirement against this tender provided.
  - B) The MSE Vendor matches the L1 Price.
  - C) L1 Price is from Non MSE Vendor.
  - D) 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 vendor will be offered who is within the L1 + 15% band (if L3 is also within 15% band).
  - E) 25% of the 25% (i.e. 6.25% of the total enquired quantity) will be earmarked for SC/ST owned MSE firms provided conditions as mentioned in (A) and (B) are fulfilled.
- Minimum 3% reservation for women owned MSEs within the above mentioned 25% reservation
- F) In case no vendor under SC / ST category firms are meeting the conditions mentioned in (A) and (B) 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.
  - G) Serial no. A to E 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.

**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

**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:	
Company Name :	
Permanent Account Number(PAN):	
Address	

City: _____	PINCODE _____	STATE _____
-------------	---------------	-------------

Contact Person(s)	
Telephone No:	
Fax No:	
e-mail id:	

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

- 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