

SOLAR BUSINESS DIVISION

NOTICE INVITING TENDER (NIT)

MATERIAL: Monocrystalline DCR PV Module

TENDER REFERENCE: SPKSCPV074

Dear Sir,

Subject: Tender for "Monocrystalline DCR PV Module".

BHEL invites offers from reputed Vendors {Refer Pre-qualifying (PQR) requirements and other requirements given in tender enquiry letter uploaded on our websites) for supply including packing & transportation to as per incoterms, satisfactory completion of Supply of "Monocrystalline DCR PV Module" as per Tender Ref: SPKSCPV074".

Your offer shall be submitted in two parts strictly as per "Instructions to Bidders" of GCC, Rev R0 in sealed covers.

Your best quotation / offer for the above requirement, in line with our terms and conditions, should either be delivered in person or sent by COURIER/REGISTERED POST, to the following address only:

BHEL- EPD/SBD Tender box (Reception of SBD)

C/o. AGM/MM

M/s BHARAT HEAVY ELECTRICALS LTD. (SOLAR BUSINESS DIVISION (SBD),

Prof CNR Rao Circle, IISc Post, Malleswaram, Bangalore- 560 012

Ph. No. +91-080-22182430, 080-22182269, +91-080-22182286.

Offer can also be submitted thru email to email ids specified below only:-

PART-A (I) BID i.e. TECHNICAL BID on technicalbid-epd@bhel.in PART-B (II) BID i.e. PRICE BID on pricebid-epd@bhel.in

NOTE:-

- 1. Tender reference & due date to be mentioned in subject of mail.
- **2.** Bidders may adopt this mode at their own risk. The Purchaser does not own any responsibility /liability for delays in receipt / loss of secrecy of such offers.

It shall be the responsibility of the bidder to ensure that the tender is delivered on or before the due date by **02:00 P.M**. The offer has to be deposited in tender box only. Part-I bids shall be opened at **02:30 P.M**. on the due date in the presence of authorized representatives of the bidders, who may like to be present.

The bidder is required to clearly mention

- 1. Tender Ref., RFQ/Tender Due Date & Name of the item in BOLD LETTERS on the top of each envelope submitted.
- 2. Name and contact details (including mobile no. and email address) of minimum one contact person along with date of submission of offer in a cover letter.

ENQUIRY TERMS AND CONDITIONS

The prices offered shall be firm till the completion of project.

- 1. Tender Ref No., due date etc. must be legibly super scribed on the sealed envelopes as per clause no. 2.0 of "Instructions to Bidders of GCC, Rev. R0".
- 2. Offers should be submitted in two parts in two separate sealed covers as follows:

Part-I: TECHNO-COMMERCIAL BID Part-II: PRICE BID.

For detailed instructions. Please see "Instructions to Bidders of GCC Rev. R0".

3. Bidders shall submit their offers meeting the requirements of the following tender documents (enclosed) included in this Enquiry Letter:



SOLAR BUSINESS DIVISION

NOTICE INVITING TENDER (NIT)

MATERIAL: Monocrystalline DCR **PV** Module

TENDER REFERENCE: SPKSCPV074

General Conditions of Contract (GCC) Rev R0 comprising of: Instructions to Bidders and General Commercial Terms & Conditions. Technical Specification, Price format & Special Conditions of Contract (SCC).

4. Tenders shall be submitted strictly in accordance with the requirements of the above tender documents. In case of deviations (Technical/ Commercial), the same shall be highlighted separately giving clause references along with the Cost of withdrawal of Deviations as per Annexure-II to GCC Rev. R0 of "DEVIATION SHEET (COST OF WITHDRAWAL)" along with reasons for taking such deviations.

Cost of withdrawal for the deviations, for which, the "Cost of withdrawal" is not specified, shall be taken as NIL. Bidder to note all the points mentioned in "Notes" of Annexure-II to GCC Rev.RO.

- 5. All the above Tender Documents shall automatically become a part of the Order / Contract after its finalisation.
- 6. Bidder has to submit "NO DEVIATION CERTIFICATE FOR COMMERCIAL TERMS AND CONDITIONS as per General Conditions of Contracts (GCC, Rev.R0), Special Conditions of Contracts and Notice Inviting Tender (NIT)" in case of no deviations.
- 7. Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any/all tender(s) in part or full without assigning any reason whatsoever.
- 8. Late tenders are liable to be rejected.
- 9. All correspondence thereof, shall be addressed to the undersigned by name & designation and sent at the following address:

Commercial

S Pankaj Kumar- Dy Manager-MM Manjunath Rao- Engineer-MM. BHEL-SBD, Prof CNR Rao Circle, IISc Post, Malleswaram, Bangalore- 560 012 E-MAIL: spankaj@bhel.in;

Ph. No. +91-080-22182269, 8126333426

Technical

Muhammed Shakir-Sr. Engineer BHEL-SBD, Prof CNR Rao Circle, IISc Post, Malleswaram, Bangalore- 560 012

E-MAIL: muhammedshakir@bhel.in;

Ph. No. +91-080-22182357, +91 9620879978

- 10. Bidders, who are not registered with BHEL-SBD, are requested to get registered through online supplier registration portal available on https://supplier.bhel.in/
- 11. BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on (www.bhel.com) for this tender. RA shall be conducted among the techno commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking."
 - Bidders are required to submit their acceptance to the terms/ conditions/ modalities before participating in the Reverse Auction in the process compliance form as enclosed. Without this, the bidder will not be eligible to participate in the event.
- 12. The evaluation of the offer shall be done on the basis of delivered cost (i.e. Total F.O.R. BHEL SBD stores, Bangalore price for supply with necessary loadings as applicable) as per GCC Rev.
- 13. Please note that detailed offers are to be submitted including the following documents duly stamped & signed on each page:
- 14. Acceptance of GCC, Rev.R0.
- 15. Acceptance of Special Conditions of Contract (SCC).
- 16. Pre-qualifying Requirements (PQRs) documents including Technical Bid Format with supporting documents.

Page 2 of 3



SOLAR BUSINESS DIVISION

NOTICE INVITING TENDER (NIT)

MATERIAL: Monocrystalline DCR PV Module

TENDER REFERENCE: SPKSCPV074

- 17. Technical Deviations and commercial deviations, if any as per format enclosed at Annexure-II of GCC, Rev.R0.
- 18. Annexure I, III, VII, XIII, XIV, XVIII & XIX of GCC Rev RO.
- 19. Along with your offer, please submit a copy of this letter duly signed & stamped on each page as token of acceptance of all terms & instructions conveyed.
- 20. Un-Priced price schedules (format) duly filled in 'Quoted" or 'Q' in each column/row.
- 21. Separate sealed price-bid envelope mentioning Tender/Enquiry No., RFQ due date & Name of the item in BOLD LETTERS on the top of envelope.

Note: Bidder must submit UN-PRICED Price format duly filled mentioning the word "QUOTED" in place of actual price. The actual price is to be filled in separately and submitted in sealed price bid.

- 22. Bidders to keep visiting BHEL website i.e www.bhel.com for any Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL. Same shall be uploaded on above BHEL website.
- 23. Order of Precedence.

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- 1. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL.
- 2. Notice Inviting Tender (NIT)
- 3. Price Schedule (either option A or option B)
- 4. Special Conditions of Contract (SCC)
- 5. Technical specification & scope of work
- 6. General Conditions of Contract (GCC)

Thanking You. Yours faithfully,

For and on behalf of BHEL

(S Pankaj Kumar)

Dy.Manager-MM

Enclosures:

- Enquiry Letter with Terms & Conditions (This letter)
 RFQ, PQR, QAP's & Technical Specifications No. PS-439-420 Rev 01
- 2. Special Conditions of Contracts (SCC)
- 3. Price formats/schedules (Prices should be quoted strictly in this format only)
- 4. General Conditions of Contracts (GCC Rev R0)
- 5. Conciliation Scheme
- 6. Integrity Pact



Spec. No	PS-439-420
Rev. No	01
Page 1 of 10	

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of Bharat Heavy Electricals Limited.

It must not be used directly or indirectly in anyway detrimental to the interest to the company

TECHNICAL SPECIFICATION FOR

SUPPLY OF MONOCRYSTALLINE SILICON PV MODULES Henrietta (Phase - II), MAURITIUS

Revision details: (01)	Prepared By	Reviewed By	DATE
Clause No 9, benefits for higher	MS	RGV	
wattage rated PV modules is added	Approved By PSP	ISSUED SPV ENGG	09.12.2021



Spec. No	PS-439-420
Rev. No	01
Page 2 of 10	

1. PRE-QUALIFICATION CRITERIA (PQC):

SI. 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 documentary evidence 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.

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 3 of 10	

2. TECHNICAL REQUIRMENTS:

SI. No	Item	Remarks
1	PV Module Configuration	Monocrystalline (PERC) photovoltaic module with 72 nos of cells in 12X6 series configuration or 144 cells in 24X6 configuration. The module construction and bill of material shall be as per vendor's approved IEC certification. Please enclose: i. Module overall assembly drawing with mounting holes ii. Data sheet with typical electrical characteristics, I-V curves, temperature coefficients etc.
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 545 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	The PV modules supplied shall follow IEC standards as below. 1. IEC 61215-1:2016 (Design Qualification and Type Approval-Part 1) 2. IEC 61215-1-1:2016 (Design Qualification and Type Approval-Part 1-1) 3. IEC 61215-2:2016 (Design Qualification and Type Approval-Part 2) 4. IEC 61730-1:2016 (Safety Qualification – Part 1) 5. IEC 61730-2:2016 (Safety Qualification – Part 2) 6. IEC 62804-1:2015- (Test methods for the detection of PID - Part 1) 7. IEC 61701:2011 (Salt Mist Corrosion testing) 8. EN 50380 – Data sheet and name plate information of photovoltaic module. 9. IEC61853 -1 (PV module performance testing and energy testing Part-1: Irradiance and temperature performance measurements and power rating.) 10. IEC 60364-4-41 (Protection against electric shock)

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 4 of 10	

		Vendors shall use Bill of materials for manufacture of PV modules as per
		subset of approved CDF of IEC Certificates.
		All IEC Certificates to be submitted with tender.
9	Module Safety Class	Safety Class – II
10	BILL OF MATERIA	ALS
10.1	Solar cells	Type : Mono Crystalline solar cells
		Pl. indicate
		Cell Source :
		Size of Cells :
		Cell efficiency :
		No. of busbars
		Enclose a copy of Solar cell data sheet with electrical parameters.
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	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/ m²/day (38°C at 90% RH). The Back sheet can be fluoro polymer based or of any other well proven technology. The backsheet shall have globally benchmarked durability properties on Moisture barrier, Tensile Strength (Machine Direction & Transverse Direction), Elongation retention and UV stability and shall be able to withstand system
10.5	PV Module	voltage of 1500 V. Corrosion resistant, anodized Aluminum. The anodizing thickness shall be 15
10.3	Frame	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 boxes shall in compliance with IEC 60670 and be of class II insulation & 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

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 5 of 10	

		visible warning sign should be provided to inform anyone working on the junction box.
		Junction box. 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.
10.7	Adhesive for framing, junction-box fixing and potting	As per manufacturer's IEC test report
10.8	RFID	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. RFID tag shall contain the following information: a. Name of module manufacturer with country of origin b. Month & year of manufacture of modules c. Name of cell manufacturer with country of origin d. Month & year of manufacture of cells e. IV curve f. Wattage, I _{max} , V _{max} , V _{oc} , I _{sc} , & fill factor g. Module model number h. Unique serial number i. Date of obtaining IEC qualification certificates j. Name of test lab issuing IEC certificates k. Other relevant information etc. on traceability of soalr cells and module as per IOS 9000 series
10.9	Nameplate	Each module shall be provided with a name plate label (sticker) containing the following information: a. Name of module manufacturer b. Module model number c. Serial number d. Polarity Terminal Leads e. Safety Class 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

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 6 of 10	

		k. Relevant standards and certifying lab name
		I. 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	Solar cells and module materials shall be used as per approved CDF as per IEC
	of IEC Certificate	Certificate. Enclose copy of approved CDF as per IEC Certificate.
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	Pl. provide mounting hole pitch details.
	Pitch	Horizontal:
		Vertical :
		Mounting hole size :
10.14	Earthing holes	Earthing holes to be provided on both the shorter arms of PV module frames.
10.15	I-V curves and	The bidder shall provide the sample solar PV module electrical characteristics
	temperature	including current-voltage (I-V) performance curves and temperature
	coefficiencts	coefficients of power, voltage and current.
		Enclose Sample I-V performance curve of for highest wattage of modules
		offered.
		Temperature coefficient of Power (Pmax) :
		Temperature coefficient of Voltage (Voc) :
		Temperature coefficient of Current (Isc) :
		10

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. 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.

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 7 of 10	

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. INSURANCE or BANK GUARANTEE FOR POWER OUTPUT WARRANTY

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

The Successful Bidder who is not able to provide insurance of PV modules as above, shall submit a Bank Guarantee 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 545Wp 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.

7. GENERAL CONDITIONS

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

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 8 of 10	

8. MODULE RATINGS OFFERED

PI. fill the table as below for the module wattage ratings offered. Module Type (model No):

Module rating	Wattage	Quantity in MWp

Note:

1) Bidders can offer a maximum of 3 Power rating bands.

9. BENEFITS FOR HIGHER WATTAGE RATED PV MODULES:

Vendors offering higher wattage PV modules will get the benefit of negative loading in their prices offered for comparison of costs and arriving at L1 (Lowest bidder) as below.

Module	Loading factor on	Module	Loading factor on
Wattage	account of Power	Wattage	account of Power rating
Offered	rating (LFP)	Offered	(LFP)
360	-	455	-78,00,000
365	-4,00,000	460	-83,00,000
370	-12,00,000	465	-86,00,000
375	-16,00,000	470	-89,00,000
380	-21,00,000	475	-92,00,000
385	-23,00,000	480	-97,00,000
390	-30,00,000	485	-1,00,00,000
395	-34,00,000	490	-1,01,00,000
400	-38,00,000	495	-1,03,00,000
405	-42,00,000	500	-1,06,00,000
410	-48,00,000	505	-1,09,00,000
415	-52,00,000	510	-1,14,00,000
420	-55,00,000	515	-1,16,00,000
425	-57,00,000	520	-1,16,00,000
430	-61,00,000	525	-1,18,00,000
435	-66,00,000	530	-1,21,00,000
440	-70,00,000	535	-1,23,00,000
445	-73,00,000	540	-1,25,00,000
450	-74,00,000	545	-1,25,00,000

Note:

1) If a mix of module ratings are offered, negative loading will be given for respective ratings of PV modules in the pro rata basis.

COPYRIGHT AND CONFIDENTIAL



Spec. No	PS-439-420
Rev. No	01
Page 9 of 10	

10. ENCLOSURES:

	Dec. and I										
SI.	Document										
No.											
1.	Documentary evidence for PV module manufacturing capacity 50MW per annum										
2.	Signed copy of BHEL Specification PS-439-420 Rev. 01 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, IEC										
	62804 and EN 50380 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 545Wp 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.										
$oxed{oxed}$											



Spec. No	PS-439-420					
Rev. No	01					
Page 10 of 10						

11. Confirmation by the vendor:

SI. 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 545 Wp 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	

12. DEVIATION SHEET

SI.	Particulars	Bidder's Confirmation
No.		
1.	Confirmation to BHEL Specification	
	PS- 439- 420 Rev. 01	Yes / No
		Please indicate deviations, if any.

Signature of Tenderer with stamp

OPTION A 'UNPRICE FORMAT- FOR INDIAN SUPPLIERS FOR Monocrystalline DCR PV Module (To be submitted with Part-1 Bid)

Rev 00

		Kindly	y mention "Q	UOTED" or "C	" in place of	actual price v	vhere ever applic	able).				
TENI	DED DEE, ODKOODW	074					SUPPLIER's NAN	ЛE:				
IENL	DER REF: SPKSCPV	0/4					Currency : INR	ency : INR For Indigenous supplies				
					S							
SI.No	Item Description:	Unit of Measureme nt	Qty (1)	Ex-works price INR	FOB Indian Seaport price INR	Sea freight price INR	Unit CFR Port Louis Seaport, Mauritius PRICE (2) INR INCL PACKING, Freight	Total CFR Mauritius Seaport PRICE [1X2] = [3] INR	CGST @ %=(4)INR	SGST @ %=(5)INR	IGST @ %=(5	TOTAL PRICE = (6)=(3)+(4)+(5) (Currency)
	Monocrystalline DCR PV Module	KW	9,300									
	PV Module - Mandatory spares	Nos.	100									
	PV modules offered											
	Vendor to submit th Cost to BHEL basis			tion A or optio	on B However	evaluation sh	nall be done on	TOTAL PRICE	E =(6)=Sum of	Two line iter	ns	
	HSN CODE:											
	Name of Indian Sea											
	TOTAL PRICE IN WO	, ,										
	Price shall be firm to	ill the comple	tion of order	execution.			DIDE					
DATE						BIDL	DER's SIGN & S	⊳⊏AL				

OPTION B

'UNPRICE FORMAT- FOR INDIAN SUPPLIERS FOR Monocrystalline DCR PV Module (To be submitted with Part-1 Bid)

Kindly mention "QUOTED" or "Q" in place of actual price where ever applicable).

Rev 00

				,	1		-					
TENI	DER REF: SPKSCPV	074				SUPPLIER's NAME:						
	PERTIES FOR TOOL TO	37 ·				Currency : INR						
						For Indigenous supplies						
SI.No	Item Description:	Unit of Measureme nt	Qty (1)	Ex-works price INR	Inland freight upto Mumbai seaport (BHEL ROD warehouse)	Unit FOR Mumbai seaport (BHEL ROD warehouse) PRICE (2) INR INCL PACKING, Freight	Total FOR Mumbai seaport PRICE [1X2] = [3] INR	CGST @ %=(4)INR	SGST @ %=(5)INR	%=(5	TOTAL PRICE = (6)=(3)+(4)+(5) (Currency)	
	Monocrystalline DCR PV Module	KW	9,300									
	PV Module - Mandatory spares	Nos.	100									
The F	PV modules offered t	for mandatory	spares (Item	No 20), shall	have highest	wattage rating offe	red for main s	upply (Item N	No 10)			
	Vendor to submit th be done on Cost to	eir quotation BHEL basis- I	for either opt Mauritius PV s	TOTAL PRICE			ns					
	HSN CODE:											
	TOTAL PRICE IN WO						ı					
	Price shall be firm ti	ill the complet	tion of order e	execution.								
DATE PLAC	ATE: BIDDER's SIGN & SEAL LACE:											



OPTION A 'PRICE FORMAT- FOR INDIAN SUPPLIERS FOR Monocrystalline DCR PV Module

Rev 00

							SUPPLIER's NAME:					
TEN	ER REF: SPKSCPV	74					Currency : INR					
			l				Currency . IIVIN					
								I	For Indigen	ous supplies	<u> </u>	
SI.No	Item Description:	Unit of Measureme nt	Qty (1)	Ex-works	FOB Indian Seaport	Sea freight price INR	Unit CFR Port Louis Seaport, Mauritius PRICE (2) INR	Total CFR Mauritius Seaport PRICE [1X2]	CGST @ %=(SGST @ %=(%=(5	TOTAL PRICE = (6)=(3)+(4)+(5)
				P ••	price INR		INCL PACKING, Freight	= [3] INR	4)INR	5)INR) INR	(Currency)
	Monocrystalline DCR PV Module	KW	9,300									
	PV Module - Mandatory spares	Nos.	100									
The I	PV modules offered f	or mandatory	spares (Item	No 20), shall	have highest	wattage ratir	ng offered for mai	in supply (Item	No 10)	· · · · · · · · · · · · · · · · · · ·		
	The PV modules offered for mandatory spares (Item No 20), shall have highest wattage rating offered for main supply (Item No 10) Vendor to submit their quotation for either option A or option B However evaluation shall be done on Cost to BHEL basis- Mauritius PV site. TOTAL PRICE =(6)=Sum of Two line items											
	HSN CODE:											
	Name of Indian Sear		-									
	TOTAL PRICE IN WORDS (6):											
	Price shall be firm ti	II the complet	tion of order e	execution.								
	DATE: PLACE:							BIDDER's SIGN & SEAL				



OPTION B PRICE FORMAT- FOR INDIAN SUPPLIERS FOR Monocrystalline DCR PV Module

Rev 00

						-					
LEVIL	ER REF: SPKSCPV	074				SUPPLIER's NAME	Ξ:				
TENDER REP. SPRSGPV0/4						Currency : INR					
	Item Description:	Unit of Measureme nt	Qty (1)		Inland freight upto Mumbai seaport (BHEL ROD warehouse)	For Indigenous supplies					
SI.No				Ex-works price INR		Unit FOR Mumbai seaport (BHEL ROD warehouse) PRICE (2) INR INCL PACKING, Freight	Mumbai	CGST @ 4)INR	SGST @ %=(5)INR	%=(5	TOTAL PRICE = (6)=(3)+(4)+(5) (Currency)
	Monocrystalline DCR PV Module	KW	9,300								
	PV Module - Mandatory spares	Nos.	100								
	V modules offered f						TOTAL PRICE			ms	
	be done on Cost to										
	HSN CODE:										
	TOTAL PRICE IN W	ORDS (6) :									
	Price shall be firm ti	Il the comple	tion of order	execution.							
DATE: PLACE:				BIDDER's SIGN & SEAL							



SOLAR BUSINESS DIVISION (SBD)

SPECIAL CONDITIONS OF CONTRACT (SCC) Rev. No. 00

Item Description: :
Monocrystalline DCR PV Module
Tender Ref:
SPKSCPV074

These Conditions shall be read in conjunction with General Condition of Contract (GCC Rev R0) enclosed along with the tender enquiry. In case of any conflict or inconsistency, the requirement of SCC shall prevail over the GCC. The name of our Plant/ Unit may please be read as SOLAR BUSINESS DIVISION (SBD) as it was changed from ELECTRIC & PHOTOVOLTAIC DIVISION (EPD) Type of Contract Supply Solar Photovoltaic Modules as per following documents: 2. Item Details 1. Technical Specifications DOC NO: PS-439-420 Rev 01 BHEL Site Office 8 MWac Solar PV Farm Central Electricity Board (CEB) Rue Du Savoir, Cyber City, Ebene, Mauritius. 3. Consignee address Delivery: (Option A) - CFR Port Louis Seaport, Mauritius (Option B) - FOR Mumbai seaport (BHEL ROD warehouse) BHARAT HEAVY ELECTRICALS LIMITED - SOLAR BUSINESS DIVISION (SBD), (Formerly Buyer and Paying known as ELECTRIC & PHOTOVOLTAIC DIVISION) 4. Authority PROF. CNR RAO CIRCLE, SCIENCE INSTITUTE POST, MALLESWARAM, BANGALORE-560012. Buyer IEC CODE/ GST IEC CODE: 0588138690 / GST No: 29AAACB4146P1ZB 5. For Commercial Clarifications: spankaj@bhel.in; aknived@bhel.in; aknived@bhel.in; 6. Buyer Email ID For Technical Clarifications: muhammedshakir@bhel.in; raghavendrababu.gv@bhel.in By Road/Rail/Air/Sea Note: It is Vendor's responsibility to ensure availability of Trucks/Train/Flight/Ship schedule etc. well in advance for dispatch of material to meet contractual delivery requirement. 7. Part shipment is allowed. Mode of Dispatch Transshipment is not allowed. It is also the vendor's responsibility to ensure material is dispatched through shortest possible route. By ROAD/RAIL/ AIR/ SEA. Price shall be firm till the completion of order execution. Option A - CFR Port Louis Seaport, Mauritius inclusive of packing & forwarding charges. Taxes and duties to be paid in line with GCC. Material to be dispatched on freight pre-paid basis. Insurance is in the scope of BHEL. In the Bill of Lading "BHEL International Operation Division" shall be mentioned as Main 8. Price basis Exporter. Option B - FOR Mumbai seaport (BHEL ROD warehouse) inclusive of packing & forwarding charges. Taxes and duties to be paid in line with GCC. Material to be dispatched on freight pre-paid basis. Insurance is in the scope of BHEL. All the other applicable taxes including Income taxes (TDS) as per prevailing Indian law shall be deducted from the payables & paid to Govt. by BHEL. On overall package L1 basis consisting of both line items (main and spares) as per Cl. No. 19.0 of GCC (Instructions to bidders). The evaluation currency for this tender shall be INR. 9. **Evaluation of Offer** Vendor to submit their quotation for either option A or option B. However evaluation shall be done on Total Cost to BHEL basis- Mauritius PV site. In case offer is received from the vendor for both the options, "Option A" shall be considered.