



## **RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**

(An ISO 9001:2015 &14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471083,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

### **INVITATION OF BIDS**

**E-TENDER DOCUMENT**

**FOR**

**“SETTING UP OF 100 MW AUTOMATIC SOLAR PHOTOVOLTAIC (SPV) MODULE MANUFACTURING LINE ( ON TURNKEY BASIS)”**

**NIT No.: REIL/MM/22-23/E-PROC./22046**

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23/E-PROC./22046	Page 1 of 79	Signature of Bidder
--	--------------------------------------	--------------	---------------------



## **TABLE OF CONTENT**

<b>TOPIC</b>	<b>PAGE NO.</b>
PART - I : Invitation for Bids (IFB) / Bid Details	4 of 78
PART - II : Instructions to Bidders (ITB)	8 of 78
PART - III : Eligibility Criteria	13 of 78
PART - IV : Evaluation Criteria	21 of 78
PART - V : General Conditions of Contract (GCC)	25 of 78
PART - VI : Special Conditions of Contract (SCC)	29 of 78
PART - VII : Scope of Work & Technical Specification	34 of 78
PART- VIII : Formats & Annexures	41 of 78
Format-15 : Price Bid	On Line



## DISCLAIMER

1. Though adequate care has been taken while preparing the NIT document, the Bidders shall satisfy themselves that the document is complete in all respect. Intimation regarding any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within ten (10) days from the date of notification of NIT, it shall be considered that the document is complete in all respect and has been received / acknowledged by the Bidder(s). Bidders submitting their bids shall be deemed to have taken into consideration, all the circumstances affecting the execution of the contract. REIL shall not be responsible for the same.
2. Rajasthan Electronics & Instruments Ltd. (REIL) reserves the right to modify, amend or supplement this document as per clause 3.6 of ITB (part-II).
3. While this tender document has been prepared in good faith, neither REIL nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this document, even if any loss or damage is caused by any act or omission on their part.

Place: Jaipur

Date: \_\_\_\_\_

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 3 of 79	Signature of Bidder
--	---------------------------------------	--------------	---------------------



# PART – I

## INVITATION FOR BIDS (IFB)

(NIT NO. – REIL/MM/22-23/E-PROC./ )



### **RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**

(An ISO 9001:2015 & 14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471083,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23/E-PROC./22046	Page 4 of 79	Signature of Bidder
--	--------------------------------------	--------------	---------------------



## INVITATION FOR BIDS (IFB)

### TENDER NOTICE

Rajasthan Electronics & Instruments Limited invites sealed bids (Technical & Financial) from eligible bidders valid for a minimum period of 90 days from the date of opening of the bid for “**Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**” as per description and terms & conditions specified herein after:

#### 1. Item Description & Quantity:

Sr. No	Description	Qty. (Nos)
1.	Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	01

#### (SINGLE STAGE TWO ENVELOPE BIDDING).

Interested parties may view and download the tender document containing the detailed terms & Conditions, free of cost from the website <http://eprocure.gov.in/> or <http://www.reiljp.com>

Please see bid information sheet given below.

### INTERPRETATIONS

1. Words comprising the singular shall include the plural & vice versa.
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 5 of 79	Signature of Bidder
--	---------------------------------------	--------------	---------------------



## **BID INFORMATION SHEET**

Document Description	Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)
NIT No.& Date	REIL/MM/22-23/E-PROC./22046 dated 29.08.2022
Name of Organization & Location	Rajasthan Electronics & Instruments Limited ,JAIPUR-INDIA
Tender Type (Open / Limited / EOI / Auction / Single )	Open
Tender Category (Services / Goods / works)	Goods
Type / Form of Contract (Work /Supply/ Auction/Service/Buy/Empanelment/Sell)	Buy
Downloading of NIT document	From 18:00 IST dated 29.08.2022 on CPP Portal / REIL website ( www.eprocure.gov.in / www.reiljp.com)
Period of work	7 Months from the date of issuance of Purchase Order(PO)
Pre-bid Conference / Clarification Meeting	12.09.2022 at 11:00 IST to be held at REIL, 2, Kanak Pura Ind. Area, Sirsi Road, JAIPUR-INDIA, 302034
Last date & Time for Online Submission of bids	26.09.2022 upto 17:00 IST
Last date & Time for physical submission of offline document at REIL office, Jaipur	Within 3 (three) days after online submission of bids 29.09.2022 upto 12:00 IST
Online Bid Opening (Techno-Commercial)	27.09.2022 at 17:00 IST
Financial Bid Opening	To be intimated subsequent to short listing of techno-Commercial bids.
Tender Documents Cost	Free of cost downloaded from CPP Portal / REIL website.
Document fee	Rs. 2,500/- to be submitted through RTGS/NEFT
Bid Security / EMD	Bid Security / EMD - Rs. 36,30,000.00 (Indian Rupees Thirty Six Lakh and Thirty Thousand only) to be submitted in the form of DD/Bank Guarantee along with the bid as per format-3. The minimum validity period of BG should be up to 3 Months, may be extended as per request / instruction of REIL.
Performance Security (PBG)	The successful bidder shall furnish with in 15 days from the date of issue of Purchase Order an unconditional and irrevocable bank guarantee for due Performance as per Format-4 attached and which shall be 3 % of basic value of purchase order and shall be valid up to 60 days beyond the successful completion of all the obligation of Purchase Order.
MSME	Exemption will be provided for startup/MSME as per GOI guidelines. It is mandatory for MSE/Start up bidders to declare their Udhyaam Registration/Udhyaog Aadhar number/ NSIC Certificate on CPPP portal.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23/E-PROC./22046	Page 6 of 79	Signature of Bidder
--	--------------------------------------	--------------	---------------------



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

REIL A/c Details for payment of Bid Document Fees (Payment mode: NEFT/RTGS)	Name of Bank : Punjab National Bank Account Number : 0221008700000152 IFSC Code : PUNB0022100 Branch name : Large Corporate Branch, M.I. Road, Jaipur
Name, Designation, Address and other details (For Submission of Response to NIT)	Dy.General Manager(MM ) Rajasthan Electronics & Instruments Ltd. 2, Kanakpura Ind. Area, Sirsi Road Jaipur- India-302034 Tel.- 0141 –2471083 <a href="mailto:Email-sr.nirmal@reil.co.in">Email-sr.nirmal@reil.co.in</a>
Details of persons to be contacted in case of any assistance required	Dy.General Manager (Production) Mobil No.-+91-7727011714 Email- <a href="mailto:deepak.gupta@reil.co.in">deepak.gupta@reil.co.in</a>

**Important Note:** Prospective Bidders are requested to remain updated for any notices/amendments/clarifications etc. to the tender document through the websites [www.reiljp.com](http://www.reiljp.com) and [www.eprocure.gov.in](http://www.eprocure.gov.in). No separate notifications will be issued for such notices/amendments/clarifications etc. in the print media or individually. Intimation regarding notification/amendments/clarifications etc. shall be updated on [www.reiljp.com](http://www.reiljp.com) and the details will only be available from [www.eprocure.gov.in](http://www.eprocure.gov.in) .

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 7 of 79	Signature of Bidder
--	--	--------------	---------------------



## PART - II

# INSTRUCTIONS TO BIDDERS (ITB)

(NIT NO. – REIL/MM/22-23/E-PROC./22046)



### **RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**

(An ISO 9001:2015 &14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471083 ,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 8 of 79	Signature of Bidder
--	---------------------------------------	--------------	---------------------



1. **INTRODUCTION**

**Organization:**

Rajasthan Electronics & Instruments Ltd. (REIL) is a ISO 9001:2015 and ISO 14001:2015 “Mini Ratna” Central Public Sector Enterprise under administrative control of Ministry of Heavy Industries & Public Enterprises, Government of India, New Delhi. The Company was conferred the status of a "MINI RATNA" by the Department of Public Enterprises, Ministry of Industry, Government of India in 1997 on account of it's good all round performance and excellent products. The area of business extends to manufacturing and marketing of electronic products/ services in the agro-dairy sector, solar photovoltaic sector, and industrial electronics sector and information technology. REIL is also providing consultancy services to various organizations and has signed MoU's with various Organizations for development of solar projects as Project Management Consultant to provide turnkey solutions for establishing solar projects and approved manufacturer of SPV Modules / System from MNRE.

The company has a state of art manufacturing facilities having a total installed capacity of 19 MW for manufacturing of SPV Modules including 12 MW Automatic SPV Module manufacturing line. Taking benefits of its experience in order to excel further in the field and to fulfill the objectives aligning with Government objective to make domestic manufacturer competitive with international manufacturers, it is imperative to enhance it solar module manufacturing facility by 100MW.

2. **DETAILS OF BID :**

S.No.	Specifications		
1.	<p><b>Scope:</b> The scope of work would essentially cover but not limited to setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line (On Turnkey Basis) which include Supply, Layout Design, installation &amp; commissioning, Integration, testing of equipments / machineries, Warranty, BIS certification and hands on training for running and maintenance of the Line.</p>		
2.	<p><b>Basis for Capacity Calculation :</b></p> <ul style="list-style-type: none"> <li>• Solar Cell type : 156.75 x 156.75 mm or 158.75 x 158.75 mm</li> <li>• Cell Power : 5.67 Watt</li> <li>• No. of Cells/Module : 72 Pcs</li> <li>• Matrix : 12 x 6</li> <li>• Yearly working Days : 300 Days</li> <li>• Working hours/ Day : 22.5 Hours</li> <li>• Watts/Module : ~400 Watts</li> <li>• Lamination Cycle time : Approx. 7-8 minutes with fast cure EVA</li> <li>• No of Cycle/ Hour : 8 Cycle</li> <li>• No of Cycle/ Day : 180 Cycle</li> <li>• No of Modules / Cycle : 5 Nos</li> <li>• No of Modules / Day : 900 Nos</li> <li>• No of Modules / Year : 2,70,000 Nos</li> <li>• Max. Production / Year : 110.225 MW</li> <li>• Uptime : 91 %</li> <li>• Yield : 99.7%</li> <li>• Average Capacity of Line : 100.00 MW</li> </ul>		
3.	<p><b>3.1 List of Main Equipment for the Production Line:</b></p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Main Equipment</th> </tr> </thead> </table>	S. No.	Main Equipment
S. No.	Main Equipment		



3.1A	Glass Lifter
3.1B	Automatic Tabber- Stringer Machine
3.1C	Hi-Speed Layup Station with Robot
3.1D	Bussing Multi-station
3.1E	In line Electroluminescence (EL) Inspection before Lamination
3.1F	Fully Automatic Laminator with Loading belt & Unloading Belt
3.1G	EdgeTrimming Station
3.1H	Automatic Inline Framing
3.1I	Automatic Silicon Dispensing Machine
3.1J	Multi-station For JB Fixing with centering conveyor
3.1K	Hi-Pot Tester (High Voltage) With Auto Centering
3.1L	Automatic Sun Simulator with Centering - (Automatic Loading/Unloading
3.1M	In-Line Electroluminescence Tester - (For Finished Modules)
3.1N	Transport System with 1 DC for Rejected Modules
3.1O	Motorised Visual Inspection
3.1P	Buffer Before Bussing
3.1Q	Direction Changer with 90 Degree rotator
3.1R	Centering Conveyor with Visual Inspection
3.1S	Buffer after Lamination
3.1T	Multistations for cleaning
3.1U	90 Degree Flipping & Inspection
<b>3.2 List of Miscellaneous Equipment for the Production Line:</b>	
3.2A	Automatic EVA / Back sheet Automatic Cutting Machine
3.2B	Automatic Ribbon Cutting & Bending Machine
3.2C	Lab Test Equipments (GEL Content Kit & Peel Tester)
<b>3.3 List of Miscellaneous Accessories required for the Production Line:</b>	
3.3A	Support Wagon for Storing Cut EVA / Backsheet
3.3B	Turnable wheels to store Modules after rework
3.3C	Support Wagon for storing Laminates



3.3D	Soldering Stations
3.3E	Maintenance tools for complete line.Tools such as scissors, knives, Gloves etc
3.3F	String Repare Station
3.3G	Patterns for soldering of Head Connections
<b>3.4 Other Accessories:</b>	
3.4A	Module shifting Karts/trollies
3.4B	Glass Transfer Karts/trollies
3.4C	Cell Transfer Karts/ trollies
3.4D	EVA / Backsheet Transfer Karts/ trollies
3.4E	Aluminium Frame Transfer Karts/ trollies
3.4F	Buffer Stacks for Layup and Laminates
3.4G	Spares & consumable kits

### 3. INSTRUCTION TO THE BIDDERS

#### 3.1. General:

3.1.1 Bidder will be declared as a Qualified Bidder based on meeting the eligibility criteria and as demonstrated based on documentary evidence submitted by the Bidder in the Bid.

- a) Bidder must meet the technical eligibility criteria independently as Bidding Company as per clause no.- 3.2.2 below.
- b) Bidder meets the financial eligibility criteria as Bidding Company as per clause no.- 3.2.3 below.
- c) If bidder is unable to meet the financial eligibility criteria it self then Bidder can use the financial strength of its Parent Company to fulfil the Financial Eligibility criteria only if parent company has 51 % or more shares holding in the bidding company. In such case, Bidders shall submit an Undertaking from the Parent Company as per Format - 9 and also furnish a certificate of relationship of Parent Company with the Bidding Company as per Format – 8.
- d) Further in-case where the bidding company has used the financial eligibility criteria of its parent company then it needs to be ensured that any change in the controlling equity of the Bidding Company requires prior approval of REIL.

**Note :** If the bidder’s submitted information is found to be false declaration or misrepresentation, the bidder(s) shall be out rightly rejected and may even debarred or blacklisted from REIL’s future tenders.

#### 3.1.2 INSTRUCTIONS TO BIDDERS FOR E-TENDERING

##### 3.1.2.1 General

The Special Instructions (for e-Tendering) supplement Section 3.1.2 ‘Instruction to Bidders’, as given in this Notice Inviting Tender (NIT) Document. Submission of Online Bids is mandatory for this Tender. Bidder must be uploaded all the documents related to tender.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 11 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

REIL shall use the portal <https://www.eprocure.gov.in> for e- tendering .

3.1.2.2 Specifically for Supplier (Bidding) organizations, the following KEY INSTRUCTIONS for BIDDERS must be assiduously adhered to:

- (i) Obtain individual Digital Signing Certificate (DSC or DC) of class III well in advance of your tender submission deadline on CPP Portal.
- (ii) Register your organization on CPP Portal well in advance of the important deadlines for your first tender viz 'Date and Time of Closure of Procurement of Tender Documents' and 'Last Date and Time of Receipt of Bids'. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of users, assigning roles to them, etc.
- (iii) Get your organization's concerned executives trained on CPP Portal well in advance for tender submission.
- (iv) Submit your bids well in advance of tender submission deadline on CPP Portal (There could be last minute problems due to internet timeout, breakdown, etc.). If bidders fail to upload the bid on CPP Portal, REIL will not be responsible for the same.
- (v) The Bidder must upload all the documents with self-attested by Authorized Person, related to NIT during Online Bid-Submission.
- (vi) The envelope shall bear {**Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)** }, the NIT No., the words 'DO NOT OPEN BEFORE' (due date & time) and mailing address of bidder with contact number and mail ID.

3.1.2.3 Other Requirements:

**(i) Minimum Requirements at Bidder's End**

- a.A Computer System with at least 1 GB RAM and Internet connectivity.
- b.Internet connectivity with at least 2 Mbps speed.
- c.Internet Explorer 7.0 or Mozilla Firefox or above.
- d.Java Run Time Engine (JRE- 1.7.0) or higher
- e.Digital Certificate(s)

**(ii) Any Further support and assistance:**

<b>REIL Helpdesk</b>	
<b>Telephone/ Mobile</b>	Mobile Numbers: +91- 7727011714
<b>Email-ID</b>	Sr.nirmal@reil.co.in Deepak.gupta@reil.co.in



3.2 ELIGIBILITY CRITERIA

S. NO.	ELIGIBILITY CRITERIA	DOCUMENTS REQUIRED	COMPLIED/ NOT COMPLIED
1.	<p><b>General</b></p> <p>a)The bidder should be registered under any of the following categories as on date of floating of tender.</p> <p>A. Company B. Sole Proprietor firm C. Partnership firm &amp; LLP</p> <p>b)The Bidder should be either a manufacturer of one or more major items of the Module manufacturing line such as Tabber Stringer, Automatic Laminator and Automatic Sun Simulator <b>OR</b> an authorized dealer/distributor of above mentioned items.</p> <p>c)The Bidder (Manufacturer) should be in existence for minimum last 3 years on the tender submission date.</p> <p>d)The bidder should be either Class I or Class II local supplier. Preference to Make in India shall be given as per the latest Govt guidelines. Refer Govt of India Public Procurement Order 2017 and revision no. P-45021/2/2017-PP (BE-II) dated 04.06.2020 issued by Public Procurement Section, Department of Industry &amp; Internal Trade and Ministry of Commerce &amp; Industry.</p> <p>e)Signed and sealed tender document by Chief Executive of Company or any person authorized by CEO or by any person authorized by resolution of board of directors or by authorized person.</p>	<p>A.In case of company : Memorandum of Association, Incorporation Certificate and notarized Power of Attorney should be uploaded with tender.</p> <p>B.In case of Sole Proprietor firm : Original/Notarized affidavit certifying the Sole proprietorship of firm before date of opening of bid.</p> <p>C.In case of Partnership firm &amp; LLP : This firm should be registered with registrar of firms. The authorization given in partnership deed or other notarized document must be uploaded.</p> <p>The bidder should submit authorization letters along with their technical bid from the manufacturers on their letterhead.</p>	
2.	<p><b>Technical</b></p> <p>Bidder should have supplied, installed &amp; commissioned in last 5 years either of following :</p> <p>One no. Automatic Module manufacturing Line of 80 MW or more OR Two nos.of Automatic Module manufacturing Line of 50 MW or more OR Three nos.of Automatic Module manufacturing Line of 40 MW or more</p> <p>The Automatic lines should be working satisfactorily for a period of at least one year as on the date of tender due date</p>	<p>a)Relevant copy of PO and Work completion certificate by the customer.</p> <p>b)Relevant satisfactory working certificate of the line.</p>	



<b>3.</b>	<b>Financial</b>	(a) The Minimum Average Annual Turnover (MAAT) of the bidder in the last three financial years (i.e. FY. 2019-20, 2020-21 and 2021-22) should INR 6 Crores (Indian Rupees Six Crores only). This must be the Company's turnover / Parent Company turnover.	a)Documentary evidence as per the Format-7, duly certified by Authorized Signatory and the Statutory Auditor / Practicing Chattered Accountant of the Bidding Company in support of their financial capability. b)A copy each of audited annual report of previous 3financial years for ascertaining their turnover and Net Worth for the purpose of verification.	
		(b) Net worth of the bidder shall be positive as per latest audited annual report.		

### 3.3 BID SUBMISSION BY THE BIDDER

- 3.3.1 Language: The Bid and all related correspondence and documents in relation to the Bidding Process shall be in English language. Supporting documents and printed literature furnished by the Bidder with the Bid may be in any other language provided that they are accompanied by translations of all the pertinent passages in the English language, duly authenticated and certified by the Bidder. Supporting materials, which are not translated into English, may not be considered. For the purpose of interpretation and evaluation of the Bid, the English language translation shall prevail.
- 3.3.2 The information and/or documents shall be submitted by the Bidder as per the formats specified in this NIT document.
- 3.3.3 Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures / pamphlets. Non-adherence to formats and / or submission of incomplete information may be a ground for declaring the Bid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of the Bidder then scanned and uploaded in the Techno- Commercial Bid Part.
- 3.3.4 The Bidder shall furnish documentary evidence in support of meeting Eligibility Criteria as indicated in Clause No. 3.2 of ITB to the satisfaction of REIL.

### 3.4 BID SUBMITTED BY BIDDING COMPANY

The Bidding Company should designate one person to represent the Bidding Company in its dealings with REIL. The person should be authorized to perform all tasks including, but not limited to providing information, responding to enquires, signing of Bid etc. The Bidding Company should submit, along with Bid, a Power of Attorney in original (as per Format-6)/ General Power of Attorney, authorizing the signatory of the Bid.

### 3.5 CLARIFICATIONS AND PRE-BID MEETING

- i. REIL will not enter into any correspondence with the Bidders, except to furnish clarifications on NIT Documents, if necessary. The Bidders may seek clarifications or suggest amendments to NIT online, also soft copy by e-mail to reach REIL before 24 Hours of the prebid meeting at the address, date and time mentioned in Bid information sheet.
- ii. The Bidder(s) or their authorized representative(s) is /are invited to attend pre-bid meeting(s), which will take place on date(s) as specified in Bid information sheet, or any such other date as notified by REIL.



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

- iii. The purpose of the pre-bid meeting will be to clarify any issues regarding the NIT including in particular, issues raised in writing and submitted by the Bidders.
- iv. REIL is not under any obligation to entertain / respond to suggestions made or to incorporate modifications sought for.

**3.6 AMENDMENTS TO NIT BY REIL**

- i. At any time prior to the deadline for submission of Bids, REIL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the NIT document by issuing clarification(s) and /or amendment(s).
- ii. The clarification(s) / amendment(s) (if any) shall be notified on REIL website [www.reiljp.com](http://www.reiljp.com) / Portal of CPP (<https://www.eprocure.gov.in>) at least Seven (7) days before the proposed date of submission of the Bid. If any amendment is required to be notified within Seven (7) days of the proposed date of submission of the Bid, the Bid Deadline may be extended for a suitable period of time.
- iii. REIL will not bear any responsibility or liability arising out of non-receipt of the information regarding Amendments in time or otherwise. Bidders must check the website for any such amendment before submitting their Bid.
- iv. In case any amendment is notified after submission of the Bid (prior to the opening of Techno- Commercial Bid due date /time for opening of techno-commercial bid shall be extended and it will be for the Bidders to submit fresh Bids/supplementary bids as the date notified by the REIL for the purpose.
- v. All the notices related to this Bid which are required to be publicized shall be uploaded on REIL website [www.reiljp.com](http://www.reiljp.com) /CPP Portal (<https://www.eprocure.gov.in>)

**3.7 BIDDING PROCESS**

**3.7.1 BID FORMATS**

The Bid in response to this NIT shall be submitted by the Bidders in the manner provided in Clause 3.4 of ITB, Part - II. The Bid shall comprise of the following:

- (A) ENVELOPE- I (COVERING LETTER, BID PROCESSING FEE AND BID SECURITY etc. ) (TO BE SUBMITTED OFF-LINE AND ONLINE BOTH)**
  - i. Covering Letter as per prescribed Format -1.
  - ii. General particulars of bidders as per Format -2.
  - iii. Bid Security / EMD as per the prescribed Format-3 shall be submitted as per Clause 3.12. Whereas MSEs bidder submit the MSEs Certificate, certified by CA in place of Bid Security /EMD.
  - iv. Checklist for Bank Guarantee submission requirements as prescribed in Format-5.
  - v. Original power of attorney issued by the Bidding Company in favour of the authorized person signing the Bid, in the form attached hereto as Format-6 or standard power of attorney in favour of authorized person signing the Bid. (Power of Attorney must be supplemented by Board Resolution to above effect for the company incorporated under Company Act 1956 or Company Act 2013). However, Employer may accept general

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 15 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



## Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

Power of Attorney executed in favour of Authorised signatory of the Bidder, if it shall conclusively establish that the signatory has been authorized by the Board of Directors to execute all documents on behalf of the Bidding Company.

- vi. Format-8, if applicable, supported by Board Resolution of the Parent Company of the Bidding Company duly certified by the Company Secretary or Authorized signatory to provide the Performance Bank Guarantee (PBG) in the event of failure of the Bidding Company to do so.
- vii. Undertakings from the Financially Evaluated Entity or its Parent Company as per Format - 9, if applicable.
- viii. Duly filled & signed formats -6, 7, 10 to 14 and annexures – I to IV.

The Bidder should also upload the scanned copies of all the above mentioned original documents during Online Bid-Submission.

### **(B) ENVELOPE- II TECHNO-COMMERCIAL DOCUMENTS (TO BE SUBMITTED ONLINE ONLY)**

- i. Document in support of meeting General Eligibility Criteria as per clause No.3.2.1.
- ii. Document in support of meeting Technical Eligibility Criteria as per Clause no. 3.2.2
- iii. Details for meeting Financial Eligibility Criteria as per Clause no. 3.2.3.
- iv. Signed and stamped Copy of NIT Documents including amendments & clarifications (on each page) by Authorized signatory.

### **(C) PRICE BID(S) (TO BE SUBMITTED ONLINE ONLY )**

- i) The Bidder shall submit the Price Bid digitally signed by an authorized signatory ON LINE in format only .
- ii) Only “On line Price bids” shall be considered for evaluation.
- iii) Price should be quoted in the INR only.

**Note:-**Bidder must submit all the above documents on line .If the Bidder submits the Document offline as specified in Clause 3.7.1 A, but fails to submit online Bid then the Bid shall be considered non-responsive, However the Bid Security shall be returned subject to request letter received from the Bidder’s side. Hard copy of technical bid documents should also be submitted within three day after tender submission due date.

### **3.8 BID DUE DATE**

The Bidder should submit the Bids ON LINE and delivered the offline documents of the bid to the address indicated below on or before date & time specified in the Bid Information Sheet.

Dy. General Manager (MM)  
RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.  
2, Kanakpura Industrial Area, Jaipur-302034

### **3.9 VALIDITY OF BID**

- 3.9.1 The bid and the Price Schedule included shall remain valid for a period of 90 days from the date of techno-commercial bid opening, with bidder having no right to withdraw, revoke or cancel his offer or unilaterally vary the offer submitted or any terms thereof. In case of the bidder revoking

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 16 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**

or canceling his offer or varying any term & conditions in regard thereof or not accepting letter of allocation, REIL shall forfeit the Bid Bond furnished by him. Confirmation regarding the Bid offer validity shall be clearly mentioned in the covering letter.

3.9.2 In exceptional circumstances when Purchase Order is not issued, REIL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The Bid Security /EMD shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Security /EMD. A Bidder granting the request will neither be required nor permitted to modify its Bid in any manner.

**3.10 METHOD OF BID SUBMISSION**

3.10.1.(a) Bids are required to be submitted online on CPP Portal ([www.eprocure.gov.in](http://www.eprocure.gov.in)) . Off line documents are to be submitted before due date in a single sealed cover envelope as referred under clause 3.7.1 (A) above. It should be duly sealed and signed.

3.10.1(b) Envelope shall clearly superscribe the followings:

**“Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)”** and shall clearly indicate the name and address with mobile number and email of the Bidder. In addition, the Bid Due Date should be indicated on the right hand corner of each of the envelopes. Each of the envelopes shall be addressed to:

Dy. General Manager (MM),  
**RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**  
 2, Kanakpura Industrial Area, Jaipur-302034  
 Telephone No.- 0141-2471083

3.10.2 The Bidders have the option of sending their Documents either by Registered Post or Speed Post or Courier or by Hand Delivery, so as to reach REIL Office by the Bid Deadline. Documents submitted by telex/telegram/fax/e-mail shall not be considered under any circumstances. REIL shall not be responsible for any delay in receipt of the Bid. Any Bid received after the Bid Deadline shall be returned unopened. It should be noted that Document envelope shall not contain any information/document relating to Price Bid. REIL shall not be responsible for premature opening of the Price Bids in case of non-compliance of above.

3.10.3 All pages of the documents, except for the Bid Security /EMD, and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized signatory on behalf of the Bidder. It is clarified that the same authorized signatory shall digitally sign all pages of the Bid. However, any published document submitted with the Bid shall be signed by the authorized signatory at least on the first and last page of such document Bidders shall submit the Bid in original, duly signed by the authorized signatory of the Bidder. No change or supplemental information to a Bid will be accepted after the Bid Deadline, unless the same is requested for by REIL or results from any amendment to NIT issued by REIL under clause 3.6 of this document.

3.10.4 If the envelope is not super scribed as per the specified requirement, REIL will have no responsibility for the Bid's misplacement or premature opening.

3.10.5 The envelope shall be sealed properly & shall indicate the Name & address of the Bidder. The Bid must be complete in all technical and commercial respect and should contain requisite certificates, drawings, informative literature etc. as required in the Bid document. Each page of the Bid document should be signed & stamped. Bids with any type of change or modification in any of the terms/ conditions of this document shall be rejected. If necessary, additional papers

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 17 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



may be attached by the Bidder to furnish/ submit the required information. Any term / condition proposed by the Bidder in his bid which is not in accordance with the terms and conditions of the NIT document or any financial conditions, payment terms, rebates etc. mentioned in Price Bid shall be considered as a conditional Bid and will make the Bid invalid.

### 3.11 COST OF BIDDING

The bidder shall bear all the costs associated with the preparation and submission of his offer, and the company will in no case be responsible or liable for those costs, under any conditions. The Bidder shall not be entitled to claim any costs, charges and expenses of and incidental to or incurred by him through or in connection with submission of bid even though REIL may elect to modify / withdraw the invitation of Bid.

### 3.12 BID SECURITY/ EMD

The Bidder shall furnish interest free Bid Security /EMD in the form of Bank Guarantee (BG) / Demand Draft drawn in favour of “Rajasthan Electronics & Instruments Ltd.”, payable at Jaipur. The validity of Bid Security /EMD shall be for a period of 4 months from the Bid Deadline. The Bid Security /EMD of unsuccessful bidders shall be returned within 15 days from the date of issuance of Purchase Order on bidder’s request. Bid Security /EMD of Successful bidder shall be released after the receipt of PBG in the format-4 prescribed by REIL and after the receipt of confirmation of their PBG’s from their respective banker.

Bid Security/EMD Amount – Rs. 36,30,000.00 (Indian Rupees Thirty Six Lakh and Thirty Thousand only) .

The bidder may alternatively submit bid security amount through demand draft on which no interest shall be payable by REIL.

#### 3.12.1 The Bid Security /EMD shall be denominated in Indian Rupees and shall:

- i. at the Bidder’s option, be in the form of either a Demand Draft or a Bank Guarantee from the List of Banks as indicated in Annexure –B.
- ii. be confirmed for payment by the branch of the bank giving the Bank Guarantee at Jaipur.
- iii. be submitted in its original form; copies will not be accepted and remain valid for a minimum period of 3 months from the date of original Techno Commercial bid opening, or beyond any period of extension subsequently requested under Clause 3.9.2. In case of extension in bid opening date, bidder has to either submit the amended BG valid for 4 months from actual date of bid opening or amended BG if requested by REIL after actual bid opening for requisite period.

#### 3.12.2 The Successful Bidder shall sign and stamp the Purchase Order (PO) and return the signed & stamped duplicate copy of the same to REIL within 14 days from the date of its issuance.

#### 3.12.3 The Bid Security /EMD shall be forfeited without prejudice to the Bidder being liable for any further consequential loss or damage incurred to REIL under following circumstances:

- a. Hundred Percent (100%) of Bid Security amount, if a Bidder withdraws/revokes or cancels or unilaterally varies his bid in any manner during the period of Bid Validity specified in the NIT document and in accordance with the Clause 3.9.2 of Part -II.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 18 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



- b. Hundred Percent (100%) of Bid Security amount, if the Successful Bidder fails to unconditionally accept the Purchase order within 30 days from the date of its issuance.
- c. Hundred Percent (100%) of Bid Security amount, if the Successful Bidder fails to furnish the "Performance Security" after 60 days from issuance of Purchase Order.

**3.13 PERFORMANCE SECURITY / PERFORMANCE BANK GUARANTEE (PBG)**

3.13.1 Within 15 days from the date of issuance of Purchase Order, Successful Bidder shall furnish the Performance Security as per Format-4 attached and shall be 3% of the basic value of purchase order and shall be valid upto 60 days beyond the successful completion of all the obligations of Purchase Order.

3.13.2 Further, any delay in submission of PBG beyond 30 days shall attract interest @ 1.25 % per month on the total amount, calculated on day to day basis. REIL at its sole discretion may cancel the order and forfeit 100% of Bid Security, in case Performance security is not submitted within 60 days from issuance of Purchase Order as per Clause 3.12.3(c). Part PBG shall not be accepted.

3.13.3 The Performance Security shall be denominated in Indian Rupees only and shall be in one of the following forms:

- a. Demand Draft or a Bank Guarantee from the List of Banks as indicated in Annexure -B
- b. BG confirmed for payment by the branch of the Bank giving the Bank Guarantee at Jaipur.

3.13.4 The PBG shall be forfeited as follows without prejudice to the Bidder being liable for any further consequential loss or damage incurred to REIL, If the Successful Bidder (Supplier) is not able to commission the project to the satisfaction of REIL.

3.13.5 Successful bidder initially deposited the Performance for a minimum period of 2 years 8 months (i.e 60 days beyond the completion of all the obligation of Purchase Order) from the date of issuance of Purchase Order. If the successful bidder (Supplier) unable to complete all the obligations of Purchase Order with in specified time period then successful bidder (Supplier) will extend the Performance Security before 30 days of expiry of Performance Security. If the successful bidder does not extend the PBG, the same shall be forfeited by REIL. The Performance security shall be released after compliance of entire obligations in the Purchase Order.

**3.14 OPENING OF BIDS**

3.14.1 Bids shall be opened at date & time specified in Bid Information Sheet or amendments issued by REIL at the venue indicated herein above, in the presence of one representative from each of the Bidders who wish to be present.

3.14.2 Name of the Bidder shall be read out to all the Bidders at the time of bid opening.

**3.15 RIGHT TO WITHDRAW THE NIT AND TO REJECT ANY BID**

3.15.1 This NIT may be withdrawn or cancelled by REIL at any time without assigning any reasons thereof. REIL further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account.

3.15.2 REIL reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the NIT and make its own judgment regarding the interpretation of the same. In this regard the REIL shall have no liability towards any Bidder and no Bidder shall have any recourse to REIL with respect to the selection process. REIL shall evaluate the Bids using the

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 19 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



evaluation process specified in NIT, at its sole discretion. REIL decision in this regard shall be final and binding on the Bidders.

3.15.3 REIL reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the Bid before submission. The decision regarding acceptance of bid by REIL will be full and final.

**3.16 ZERO DEVIATION**

This is a ZERO Deviation Bidding Process. Bidder is to ensure compliance of all provisions of the Bid Document and submit their Bid accordingly. Tenders with any deviation to the bid conditions shall be liable for rejection.

**3.17 EXAMINATION OF BID DOCUMENT**

3.17.1 The Bidder is required to carefully examine the Technical Specification, terms and Conditions of Contract, and other details relating to supplies as given in the Bid Document.

3.17.2 The Bidder shall be deemed to have examined the bid document including the agreement/ contract, to have obtained information on all matters whatsoever that might affect to execute the project activity and to have satisfied himself as to the adequacy of his bid. The bidder shall be deemed to have known the scope, nature and magnitude of the supplies and the requirements of material and labour involved etc. and as to all supplies he has to complete in accordance with the Bid document.

3.17.3 Bidder is advised to submit the bid on the basis of conditions stipulated in the Bid Document. The cancellation / alteration / amendment / modification in Bid documents shall not be accepted by REIL.

3.17.4 Bid not submitted as per the instructions to bidders is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this bid document.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 20 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



## PART – IV

# EVALUATION CRITERIA

(NIT NO. –REIL/MM/22-23/E-PROC/22046)



## RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.

(An ISO 9001:2015 &14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471835, +91-141-2470879,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 21 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**1. BID EVALUATION**

The evaluation process comprises the following four steps:

Step I: Responsiveness check of Techno Commercial Bid

Step II: Evaluation of Bidder’s fulfillment of Eligibility Criteria

Step III: Evaluation of Price Bid

Step IV: Successful Bidders(s) selection

**1.1. RESPONSIVENES CHECK OF TECHNO-COMMERCIAL BID**

The Techno Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the NIT subject to Clause 3.2.1, Clause 3.2.2, and Clause 3.2.3 of Part - II. Any of the following may cause the Bid to be considered “Non-responsive”, at the sole discretion of REIL:

- a. Bids that are incomplete, i.e. not accompanied by any of the applicable formats inter alia covering letter, power of attorney supported by a board resolution, Bid Security etc.;
- b. Bid not signed by authorized signatory and /or stamped in the manner indicated in this NIT;
- c. Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria;
- d. Information not submitted in the formats specified in this NIT;
- e. Bid being conditional in nature;
- f. Bid not received by the Bid Deadline;
- g. Bid having Conflict of Interest;
- h. More than one Member of a Bidding Company using the credentials of the same Parent Company;
- i. Bidder delaying in submission of additional information or clarifications sought by REIL as applicable;
- j. Bidder makes any misrepresentation.

Each Bid shall be checked for compliance with the submission requirements set forth in this NIT before the evaluation of Bidder’s fulfillment of Eligibility Criteria is taken up. Clause 3.2 of Part - II shall be used to check whether each Bidder meets the stipulated requirement.

**1.2 PRELIMINARY EXAMINATION**

1.2.1 REIL will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and stamped and whether the Bids are otherwise in order.

1.2.2 If there is a discrepancy between words and figures, the amount written in words will prevail.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 22 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



### 1.3 EVALUATION OF BIDDER'S FULFILMENT OF ELIGIBILITY CRITERIA

Evaluation of Bidder's Eligibility will be carried out based on the information furnished by the Bidder as per the prescribed Formats and related documentary evidence in support of meeting the Eligibility Criteria as specified in Clause 3.2 part-II, ITB. Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid non-responsive.

### 1.4 EVALUATION OF PRICE BID

1.4.1 Price Bid of the Qualified Bidders shall be opened online through CPP Portal . The evaluation of Price Bid shall be carried out based on the information furnished in Financial Bid (Price Bid). The Price Bid submitted by the Bidders shall be scrutinized to ensure conformity with the NIT. Any Bid not meeting any of the requirements of this NIT may cause the Bid to be considered "Non-responsive" at the sole decision of the REIL.

1.4.2 Price bids shall be evaluated on FOR REIL Jaipur basis.

### 1.5 SUCCESSFUL BIDDER(S) SELECTION

1.5.1 Bids qualifying in Clause 1.4 shall only be evaluated in this stage.

1.5.2 Price quoted in all Price Bids of Qualified Bidders shall be ranked from the lowest to the highest. (FOR REIL Jaipur Basis).

#### 1.5.3 ASSESSMENT OF SUCCESSFUL BIDDER

1.5.3.1 Based on the price bid quoted by the bidders, REIL shall arrange the bids in the ascending order i.e. L-1, L-2 and so on (L-1 being the lowest quoted value).

1.5.3.2 Preference to Make in India shall be given as per the latest Govt guidelines. Refer Govt of India Public Procurement Order 2017 and revision no. P-45021/2/2017-PP (BE-II) dated 04.06.2020 issued by Public Procurement Section, Department of Industry & Internal Trade and Ministry of Commerce & Industry. Successful bids shall be evaluated as per these Govt guidelines.

1.5.7 REIL at its own discretion, has the right to reject any or all the Bids without assigning any reason whatsoever, at its sole discretion

1.5.8 If Value of the bid is more than the estimated bid value, then REIL may negotiate with the L-1 Bidder.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 23 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**2. NOTIFICATION TO SUCCESSFUL BIDDERS**

The name of Successful Bidders shall be notified with offered price on REIL website [www.reiljp.com](http://www.reiljp.com) or CPP Portal and also shall be notified individually through Purchase Order.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 24 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



# PART – IV

## GENERAL

# CONDITIONS OF CONTRACT (GCC)

(NIT NO. – REIL/MM/22-23/E-PROC./22046)



## RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.

(An ISO 9001:2015 & 14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471835, +91-141-2470879 ,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 25 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



## GENERAL TERMS AND CONDITIONS

### 1) AMENDMENT

Except as otherwise provided herein, no addition, amendment to or modification of the Contract shall be effective unless it is in writing and signed by and on behalf of both parties.

### 2) SEVERABLEITY

In the event that any or any part of the terms conditions or provisions contained in the Contract shall be determined invalid, unlawful or unenforceable to any extent such term, condition or provision shall be served from the remaining terms, conditions and provisions that shall continue to be valid and enforceable to the fullest extent permitted by law.

### 3) CONFIDENTIAL TREATMENT

It is understood and agreed that data, know-how and other such proprietary information that was provided or will be provided by either party, will remain confidential.

### 4) RELATIONSHIP OF THE PARTIES

REIL relationship with Supplier will be that of a Business Associate, and nothing in this Contract shall be construed to create a relationship, joint venture, partnership.

### 5) INDEMNITY

REIL and the Supplier will indemnify, defend, and hold harmless each other and its divisions, successors, subsidiaries and affiliates, the assigned of each and their directors, officers, agents and employees from and against all liabilities, claims, losses, and damages of any nature, including, without limitation, all expenses (including attorney’s fees), cost, and judgments incident there to REIL and REIL’s obligations under this indemnity will survive the expiration, termination, completion or cancellation of this Contract or an order hereunder.

### 6) FORCE MAJURE

REIL and the Supplier shall not be under any liability to each other or to any other party in any way whatsoever for the destruction, damage, delay or any other matters of the nature arising out of reasons beyond the control of either party, including but not limited to a war, rebellion, civil commotion, strikes, lock-outs and industrial disputes; fire, explosion, earthquake, Act of God, flood, drought, bad weather, requisitioning or other act or order by any government department, council or other constituted body, and similar other reasons.

If a force majeure situation arises, the Supplier shall notify REIL in writing promptly, not later than 7 (seven) days from the date such situation arises. The Supplier shall notify REIL not later than 3 days of cessation of force majeure conditions. After examining the cases, REIL shall decide and grant suitable additional time for the completion of the work, if required.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 26 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



## 7) RESTRICTION ON EMPLOYMENT

Both the parties have agreed that they will not recruit any members of staff of other party directly or indirectly.

## 8) ARBITRATION

All disputes arising out of this contract and questions relating to its interpretation etc. shall be referred to the contract committee headed by GM/AGM and if not resolved shall be referred to the sole arbitration of Managing Director, Rajasthan Electronics & Instruments Ltd., for his decision, which shall be final and binding on both parties. The Venue of Arbitration proceedings shall be at Jaipur.

## 9) RISK AND COST

In the event of failure on the part of the contract in the supply, installation and commissioning of goods and services, which is required in view of the pending orders, REIL shall be entitled to cancel the remaining order and procure the outstanding quantity through other sources at risk and costs of the supplier.

## 10) TERMINATION OF CONTRACT:

REIL shall be entitled to terminate this Contract, in the event of any or all or any of the following events, with a written notice of 15 days with due consent of the supplier:-

- i. has abandoned the Contract.
- ii. has without valid reason failed to supply the goods in respect of the contract or has suspended the progress of supply of equipment.
- iii. Persistently fails to execute the Contract in accordance with the Contract or persistently neglects to carry out its obligations under the Contract without just and proper cause.

## 11) DURATION OF CONTRACT

This contract shall take effect on the day of release of Purchase order and shall endure for the period of 7 months from the date of Purchase order.

## 12) GOVERNING LAW

This contract and its validity, interpretation and performance will take effect and be governed under the laws of India. Venue in any action in law or equity arising from the terms and conditions of this contract shall be the court of appropriate jurisdiction in Jaipur, Rajasthan (India).

## 13) PREFERENCE TO MSE

Preference to MSE will be given and procurement from SC/ST and Women Entrepreneurs shall be done as per the government guidelines. Start Ups are exempted from condition of prior turnover and prior experience subject to meeting of quality and technical specifications and submission of valid certification of recognition from department for Promotion of Industry and Internal Trade(formerly DIPP).

## 14) INDIGENOUS MANUFACTURER

Indigenous manufacturer shall be given preference for promotion of indigenous products to maximum subject to meeting quality standards and specifications.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 27 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



### 15) NO NEAR RELATIVE CLAUSE

The bidder should give a certificate that none of his/her near relative is working in REIL as defined below along with their technical bid as per the attached format-13 . In case of proprietorship firm certificate will be given by the proprietor. For partnership firm & LLP , certificate will be given by all the partners and in case of limited company by all the Directors of the company excluding Government of India/Financial institution nominees and independent non-Official part time Directors appointed by Govt. of India or the Governor of the state and full time Directors of PSUs both state and central. Due to any breach of these conditions by the company or firm or any other person the tender will be cancelled and Bid Security will be forfeited at any stage whenever it is noticed and REIL will not pay any damage to the company or firm or the concerned person. The company or firm or the person will also be debarred for further participation in REIL's Tender. The near relatives for this purpose are defined as:- (a) Members of a Hindu undivided family. (b) They are husband and wife. (c) The one is related to the other in the manner as father, mother, son(s) & Son's wife (daughter in law), Daughter(s) and daughter's husband (son in law), brother(s) and brother's wife, sister(s) and sister's husband (brother in law).

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 28 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



# **PART – V**

# **SPECIAL**

# **CONDITIONS OF CONTRACT (SCC)**

(NIT NO. – REIL/MM/22-23/E-PROC./22046)



## **RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**

(An ISO 9001:2015 &14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471083,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23/E-PROC./22046	Page 29 of 79	Signature of Bidder
--	--------------------------------------	---------------	---------------------



**1 Project description :**

The project is setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis) at REIL ,Jaipur .

**2 Project Site:**

Project site is located at REIL, 2 –Kanakpura Industrial Area ,Sirsi Road ,Jaipur- India , Pin Code-302034.

**3 Scope of Works:**

The detailed scope of works under this contract shall be referred at Section VI: SCOPE OF WORK & TECHNICAL SPECIFICATIONS.

**4 Trial Run of Line:**

Vendor will run the line after successful completion of installation & commissioning for min. one month as a trail run of the line, to produce minimum 5 MW of SPV Modules. A set of modules produced will be send to Indian laboratories authorized by MNRE for BIS certification.

**5 Exemption for MSEs AND Start ups:**

5.1 Bid Security / EMD are exempted for Indian MSEs Manufacturers/ Startups meeting the following criteria:

It is mandatory for MSE bidders to declare their Udhyam Registration/ UdhyogAadhar number on CPP Portal, failing which such bidders will not able to enjoy the benefits of procurement policy for MSE., CA certificate is mandatory for confirmation of MSE status as per recent Government guidelines of Turnover ,investment in plant & Machinery and manufacturer of tendered items . If Udhyam registration is not available then confirmation is needed that you have applied for Udhyam Registration. 2) Startup bidders should submit valid certification of recognition from department for Promotion of Industry and Internal Trade (formerly DIPP) on CPP Portal failing which such bidders will not able to enjoy the benefits of Procurement policy for startups.

5.2 If MSEs/Start up vendor will awarded the capacity and it does not submit the performance bank guarantee as per clause 3.13 of Part – II ITB, it shall be blacklisted from all tenders of REIL or shall have to pay a penalty equivalent of Bid Security/EMD amount with subsequent interest calculated as 1.25 % per month on Bid Security/ EMD amount from the date of bid submission.

**6 Performance Guarantee:**

6.1 Successful Production of minimum 5 MW of SPV Modules during trial runs.

6.2 The breakage of Solar Cell must be less than 0.3 % from over all the line.

6.3 One Month smooth production as per calculation sheet, clause No.-2 Part-II, ITB.

6.4 Following Process Parameters should be demonstrated.

- Gel Content  $\geq$  80% ,
- Ribbon Peel Strength  $\geq$  2 N (Front side),
- EVA to Glass Peel Strength  $\geq$ 16 N/CM,
- EVA to Backsheet Peel Strength  $\geq$  40 N/CM

6.5 Modules manufactured by the line must qualify Design & Safety qualification BIS certificate for the module upto 545 W.

**7 Project Time line:**

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 30 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



# Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

The time line for Completion of the installation & Commissioning of line is 7 months from the date of issue of Purchase Order.

## 8 Mode of Execution:

The entire work shall be executed on turnkey basis. Any item(s) not included in the NIT but essentially required for completion of the line shall have to be carried out/ supplied without any extra cost. Such works, not listed in the NIT of works but elaborately described to perform or to facilitate particular operation(s) required for completion of the project shall deemed to have been included in the scope of this work and the vendor shall supply, install & commission the same without any extra cost.

## 9 Terms of Payment:

### 9.1 Payment Terms

- i. 75% of the invoice value will be paid through irrevocable L/C payable at 90 days from date of receipt of material at REIL works, Jaipur subject to submission of copy of Performance Bank Guarantee.
- ii 25% of the invoice value will be paid through irrevocable L/C after 120 days from the date of receipt of material at REIL Works subject to submission of signed successfully completion report of installation & commissioning and hands on training on operations and maintenance of the Line (Both on software as well as on hardware) at Buyer's site signed by representative of REIL.

**Note:** L/C of First Mile stone payment ie. 75% of the invoice value will be open with in 30 days after receipt of performance bank Guarrantee. Whereas L/C of Second Mile stone payment ie. 25% of the invoice value will be open with in 30 days after receipt of complete material at REIL , Works .

### 9.2 Documents required for Payment

#### i. For 75% Payment:

- 01. Draft for 75% of Invoice Value
- 02. Invoice-6 copies in original
- 03. Packing List-6 copies in original
- 04. Certificate of Origin-2 copies in original from Chamber of Commerce.
- 05. Quality Certificate/ Test Report-6 copies in original
- 06. Complete Material receipt duly signed by REIL authorized person in original
- 07. Scanned copy of Pre dispatch inspection report of Line signed by buyer's representative
- 08. Copy of Performance bank Guarantee (PBG)
- 09. Any other document which may require as per requirement

#### ii. For 25% Payment:

- 01.Draft for 25% of Invoice Value
- 02.Copy of Invoice-6 copies in original
- 03.Signed Completion Report of Installation & Commissioning with hands on training on operations and maintenance of Line at Buyer's site by REIL.

### 9.3 Period of Presentation of documents:

- i. **For 75% Payment:** Draft of 75% of the invoice value should be presented to the negotiating bank within 21 days from date of receipt of material at REIL Works.
- ii. **For 25 % Payment:** Draft of 25% of the invoice value should be presented within L/C validity.

## 10 Price Escalation

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 31 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**

No Price escalation is allowed. The rate(s) quoted against the work shall remain firm during the entire Contract period. Any change in Forex rate shall not be considered for price variation.

**11 Liability and Insurances:**

11.1 All the supplies mentioned/ required under this NIT shall be insured till REIL, Jaipur. The vendor shall be responsible for loss, damages or depreciation to goods, Equipments & machineries upto delivery at site. The replacement of the effected item shall also be carried out by the vendor to meet the performance of the line with in specified time.

11.2 All insurance related expences shall be borne by vendor. Goods, Equipments & machineries supplied shall be fully insured against the loss or damage or theft or pilferage or fir accident or combination etc upto delivery at site i.e REIL, Jaipur before dispatch of material.

11.3 Vendor should also provide the insurance coverage to its workmen under Workmen's Compensation Act or similar Rules and Acts as applicable during installation & commissioning of the line

**12 Taxes and Duties:**

12.1 Proper tax invoices, raised against the different work viz. Supply, installation & commissioning etc must be submitted mentioning the tax component (GST) clearly and separately. Company will pay only GST charges as applicable. Company will not pay more than the basic price except GST Charges.

12.2 Bidder will quote the price based on the concessional rate or exemption in the same (as applicable) that can be availed by the bidder on its own.

**13 Liquidated Damage:**

Liquidated damages in the event of delay in affecting the delivery and I&C within agreed period, a reduction in the price shall be levied @ 0.50% of the total purchase order value per week or part thereof subject to maximum of 5% of the total purchase order value.

**14 Pre Dispatch Inspections:**

Pre Dispatch Inspection of module manufacturing equipments will be done by REIL/REIL's representative. REIL/REIL's representative shall have free access to the supplier's works during testing and final inspection of module manufacturing equipments. Vendor shall inform the REIL not less than 30 days in advance. All testing arrangements shall be the responsibility of the vendor. REIL reserves the right to inspect the material during manufacturing and/or before dispatch as per specifications and test protocols. Internal inspection report and inspection certificate must accompany the supply.

**15. Training:**

Vendor should provide adequate training to three (3) REIL officials for 10 Days free of cost on operation and maintenance at the time of pre-dispatch inspection of the equipments at vendor's works. Vendor also provide training to REIL supervisors & workers on operation and maintenance of all the machines at the time, trial run of production of SPV Modules at REIL JAIPUR.

**16. Warranty:**

The supplier should give comprehensive Guarantee/ Warranty for a period of 24 months of overall line from the successful installation & commissioning of the line. During this period supplier /manufacturer should replace/ repair the defective parts and consumables. The entire expenditure including freight, customs duty, customs clearing charges, GST and local transportation if any for such replacement shall be borne by the supplier. In order to un-interrupted operation of line, during warranty period , a set of spare parts & consumables for over all line shall be provided by supplier. Supplier will also undertake for after sales support for supplied item for the next 5 years after completion of warranty period on

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 32 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



## Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

chargeable basis. Supplier will provide the list of Spare parts and consumables with tentatives price before completion of the warranty period of line.

### 17. Miscellaneous:

- (i) Vendor shall supply all equipment as per specifications to REIL, integrate all equipment and commission the PV Module line along with conveyor / transport system.
- (ii) Vendor shall supply all new equipment and not for any refurbished / used equipment.
- (iii) Three sets of operation and maintenance manuals for each equipment along with bought out items manual in English shall be supplied. Maintenance manual should include complete electrical schematics, all mechanical /pneumatic/ hydraulic diagram, trouble shooting chart, routine checks and preventive maintenance schedule and recommended spare parts list. Two sets of backup software CD's of all equipment is also to be provided.
- (iv) The equipment shall be designed taking into account all safety and Occupational Health and Safety Advisory Services (OHSAS) requirements. Hazards connected with operation & maintenance of the equipment shall be brought out explicitly and instructions for minimizing the hazards (environmental / safety) to be indicated.
- (v) The equipment shall be aesthetically fabricated.
- (vi) All pneumatics e.g. solenoid valves, isolation valves, gauges should be of well known reputed make. Vendor should specify the make.
- (vii) PC, PLC, electronics module used for automation in equipment should be of well known reputed make. Vendor should specify the make
- (viii) List of spares, part numbers, price and address of original suppliers of spares/subsystems should be provided.
- (ix) Service facilities required, Environmental requirements and their tolerance limits may be furnished.
- (xi) Design & safety qualification BIS certificate will be taken on the modules up to 540 Wp produced during trial production. BOM for trial run will be provided by Supplier but material for trial run will be provided by REIL.
- (xii) RFI filter / surge suppresser shall be provided at mains (incoming) stage as well as at the input stage of critical electronic instruments / systems used in the equipment.
- (xiii) The vendor should submit test and guarantee certificates for all the supplied equipment. Calibration certificates for all the instruments / gauges/ indicators shall be provided. Calibration procedures are also to be indicated in detail. All equipment shall be guaranteed for trouble-free operation against manufacturing defects for a minimum period of 2 years from date of commissioning.
- (xiv) Equipment should be rated for nominal 415 V+/- 5% /3 phase / 50 Hz / 5 wire or 220 V+/- 5% / 1 phase / 50 Hz / 3 wire systems only
- (xv) Service Engineers deputed by the Vendor for installation of the equipment at REIL works shall comply with safety regulations, and have had adequate training in Environmental/ Health /Safety hazards associated with the installation and operation of the equipment.
- (xvi) REIL will like to deal directly with manufacurers of equipment or turnkey supplier..
- (xvii) In case of discrepancy between GCC Clause and SCC Clause on a particular subject, SCC conditions will prevail.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 33 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



# **PART – VI**

# **SCOPE OF WORK**

# **&**

# **TECHNICAL SPECIFICATIONS**

(NIT NO. – REIL/MM/22-23/E-PROC./22046)



## **RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**

(An ISO 9001:2015 &14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471835,+91-141-2470879 ,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23/E-PROC./22046	Page 34 of 79	Signature of Bidder
--	--------------------------------------	---------------	---------------------



**TECHNICAL SPECIFICATION**

**Scope of work:** The scope of work would essentially cover but not limited to setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line (On Turnkey Basis) which include Supply, Layout Design, installation & commissioning, Integration, testing of equipments/machineries, Warranty, BIS Certification and hands on training for running and maintenance of the Line.

SNo.	Equipment	Specification
<b>In-Line Equipments</b>		
1	Glass Lifter	<ul style="list-style-type: none"> <li>•Glass Loader to Pick up the glass from the Pallet and placing it on the Lay-up Station</li> </ul>
2	Tabber Stringer	<ul style="list-style-type: none"> <li>•An advanced and innovative High Speed Tabber &amp; Stringer machine with Throughput of minimum 3600 Cells/ hour</li> <li>•1/3rd Cell Processing is also required as optional</li> <li>•Breakage less than 0.2%.*</li> <li>•It is equipped with INFRARED soldering head to solder very thin PV solar cells such as MONO, POLY, BIFACIAL, PERC and high efficiency solar cells without mechanical and thermal stress.</li> <li>•Machine is equipped with High Resolution Camera which is used for the alignment &amp; centering of cells and Camera for detecting broken Cells before soldering.</li> <li>•The alignment is performed both optically and mechanically</li> <li>•Compatibility : 5BB to 12BB</li> <li>•4 Axis ROBOT for accurate cells handling</li> <li>•High Resolution Camera for Broken Cell Detection, Cell Alignment &amp; Centering</li> <li>•Compatible with Cell size from 157mm to 210mm</li> <li>•Half Cut &amp; Triple Cut Cell can also be processed in this machine upto 210mm x 105mm and minimum of 210mm x 70mm</li> <li>•Cell basket loading is Automatic with minimum 8 numbers of basket included</li> <li>•Ribbon Positioning Accuracy : <math>\pm 0.2\text{mm}</math> + Cell tolerance</li> <li>•Flat Ribbon Size : Width 0.50 to 1mm, Thickness 0.15 to 0.22mm</li> <li>•Round Ribbon Size : <math>\varnothing 0.30</math> to <math>\varnothing 0.40</math> mm available as optional</li> <li>•Cell – Cell Gap: 1.5 to 35 mm; tolerance: +/- 0.1mm and for 210 mm cell +/- 0.25mm + Cell tolerance</li> <li>•Cell positioning accuracy: <math>\pm 0.1\text{mm}</math></li> <li>•String Length: Max. 2200mm</li> <li>•The machine is supplied with internet assistance and embedded PC with user friendly HMI</li> <li>•String Flipping device is provided on the unloading belt</li> <li>•Automatic Spray Fluxing system on Ribbon</li> <li>•Centring Plate for pre heating of cells to avoid thermal stress</li> <li>•Ribbon Changeover Time : Approximately 120 - 150 secs</li> <li>•CONFIGURATION KIT FOR THE MACHINE:               <ul style="list-style-type: none"> <li>•5BB – 157mm (Full Cell) with Interaxis 31.2mm &amp; 1mm Flat Ribbon</li> <li>•9BB – 166mm x 83mm (Half Cut Cell) with Interaxis 16.8mm &amp; 0.5mm Flat Ribbon</li> <li>•10BB – 182mm x 91mm (Half Cut Cell) with Interaxis 17.3mm &amp; 0.5mm Flat Ribbon</li> <li>•12BB – 210mm x 105mm (Half Cut Cell) with Interaxis 17.3mm &amp; 0.5mm Flat Ribbon</li> </ul> </li> <li>•Online / Offline Laser Scribe:               <ul style="list-style-type: none"> <li>•Laser Scribing &amp; Separating machine for solar cells</li> </ul> </li> <li>•Characteristics:               <ul style="list-style-type: none"> <li>•Loading and unloading mechanism suitable for half cells</li> <li>•Scribing width : &lt; 0.05 mm</li> <li>•Cutting thickness : &lt; 1.2 mm</li> <li>•Dimension of the cut solar cells to be defined by user for preliminary setting of</li> </ul> </li> </ul>



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

		the equipment
3	Hi-Speed Layup Station with 6 Axis Robot	<ul style="list-style-type: none"> <li>•It is a robotic layup station designed to increase efficiency and accuracy in module production.</li> <li>•The robot's arm picks up the strings from the stringer machine and places them on the glass provided with encapsulant.</li> <li>•The strings are positioned very precisely due to the use of embedded cameras, which allow an accurate alignment.</li> <li>•The strings are positioned on the glass by the robot which turns them clockwise or anticlockwise in order to allow the electrical connection between the strings.</li> <li>•Placing of the strings on the glass with glass Centering</li> <li>•Included Reject tray for strings</li> <li>•Pick-up arm supplied with the machine</li> <li>•157mm Full Cell</li> <li>•166mm Half Cut</li> <li>•182mm Half Cut</li> <li>•210mm Half Cut</li> <li>Etc.</li> </ul>
4	Buffer Station before busing and before lamination	<ul style="list-style-type: none"> <li>•Buffer system to store up to 15 modules for a temporary storage.</li> <li>•This buffer works autonomously and it is provided with a PLC and electrical control panel.</li> </ul>
5	Multi-station for Bussing	<p>Inline Bussing station for bussing composed by:</p> <ul style="list-style-type: none"> <li>•5 Multistation with support for Standard as well as Twin Peak Module bussing with PLC Control.</li> <li>•Each work station for soldering of head connections supports two soldering stations.</li> <li>•The island stations help the operators to perform the soldering of the head connections optimizing the productivity and speeding the operations.</li> <li>•Provision for connecting continuity tester is made in the bussing station.</li> </ul>
6	Motorized Conveyor For Visual Inspection	<ul style="list-style-type: none"> <li>•Motorized Conveyor with Mirror for Visual Inspection</li> </ul>
7	Electroluminescence (EL) Tester( Before Lamination)	<p>Characteristics:</p> <ul style="list-style-type: none"> <li>•Capability to detect Microcracks, Contamination, Sintering Defect, Defects of Solar cell material (Debris, Cracked, Broken Gate, pollution), Defects from the Welding Process (Weld, De-Solder, Broken Fingers), Mix Different levels Cells sorted wrongly</li> <li>•Exposition time: from 1s to 10s per snap</li> <li>•Analysing time for a complete module: less than 30s</li> <li>•PC based software</li> <li>•Dark current test in-built in the machine</li> <li>•Motorised Loading / Unloading with Manual Contact</li> <li>•Bar Code Reader</li> <li>•43" monitor for clear vision</li> </ul>
8	Transport System For Reject Modules	<ul style="list-style-type: none"> <li>• Motorised Exit rolling conveyor with direction changer for rejected modules.</li> </ul>
9	Fully Automatic Laminator with Loading belt & Unloading Belt	<ul style="list-style-type: none"> <li>• Automatic two stage laminator for photovoltaic module laminator with Centering and Loading system.</li> <li>•Maximum Module Size : 2500mm x 1400mm &amp; module qty.- 5 / cycle</li> <li>•Each plate is divided in multiple controllable zones.</li> <li>•Each zone is heated by electrical elements/oil heating with a uniformity of +/- 2°C.</li> <li>•The temperatures in each zone are independent in order to have uniform gel content over the complete surface of the module.</li> <li>•Automatic Module Centering.</li> <li>•Suitable for Glass to Glass Module (2+2mm, 3.2+3.2mm). Other Glass sizes can be processed using Optional Kit</li> <li>•Automatic release sheet made of Teflon on both module sides during lamination.</li> </ul>



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

		<ul style="list-style-type: none"> <li>•Quick change system of the silicone membrane with clamps around the external borders of the laminator. Membrane change in less than 30 minutes and change can be performed with the plates still in working temperatures.</li> <li>•Additional Vacuum pump installed in the pump housing for non-stop operation</li> <li>•The Condenser unit absorbs the gasses / fumes formed during the lamination process in order to not damage the pumps and to not let out this gas in the environment. Internet connection for assistance and supervision.</li> <li>•Cooling of the Modules on unload belt</li> </ul>
10	Transport System	<p>Transport System consists of:</p> <ul style="list-style-type: none"> <li>• 1 No. of long Motorised Conveyor Belt with PLC control</li> <li>• 2 Nos. Direction Changer.</li> <li>• Ladder for reaching between the laminator.</li> </ul>
11	Buffer After Lamination	<ul style="list-style-type: none"> <li>• Buffer system to store up to 15 modules for a temporary storage.</li> <li>•This buffer works autonomously and it is provided with a PLC and electrical control panel.</li> </ul>
12	EdgeTrimming Station	<ul style="list-style-type: none"> <li>•Inline motorized trimming station.</li> <li>•Turn able table with vacuum blocking system.</li> <li>•The edge trimming is done manually.</li> </ul>
13	Automatic Inline Framing	<ul style="list-style-type: none"> <li>•Inline Framing Machine with Centering Conveyor &amp; PLC Control for easy Operation</li> <li>•Sunny side down operation with Motorised Loading &amp; Unloading</li> <li>•Suitable for silicone &amp; Double Sided Tape framing.</li> <li>•Frame punching on long side &amp; Short Side at same time.</li> <li>•Auto locking system for Corner Blocks</li> </ul>
14	Automatic Silicon Dispensing Machine	<ul style="list-style-type: none"> <li>• Automatic dispenser / Pneumatic silicone pump for neutral silicone drums of 25 kg.</li> <li>•It is an automatic machine developed to put in automatic way an even and correct amount of silicone in the frame that later will be installed around the photovoltaic module.</li> <li>•The machine is composed by a load unit that feeds the frames to the silicone station that after applying the silicone on the frame pushes it to the operator.</li> <li>•The machine has a sensor that reads the state of the unload station in order to interrupt the cycle automatically when the belt is full.</li> <li>•Additional Nozzle for Junction Box Fixing</li> </ul>
15	90° Flip & Inspection	<p><b>Inline Visual inspection station with 90 degree rotation consist of following</b></p> <ul style="list-style-type: none"> <li>•Visual Inspection Station with Auto Lifting System &amp; Illumination</li> <li>•Motorised Transport System with 90 Degree Rotation.</li> </ul>
16	Transport System For Reject Modules	<ul style="list-style-type: none"> <li>• Motorised Exit rolling conveyor with direction changer for rejected modules.</li> </ul>
17	JB Fixing	<ul style="list-style-type: none"> <li>• 2 Nos. of Multistation for fixing junction box on Twin Peak module</li> </ul>
18	Motorized Conveyor Before Hi-Pot Testing	<ul style="list-style-type: none"> <li>• Motorized conveyor for loading the module on Hi-pot Testing.</li> </ul>
19	Hi-Pot Tester (High Voltage) With Auto Centering	<ul style="list-style-type: none"> <li>• In order to guarantee a long life of the photovoltaic module and the safety of the installation, An instrument which controls the electrical insulation of the modules during the production process in respect of the norm IEC 61215/61730.</li> <li>•The instrument permits to perform the Hi-Pot test with a maximum voltage of 6kV DC &amp; IR test upto 1500V</li> <li>•The Machine incorporates Motorised Loading / Unloading of the module with Manual Contact testing</li> </ul>



20	Motorized Conveyor Before Sun Simulator	• Motorized conveyor for loading the module on sun simulator.
21	Automatic Sun Simulator with Centering - (Automatic Loading/Unloading)	<ul style="list-style-type: none"> <li>•Sun Simulator represents a new generation of sun simulator with use of LED/Lamp, more than consenting a supply of radiation. Light source more than A+ Class</li> <li>•Suitable for module with cells: Mono, Poly, PERC, HIT, Bifacial, Back Contact, Thin Film – Sun Soaking</li> <li>•Spectral Range : 300nm – 1200nm</li> <li>•Range of intensity : 200W/m<sup>2</sup> – 1200W/m<sup>2</sup></li> <li>•Spectrum : ± 8%</li> <li>•LTI / STI : ± 0.125%</li> <li>•Non-Uniformity of Irradiance &lt; 1% (A+ Class at 1000 W/m<sup>2</sup>)</li> <li>•Repeatability Error &lt; 0.3 /0.5 % at continuous test 40/100 respectively</li> <li>•No recharging time between the tests</li> <li>•Standard pulse duration : 100ms – 200ms</li> <li>•Long pulse capabilities : 3 – 5s</li> <li>•Possibility to personalize the pulses up to 30s</li> <li>•Calibrated pyranometer for irradiance measurements</li> <li>•Compact dimensions</li> <li>•Precise Electronic load for the characterization of the module with customized I- V range</li> <li>•Sensor to measure the module and the environment temperature</li> <li>•Uniformity constant over LED/Lamp source life time</li> <li>•LED/Lamp source with high life time</li> <li>•Nr. 1 Thermal Printer for bar code and back labels with Ribbon, Barcode label &amp; Backside Label</li> <li>•Nr. 1 Laser printer for printing IV Curve</li> <li>•Bar Code Reader</li> <li>•Inline work height 1000 mm</li> <li>•SQL database for data storage</li> <li>•RFID compatible with suitable hardware</li> <li>•8 Sets of JB Extension cable for module testing</li> <li>•Motorised load/unloading system with Manual contact</li> </ul>
22	Motorized Conveyor Before EL Tester	• Motorized conveyor for unloading the module after sun simulator as well as input for EL Testing.
23	In-Line Electroluminescence Tester - (For Finished Modules)	<p>Characteristics:</p> <ul style="list-style-type: none"> <li>•Capability to detect Microcracks, Contamination, Sintering Defect, Defects of Solar cell material (Debris, Cracked, Broken Gate, pollution), Defects from the Welding Process (Weld, De-Solder, Broken Fingers), Mix Different levels Cells sorted wrongly</li> <li>•Exposition time: from 1s to 10s per snap</li> <li>•Analysing time for a complete module: less than 30s</li> <li>•PC based software</li> <li>•Dark current test in-built in the machine</li> <li>•Motorised Loading / Unloading with Manual Contact</li> <li>•Bar Code Reader</li> <li>•43” monitor for clear vision</li> </ul>
24	Motorized Conveyor After EL Tester	• Motorized conveyor for unloading the module after final EL Testing
<b>Off-Line Equipments</b>		
25	EVA / Back sheet Automatic Cutting Machine	<ul style="list-style-type: none"> <li>• Off-line Automatic film cutting machine for EVA and back sheet.</li> <li>•Easy and quick change of the cutting measures.</li> <li>•Easy and quick change of the material type.</li> <li>•The speed and all measures are adjustable from the touch screen.</li> <li>•Automatic piece Counter.</li> <li>•Quick Remote assistance and supervision via internet.</li> </ul>



		<ul style="list-style-type: none"> <li>•Prepares incision for the ribbon exit</li> <li>•Punching for Twin Peak Module</li> </ul>
26	Ribbon Cutting Machine	<p>•It has been developed to cut ribbon of variable length and thickness. This Automatic Machine gives the benefit of bending the ribbon in an “L” shape, making the bussing procedure easier and faster. This compact 2 in 1 solution is the best system for a high efficiency productivity.</p> <ul style="list-style-type: none"> <li>•Characteristics:</li> <li>•Easy and quick change of the cut measures</li> <li>•Easy and quick change of the material type</li> <li>•Possibility to cut &amp; bend ribbon with a width from 5mm up to 10mm</li> <li>•Repeatability of the cut measure [+/- 1mm]</li> <li>•Automatic pieces counter</li> <li>•This machine has a very little need of maintenance which can all be performed by the operator, without an external help needed</li> <li>•Forming Length: Short Side – 50-140mm, Long Side - &lt; 9999.9mm</li> <li>•Forming Angle: 90° ± 5° (Adjustable)</li> </ul>

Note: The equipment list as above is tentative only. Any equipment/part which are necessarily required for 100 MW automated module production line but not covered in the list above will be supplied by supplier free of cost .



## PART – VII

# FORMATS & ANNEXURES

(NIT NO. – REIL/MM/22-23/E-PROC./22046)



## RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.

(An ISO 9001:2015 &14001:2015 'Mini-Ratna' Central Public Sector Enterprise)

2, Kanakpura Industrial Area, Sirsi Road, Jaipur – 302034

Tel: +91-141-2471835,+91-141-2470879 ,

Fax- +91-141-2470139

&

Website - <http://www.reiljp.com>

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23/E-PROC./22046	Page 40 of 79	Signature of Bidder
--	--------------------------------------	---------------	---------------------



**FORMAT FOR SUBMITTING NIT**

**Covering Letter**

(The covering letter should be on the Letter Head of the Bidding Company)

Ref.No. \_\_\_\_\_ Date: \_\_\_\_\_

From:

\_\_\_\_\_ (Insert name and address of Bidding Company)

\_\_\_\_\_  
\_\_\_\_\_

Tel. #:

Fax #:

E-mail address#

To

RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.

2, Kanakpura Ind. Area

Sirsi Road

JAIPUR-302034

**Sub:** Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line (On Turnkey Basis)

Dear Sir,

1. We, the undersigned....[insert name of the 'Bidder'] having read, examined and understood in detail the NIT Document for "Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line (On Turnkey Basis) "hereby submit our Bid comprising of Price Bid and Techno Commercial Bid. We confirm that neither we nor any of our Parent Company/ Indian representative has submitted Bid other than this Bid directly or indirectly in response to the afore said NIT.

2. We give our unconditional acceptance to the NIT, dated.....and NIT Documents attached thereto, issued by REIL, as amended. As a token of our acceptance to the NIT Documents, the same have been initialed by us and enclosed to the Bid. We shall ensure that we execute such NIT Documents as per the provisions of the NIT and provisions of such NIT Documents shall be binding on us.

3. Bid Security /EMD.

We have enclosed a Bid Security/ EMD of Rs.....(Insert Amount), in the form of bank guarantee no.....(Insert number of the bank guarantee) dated.....[Insert date of bank guarantee] as per Format .....from .....(Insert name of bank providing Bid Security/ EMD) and valid up to .....in terms of Clause .....of this NIT OR demand draft/banker cheque No.-----for Rs.-----In favour of REIL payable at Jaipur.

4. We have submitted our Price Bid strictly as per this NIT, without any deviations, conditions and without mentioning any assumptions or notes for the Price Bid in the said format(s).

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 41 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



5. Acceptance

We hereby unconditionally and irrevocably agree and accept that the decision made by Rajasthan Electronics & Instruments Ltd. in respect of any matter regarding or arising out of the NIT shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to execution of projects.

6. Familiarity with Relevant Laws & Regulations of India

We confirm that we have studied the provisions of the relevant an laws and regulations of India as required to enable us to submit this Bid and execute the NIT Documents, in the event of our selection as Successful Bidder. We further undertake and agree that all such factors as mentioned in NIT have been fully examined and considered while submitting the Bid.

7. **Contact Person**

Details of the contact person are furnished as under:

- Name : .....
- Designation : .....
- Company : .....
- Address : .....
- Phone Nos. : .....
- Fax Nos. : .....
- E-mail address : .....

8. We are enclosing herewith the Envelope-I (Covering letter and Bid Security/EMD etc) in hard copy as per clause 3.8.1.A of the NIT.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the NIT and subsequent communications from RAJASTHAN ELECTRONICS & INSTRUMENTS LTD. The information submitted in our Bid is complete, strictly as per the requirements stipulated in the NIT and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of 7 month from the Bid deadline. We confirm that we have not taken any deviation so as to be deemed non-responsive.

Dated the \_\_\_\_\_ day of \_\_\_\_\_, 20

Thanking you,  
We remain,  
Yours faithfully,

Name, Designation and Signature of Authorized Person in whose name Power of Attorney/Board Resolution/Authrised Representative)

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 42 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**GENERAL PARTICULARS OF THE BIDDER**

<b>SNo.</b>	<b>Particular</b>	<b>Filled by Bidder</b>
01.	Name of the Bidder	
02.	Type of Company/ Firm	
03.	Registered / Corporate Office Address	
04.	E-mail	
05.	Web site	
06.	Authorized Contact Person(s) with name, designation Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made.	
07.	Year of Incorporation	
08.	Bidding company is listed in India. If No, write name of the country.	Yes/No
09.	Details of the Ownership structure	
10.	Whether company is MSEs/Start up as on the bidding date	Yes/No

(Signature of Authorized Signatory)  
With Stamp



**FORMAT FOR BID SECURITY/EMD**

Bank Guarantee No.-----

Date:

To,  
**Dy. General Manager (MM)**  
 Rajasthan Electronics & Instruments Limited, (REIL)  
 2, Kanakpura Industrial Area Sirsi Road,  
 Jaipur-302034 (Rajasthan)

Dear Sir,  
 In accordance with Invitation for Bids under your Bid Document No. .... dated .....).M/s. ....(Bidder Name) having its registered office at .....’ (hereinafter called the bidder) wish to participate in the said Bid for “ **Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**”.

As an irrevocable bank guarantee against Bid Security for an amount of Rs. 36, 30,000.00 (Indian Rupees Thirty Six Lakh and Thirty Thousand only) valid up to ....., required to be submitted by the Bidder as a condition precedent for participation in the said Bid which amount is liable to be forfeited on the happening of any contingencies mentioned in the Bidding Documents.

We, the .....(Bank Name & address) guarantee and undertake to pay immediately on demand by Rajasthan Electronics & Instruments Limited the amount of Rs. 36, 30,000.00 (Indian Rupees Thirty Six Lakh and Thirty Thousand only) without any reservation, protest, demand and recourse. Any such demand made by the ‘REIL’ shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

This Guarantee shall be unequivocally, irrevocably & unconditionally and shall remain valid up to .....(date of expiry of Guarantee).. If any further extension of this guarantee is required, the same shall be extended to such required period (not exceeding one year) on receiving instructions from M/s. ....(Bidder Name) on whose behalf this guarantee is issued.

This guarantee will remain in force up to and including .....(date of expiry of Guarantee) and any demand in respect thereof must reach the Bank not later than the above date.

Notwithstanding anything contained herein above:

Our liability under this guarantee shall not exceed Rs. 36, 30,000.00 (Indian Rupees Thirty Six Lakh and Thirty Thousand only).

This bank guarantee shall be valid up to .....(date of expiry of Guarantee).

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if we receive from you a written claim or demand on or before ..... (date of expiry of Guarantee).

The said letter of guarantee has been transmitted through SFMS gateway to your bank. It is advised that in your own interest, you may verify the genuineness of above letter of guarantee from your bank / branch.

Dated the                      date of                      2022.

Bank Name  
 (Sealed & Signed)

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 44 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

(To be on non-judicial stamp paper of appropriate value as per Stamp Act.)

Format- 4

**FORMAT FOR PERFORMANCE BANK GUARANTEE**

Bank Guarantee No.----- Date

To,

**Dy. General Manager (MM)**

Rajasthan Electronics & Instruments Limited, (REIL)

2, Kanakpura Industrial Area Sirsi Road,

Jaipur-302034 (Rajasthan)

Dear Sir,

In accordance with Invitation for Bids under your Bid Document No. .... dated .....).M/s. ....(Bidder Name) having its registered office at .....’ (hereinafter called the bidder) wish to participate in the said Bid for “ **Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**”.

As an irrevocable bank guarantee against performance Security for an amount of Rs.----- valid up to ....., required to be submitted by the Bidder as a condition precedent for participation in the said Bid which amount is liable to be forfeited on the happening of any contingencies in the performance of **100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**.

We, the .....(Bank Name & address) guarantee and undertake to pay immediately on demand by Rajasthan Electronics & Instruments Limited the amount of Rs. ----- without any reservation, protest, demand and recourse. Any such demand made by the ‘REIL’ shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

This Guarantee shall be unequivocally, irrevocably & unconditionally and shall remain valid up to .....(date of expiry of Guarantee).. If any further extension of this guarantee is required, the same shall be extended to such required period (not exceeding one year) on receiving instructions from M/s. .... (Bidder Name) on whose behalf this guarantee is issued.

This guarantee will remain in force up to and including .....(date of expiry of Guarantee). , and any demand in respect thereof must reach the Bank not later than the above date.

Notwithstanding anything contained herein above:

Our liability under this guarantee shall not exceed Rs. -----

This bank guarantee shall be valid up to .....(date of expiry of Guarantee).

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if we receive from you a written claim or demand on or before ..... (date of expiry of Guarantee).

The said letter of guarantee has been transmitted through SFMS gateway to your bank. It is advised that in your own interest, you may verify the genuineness of above letter of guarantee from your bank / branch.

Dated the                      date of                      2022.

Bank Name  
(Sealed & Signed)

(To be on non-judicial stamp paper of appropriate value as per Stamp Act.)

- 1.The Performance Bank Guarantee (PBG) shall be executed by any of the Bank from the List of Banks enclosed as per Annexure-B
- 2.The Stamp Paper should be in the name of the Executing Bank and of appropriate value.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 45 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



### CHECK LIST FOR BANK GUARANTEES

Sl.No	Details of checks	YES/NO.
1	Is the BG on non-judicial Stamp paper of appropriate value, as per applicable Stamp Act of the place of execution	
2	Whether date, purpose of purchase of stamp paper and name of the REIL are indicated on the back of Stamp paper under the Signature of Stamp vendor? (The date of purchase of stamp paper should be not later than the date of execution of BG and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the BG has been issued. Also the Stamp Paper should not be older than six months from the date of execution of BG).	
3	Has the executing Officer of BG indicated his name, designation and Power of Attorney No./Signing Power no. on the BG?	
4	Is each page of BG duly signed/ initialed by executants and whether stamp of Bank is affixed thereon? Whether the last page is signed with full particulars including two witnesses under seal of Bank as required in the prescribed Performa?	
5	Does the Bank Guarantees compare verbatim with the Performa prescribed in the Bid Documents?	
6	Are the factual details such as Bid Document No. / Specification provided	
7	No., / LOA No. (if applicable) / Amount of BG and Validity of BG correctly mentioned in the BG	
8	Whether overwriting/cutting if any on the BG have been properly authenticated under signature & seal of executants?	
9	Contact details of issuing bank Including email ID, Mobile number etc.	



**POWER OF ATTORNEY**

(To be on non-judicial stamp paper of appropriate value as per Stamp Act.)

(Power of Attorney to be provided by the Bidding Company in favour of its representative as evidence of authorized signatory's authority)

Know all men by these presents, We ..... (name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. .... (name & residential address) who is presently employed with us and holding the position of ..... as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for "**Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)**". in response to the NIT No ..... dated ..... issued by Rajasthan Electronics & Instruments Ltd. (REIL), Jaipur including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the REIL may require us to submit. The aforesaid Attorney is further authorized for making representations to the REIL Jaipur and providing information / responses to REIL, Jaipur representing us in all matters before REIL Jaipur and generally dealing with REIL Jaipur in all matters in connection with Bid till the completion of the bidding process as per the terms of the above mentioned NIT.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the NIT.

Signed by the within named

.....(Insert the name of the executant company) through the hand of

Mr.....

Duly authorized by the Board to issue such Power of Attorney

Dated this.....day of..... Accepted

.....

Signature of Attorney

(Name, designation and address of the Attorney)

Attested

..... (Signature of the executant)

(Name, designation and address of the executant)

.....

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 47 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Signature and stamp of Notary of the place of execution

Common seal of.....has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

WITNESS

1. .... (Signature)

Name.....

Designation.....

2. .... (Signature)

Name.....

Designation.....

Notes:

The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

The person authorized under this Power of Attorney, in the case of the Bidding Company being a public company, or a private company in terms of the Companies Act, 1956, with a paid up share capital of more than Rupees Five crores, should be the Managing Director / whole time director/manager appointed under section 269 of the Companies Act, 1956. In all other cases the person authorized should be a director duly authorized by a board resolution duly passed by the Company.

Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 48 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT (AS PER CLAUSE 3.2.3, PART-II)**

(To be submitted on the letterhead of Bidding Company)

To,

**RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.**

2,Kanakpura Ind. Area  
Sirsi Raod  
JAIPUR-302034

Dear Sir,

**Sub:** Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis).

We submit our Bid for for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis) for which details of our Financial Eligibility Criteria Requirements are as follows.

Further, we certify that the Financially Evaluated Entity (ies) had an average Annual Turnover----- and Net worth of Rs.....Crore for the year 2021-22 based on unconsolidated audited annual accounts of the last 3 Years .

Name of Financially Evaluated Entity*	Relationship with Bidding Company**	Financial year	Year of Incorporation	Annual Turnover (Rs. Crore)	Net worth Rs. Crore)
		2019-20			-
		2020-21			-
		2021-22			
Average:					

\* The Financially Evaluated Entity may be the Bidding Company itself.

\*\* The column for "Relationship with Bidding Company" is to be filled in only in case financial capability of Parent Company has been used for meeting Qualification Requirements.

Yours faithfully

Signature and stamp (on each page) of Authorized Signatory of Bidding Company.

Name: .....

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 49 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

Date: .....

Place: .....

Signature and stamp (on each page) of Chartered Accountant/Statutory Auditors of Bidding Company.

Name: .....

Date: .....

Place: .....

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 50 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**FORMAT FOR CERTIFICATE OF RELATIONSHIP OF PARENT COMPANY WITH THE BIDDING COMPANY**

(To be submitted on the letterhead of Bidding Company)

To,

.....

Dear Sir,

**Sub:** Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis).

We hereby certify that M/s....., is the Parent Company of the Bidding Company as per the definition of Parent Company as provided in this NIT and based on details of equity holding as on seven (7) days prior to the Bid Deadline.

The details of equity holding of the /Parent Company/Bidding Company or vice versa as on seven (7) days prior to the Bid Deadline are given as below:

Name of Bidding Company	Name of the Parent Company of the Bidding Company	Percentage of Equity Holding of Parent Company in the Bidding Company

.....

(Insert Name and Signature of Statutory Auditor or practicing Company Secretary of the Bidder)



**UNDERTAKING FROM THE FINANCIALLY EVALUATED ENTITY OR ITS PARENT COMPANY**

(On the Letter Head of the Financially Evaluated Entity or its Parent Company)

Name:  
Full Address:  
Telephone No.:  
E-mail address:  
Fax/No.:  
To,

.....

Dear Sir,

We refer to the NIT No.....dated.....for “for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)”.

“We have carefully read and examined in detail the NIT, including in particular, Clause ....of the NIT, regarding submission of an undertaking, as per the prescribed Formats & Annexures of the NIT.

We confirm that M/s.....(Insert name of Bidding Company/) has been authorized by us to use our financial capability for meeting the Financial Eligibility as specified in Clause....of the NIT referred to above.

We have also noted the amount of the Performance Guarantee required to be submitted as per Clause....of the NIT the .....(Insert the name of the Bidding Company) in the event of it being selected as the Successful Bidder”.

In view of the above, we hereby undertake to you and confirm that in the event of failure of.....(Insert name of the Bidding Company) to submit the Performance Guarantee in full or in part at any stage, as specified in the NIT, we shall submit the Performance Guarantee not submitted by .....(Insert name of the Bidding Company)”.

We have attached hereto certified true copy of the Board Resolution Whereby the Board of Directors of our Company has approved issue of this Undertaking by the Company.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the NIT.

Signature of Authorised Signatory

Common seal of .....has been affixed in my/our presence pursuant to Board of Director’s Resolution dated.....

WITNESS

.....

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 52 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

(Signature)

Name.....

Designation.....

.....

(Signature)

Name.....

Designation.....

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 53 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Tender ref.: REIL/MM/22-23//E-PROC./22046

**CA Certificate**

To  
**DGM(MM)** ,  
Rajasthan Electronics & Instruments Limited,  
2, Kanakpura Industrial Area,  
Jaipur-302034  
Rajasthan

Date:

Dear Sir,

It is certified that M/s ..... is falling under MSE category as per guidelines contained in the provisions of the MSMED Act, 2006 and notification No. S.P. 1722(E) dated 05.10.2006 & latest amendment and having UdhogAdhar no. .... We also certify that the investment in plant and machinery (Imported and indigenous) as on date.....is ..... and turnover is less than ..... Crore in financial year 2021-22.

Item being supplied against tender is being manufactured by tenderer ( M/s .....)

Chartered Accountant  
Firm name:-  
Signature with seal  
UDIN.....

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 54 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Tender ref.: REIL/MM/22-23//E-PROC./22046

**Performance Certificate**

(To be submitted on the letterhead of User Company)

To  
**DGM(MM)** ,  
 Rajasthan Electronics & Instruments Limited,  
 2, Kanakpura Industrial Area,  
 Jaipur-302034  
 Rajasthan

Date:

Dear Sir,

We M/s. ....are certifying that ----- MW Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis) procured from M/s. .... on dated ----- and it is working satisfactory since last \_\_\_\_ years.

On behalf of company .....

Signed and sealed

**Note:** Generalized Performance Certificate on letter head of user Company may also be accepted which was issued after the date of NIT.

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 55 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Tender ref.: REIL/MM/22-23/E-PROC./22046

**CERTIFICATE FOR NON BLACK LISTING**  
(To be submitted on the letterhead of Bidding Company)

To

Date

**DGM (MM),**  
Rajasthan Electronics & Instruments Limited,  
2, Kanakpura Industrial Area,  
Jaipur-302012  
Rajasthan

Dear Sir,

We M/s. ....confirm that we are not blacklisted in any PSUs/Government/Semi Government /Quasi Government department in India, as on date of submission of bid. This undertaking is submitted to the best of my knowledge. If at any stage it is found wrong then REIL may take necessary action against us.

On behalf of company .....

Name and Designation

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 56 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Tender ref.: REIL/MM/22-23/E-PROC./22046

**UNDERTAKING OF NO NEAR RELATIVE**  
(To be submitted on the letterhead of Bidding Company)

To

Date

**DGM (MM),**  
Rajasthan Electronics & Instruments Limited,  
2, Kanakpura Industrial Area,  
Jaipur-302034  
Rajasthan

Dear Sir,

I.....S/o..... R/o..... hereby certify that none of my relatives) as defined in the tender document is/are employed in REIL unit as per details given in tender document. In case at any stage, it is found that the information given by m is false/incorrect, REIL shall have the absolute right to take any action as deemed fit/without any prior intimation to me.

On behalf of company .....

Name and Designation

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 57 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**Undertaking from the Bidding Company on their Letter Head**

( For MSE’s Venders only-To be submitted on the letterhead of Bidding Company)

Name:

Full Address:

Telephone No.:

E-mail address:

Fax/No.:

To,

Rajasthan Electronics & Instruments Ltd.  
2-Kanakpura Industrial Area,  
Jaipur-302034

Dear Sir,

We refer to the NIT No.....dated.....for “for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis) ”.

We have carefully read and examined in detail the NIT, including its amendments and clarifications as available on CPP Portal.

We confirm that M/s..... (Insert name of Bidding Company/) has fulfilled all the Requirements of MSME Act and as per the acknowledgement/certificate of MSEs provided by ..... (Insert name of Authority who has provided the MSEs Certificate), we are eligible for for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)for which the bid has been submitted by us in pursuance to the REIL’s NIT No.....dated.....

Further, we are complying and will continue to comply all terms and conditions of acknowledgement / certificate of MSEs until any further orders from the MSEs authority. Any change in the acknowledgement / certificate of MSEs submitted to REIL, shall be immediately apprised to REIL for their any further decision in this regard.

Further, we are also eligible for the benefits provided under MSEs Act, 2006 and any further order issued by Govt. of India in this regard prior to last date of bid submission for the aforementioned NIT.

In case any information provided/documents submitted or anything material or otherwise is found w.rt above undertaking, REIL shall have the right to cancel the Purchase Order to us and forfeit the Performance Bank Guarantee submitted by us. In addition to above, we (including our parent ) may also be debarred by REIL to participate in any future tender.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the NIT.

Signature of Managing Director/Authorised signatory (with company Stamp)

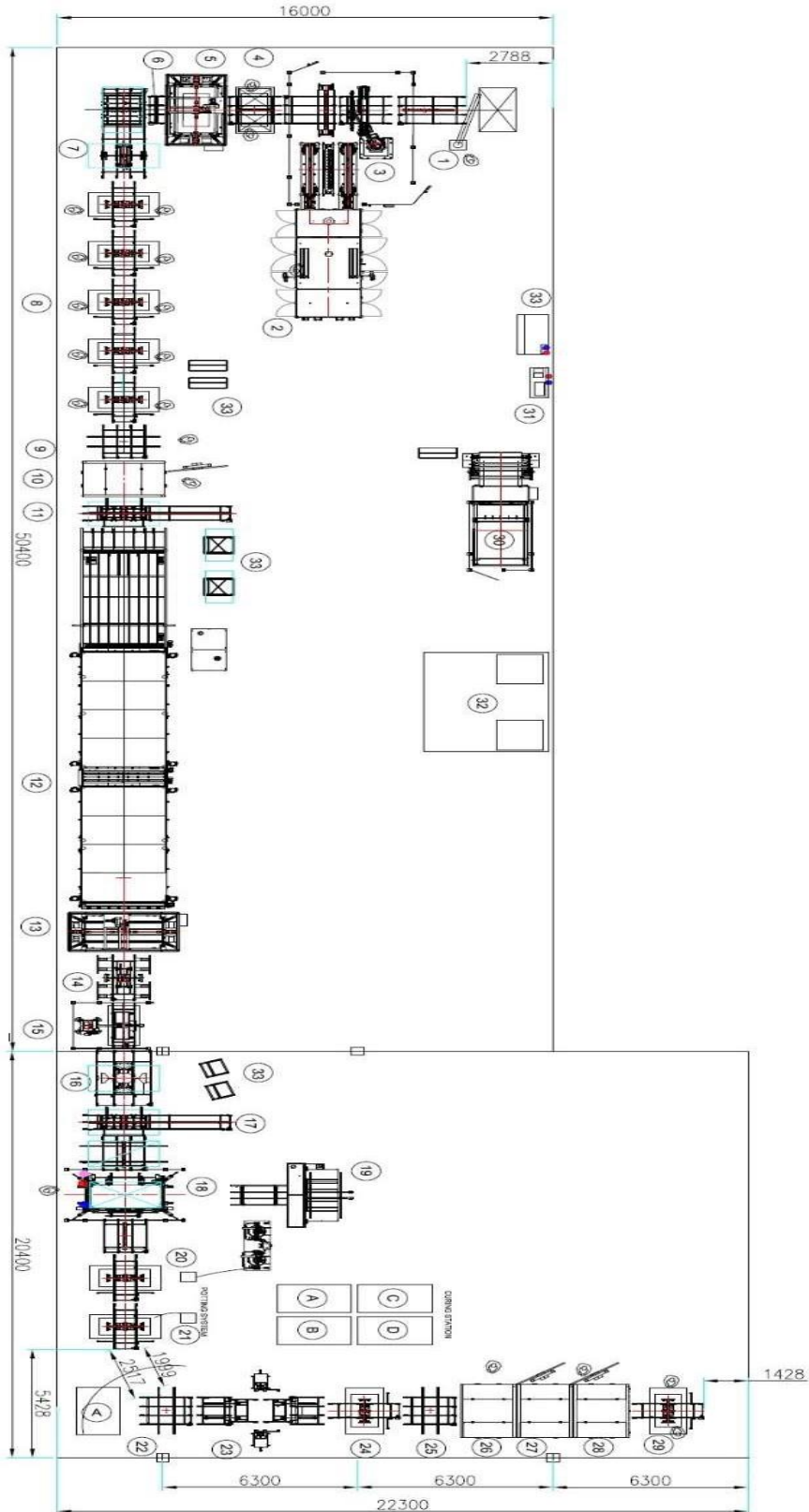
Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 58 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



**PRICE BID**

(To be filled On Line only)

<b>Tender Inviting Authority:</b> Dy.General Manager (MM), M/s Rajasthan Electronics & Instruments Limited, Jaipur								
<b>Name of Work:</b> The scope of work would essentially cover but not limited to setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Baisis) which include Supply,Layout Design, installation & commissioning, Integration, testing of equipments / machineries ,Warranty, BIS certification and hands on training for running and maintenance of the Line.								
<b>NIT No:</b> REIL/MM/22-23//E-PROC./								
<b>Bidder Name :</b> <input type="text"/>								
<b>Place of Project :</b> REIL,Jaipur- India								
(This Price Schedule template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )								
NUMBER #	TEXT #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	NUMBER #	TEXT #
Sr. No.	Item Description	Item Code / Make	Quantity	Units	Basic Price in INR ( FOR REIL,JAIPUR)	GST Amount in INR	Total Amount col (8) = sum (6 & 7)	TOTAL AMOUNT In Words
1	2	3	4	5	6	7	8	9
1	Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)-FOR REIL JAIPUR	Item 1	1	Lumpsu m				INR ----- Only
Total Amount In Words ( FOR REIL ,JAIPUR)		<b>INR----- Only</b>						





Tender ref.: REIL/MM/22-23/E-PROC./22046

**Process Compliance Form**

(Tenders are required to print on their company's letter head and signed, stamp before uploading)

To

**M/s. RAJASTHAN ELECTRONICS &INSTRUMENTS LTD.,**  
2, KANAKPURA INDUSTRIAL AREA, SIRSI ROAD,  
JAIPUR-302034

**Sub:-**Acceptance to the process related Terms and Conditions for the e-Tendering.

Dear Sir,

This has reference to the Terms & Conditions for e-Tendering mentioned in the Tender No.: REIL/MM/22-23 /E-PROC./22046 Dated-----

We hereby confirm the following:-

- 1) The undersigned is authorized representative of the company.
- 2) We have carefully gone through the NIT, Tender Documents and the Rules governing the e-tendering as well as this document.
- 3) We will honor the Bid submitted by us during the e-tendering.
- 4) We undertake that if any mistake occurs while submitting the bid from our side, we will honor the same.
- 5) We are aware that if REIL has to carry out e-tender again due to our mistake, REIL has the right to disqualify us for this tender.
- 6) We confirm that REIL shall not be liable & responsible in any manner whatsoever for my/our failure to access & submit offer on the e-tendering site due to loss of internet connectivity, electricity failure, virus attack, problem with the PC, digital signature certificate or any other unforeseen circumstances etc.
- 7) We accept all the Compliance sheets attached with the NIT.

With regards

Signature with company seal

Name-  
Designation  
E-mail Id:  
Mob No:

Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)	NIT No.: REIL/MM/22-23 /E-PROC./22046	Page 61 of 79	Signature of Bidder
--	---------------------------------------	---------------	---------------------



Tender ref. - REIL/MM/22-23/E-PROC./22046

**Compliance sheet-1 (General Terms & Conditions)**

S.	Eligibility criteria	Documents Required	Complied/ Not complied	Deviation if any
1	The Manufacturer should be in existence for minimum 3 years on the tender submission date.	Self undertaking by manufacturer		
2.	Bidder should have supplied, installed & commissioned in last 5 years either of following :  One no. Automatic Module manufacturing Line of 80 MW or more OR Two nos.of Automatic Module manufacturing Line of 50 MW or more OR Three nos.of Automatic Module manufacturing Line of 40 MW or more  The Automatic lines should be working satisfactorily for a period of at least one year as on the date of tender due date	a)Relevant copy of PO and Work completion certificate by the customer. b)Relevant satisfactory working certificate of the line.List of customers with detail		
3	Performance certificate of Solar Photovoltaic (SPV) Module Manufacturing Lines in India for working satisfactory for minimum 1 year. A certificate in this regard as per enclosed Format- 11 is to be submitted on the letter head of the user company.	Performance certificate on the letter head of user company as per Format-11		
4	Bidder should submit copy of audited balance sheets for last three financial years.			
5	If required, REIL representative may visit any of sites in INDIA for which necessary permission shall be arranged by the supplier.			
6	After sales support net work in India: Supplier's service facility in India for local support and trouble shooting is mandatory. Supplier should give complete address of local support office including contact person, Mobile/ Tel No./ Fax/ E-mail .They should also provide the details of service equipments & trained manpower with qualification deployed for the service support.	Details of support network in India		
7	Manufacturer/Authorized representative should not be blacklisted in any PSUs/Government/Semi Government	As per Format-12		



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

	/Quasi Government department in India, as on date of submission of bid. In this regard both have to furnish undertaking that they are not blacklisted by any of the above mentioned organization			
8	Supplier should conform to all technical specifications.	Conformance as per annexure -III		
9	Supplier should confirm to all Commercial terms and conditions	Conformance as per annexure -IV		
10	Supplier should confirm that down time of the machine during warranty period will not be more than 3 days (including holidays) from the date of complaint.If it is more than 3 days, penalty of Rs.1 Lakh/ day basis will be levied upto value of performance bank guarantee.			



Tender ref. - REIL/MM/22-23/E-PROC./22046

**Compliance sheet-2 (Technical Specifications)**

(Note: Bidder has to confirm their acceptance in given sheet and for technical evaluation, this Annexure to be submitted in Technical Specifications in e-Tender)

S no.	Part No:	Description	Specify HSN Code	Qty.	Offer Status	
					Complied	Deviation if any
		<b>Scope of work:</b> The scope of work would essentially cover but not limited to setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis) which include Supply,Layout Design, installation & commissioning, Integration, testing of equipments/machineries ,Warranty, BIS certification and hands on training for running and maintenance of the Line.				
		<b>Equipment</b>	<b>Specification</b>			
<b>In-Line Equipments</b>						
1		Glass Lifter	<ul style="list-style-type: none"> <li>• Glass Loader to Pick up the glass from the Pallet and placing it on the Lay-up Station</li> </ul>	1		
2		Tabber Stringer	<ul style="list-style-type: none"> <li>• An advanced and innovative High Speed Tabber &amp; Stringer machine with Throughput of minimum 3600 Cells/hour</li> <li>• 1/3rd Cell Processing is also required as optional</li> <li>• Breakage less than 0.2%.*</li> <li>• It is equipped with INFRARED soldering head to solder very thin PV solar cells such as MONO, POLY, BIFACIAL, PERC and high efficiency solar cells without mechanical and thermal stress.</li> <li>• Machine is equipped with High Resolution Camera which is used for the alignment &amp; centering of cells and Camera for detecting broken Cells before soldering.</li> <li>• The alignment is performed both optically and mechanically</li> <li>• Compatibility : 5BB to 12BB</li> <li>• 4 Axis ROBOT for accurate cells handling</li> </ul>	1		



		<ul style="list-style-type: none"> <li>• High Resolution Camera for Broken Cell Detection, Cell Alignment &amp; Centering</li> <li>• Compatible with Cell size from 157mm to 210mm</li> <li>• Half Cut &amp; Triple Cut Cell can also be processed in this machine upto 210mm x 105mm and minimum of 210mm x 70mm</li> <li>• Cell basket loading is Automatic with 8 numbers of basket included</li> <li>• Ribbon Positioning Accuracy : <math>\pm 0.2\text{mm}</math> + Cell tolerance</li> <li>• Flat Ribbon Size : Width 0.50 to 1mm, Thickness 0.15 to 0.22mm</li> <li>• Round Ribbon Size : <math>\varnothing</math> 0.30 to <math>\varnothing</math> 0.40 mm available as optional</li> <li>• Cell – Cell Gap: 1.5 to 35 mm; tolerance: +/- 0.1mm and for 210 mm cell +/-0.25mm + Cell tolerance</li> <li>• Cell positioning accuracy: <math>\pm 0.1\text{mm}</math></li> <li>• String Length: Max. 2200mm</li> <li>• The machine is supplied with internet assistance and embedded PC with user friendly HMI</li> <li>• String Flipping device is provided on the unloading belt</li> <li>• Automatic Spray Fluxing system on Ribbon</li> <li>• Centring Plate for pre heating of cells to avoid thermal stress</li> <li>• Ribbon Changeover Time : Approximately 120 - 150 secs</li> <li>• CONFIGURATION KIT FOR THE MACHINE:</li> <li>• 5BB – 157mm (Full Cell) with Interaxis 31.2mm &amp; 1mm Flat Ribbon</li> <li>• 9BB – 166mm x 83mm (Half Cut Cell) with Interaxis 16.8mm &amp; 0.5mm Flat Ribbon</li> <li>• 10BB – 182mm x 91mm (Half Cut Cell) with Interaxis 17.3mm &amp; 0.5mm</li> </ul>			
--	--	--	--	--	--



			<p>Flat Ribbon</p> <ul style="list-style-type: none"> <li>• Online / Offline Laser Scriber:</li> <li>• Laser Scribing &amp; Separating machine for solar cells</li> </ul>			
			<ul style="list-style-type: none"> <li>• Characteristics:</li> <li>• Loading and unloading mechanism suitable for half cells</li> <li>• Scribing width : &lt; 0.05 mm</li> <li>• Cutting thickness : &lt; 1.2 mm</li> <li>• Dimension of the cut solar cells to be defined by user for preliminary setting of the equipment</li> </ul>			
3		Hi-Speed Layup Station with 6 Axis Robot	<ul style="list-style-type: none"> <li>• It is a robotic layup station designed to increase efficiency and accuracy in module production.</li> <li>• The robot's arm picks up the strings from the stringer machine and places them on the glass provided with encapsulant.</li> <li>• The strings are positioned very precisely due to the use of embedded cameras, which allow an accurate alignment.</li> <li>• The strings are positioned on the glass by the robot which turns them clockwise or anticlockwise in order to allow the electrical connection between the strings.</li> <li>• Placing of the strings on the glass with glass Centering</li> <li>• Included Reject tray for strings</li> <li>• Pick-up arm supplied with the machine</li> <li>• 157mm Full Cell</li> <li>• 166mm Half Cut</li> <li>• 182mm Half Cut</li> </ul>		1	
			<ul style="list-style-type: none"> <li>• 210mm Half Cut etc.</li> </ul>			
4		Buffer Station before busing and before lamination	<ul style="list-style-type: none"> <li>• Buffer system to store up to 15 modules for a temporary storage.</li> </ul>		1	



			<ul style="list-style-type: none"> <li>This buffer works autonomously and it is provided with a PLC and electrical control panel.</li> </ul>			
5		Multi-station for Bussing	<p>Inline Bussing station for bussing composed by:</p> <ul style="list-style-type: none"> <li>5 Multistation with support for Standard as well as Twin Peak Module bussing with PLC Control.</li> <li>Each work station for soldering of head connections supports two soldering stations.</li> <li>The island stations help the operators to perform the soldering of the head connections optimizing the productivity and speeding the operations.</li> <li>Provision for connecting continuity tester is made in the bussing station.</li> </ul>		5	
6		Motorized Conveyor For Visual Inspection	<ul style="list-style-type: none"> <li>Motorized Conveyor with Mirror for Visual Inspection</li> </ul>		1	
7		Electroluminescence (EL) Tester( Before Lamination)	<p>Characteristics:</p> <ul style="list-style-type: none"> <li>Capability to detect Microcracks, Contamination, Sintering Defect, Defects of Solar cell material (Debris, Cracked, Broken Gate, pollution), Defects from the Welding Process (Weld, De-Solder, Broken Fingers), Mix Different levels Cells sorted wrongly</li> <li>Exposition time: from 1s to 10s per snap</li> <li>Analysing time for a complete module: less than 30s</li> <li>PC based software</li> <li>Dark current test in-built in the machine</li> <li>Motorised Loading / Unloading with Manual Contact</li> <li>Bar Code Reader</li> <li>43" monitor for clear vision</li> </ul>		1	
8		Transport System For Reject Modules	<ul style="list-style-type: none"> <li>Motorised Exit rolling conveyor with direction changer for rejected modules.</li> </ul>		1	



9		Fully Automatic Laminator with Loading belt & Unloading Belt	<ul style="list-style-type: none"> <li>• Automatic two stage laminator for photovoltaic module laminator with Centering and Loading system.</li> <li>• Maximum Module Size : 2500mm x 1400mm &amp; module qty.- 5 / cycle</li> <li>• Each plate is divided in multiple controllable zones.</li> <li>• Each zone is heated by electrical elements/oil heating with a uniformity of +/- 2°C.</li> <li>• The temperatures in each zone are independent in order to have uniform gel content over the complete surface of the module.</li> <li>• Automatic Module Centering.</li> <li>• Suitable for Glass to Glass Module (2+2mm, 3.2+3.2mm). Other Glass sizes can be processed using Optional Kit</li> <li>• Automatic release sheet made of Teflon on both module sides during lamination.</li> <li>• Quick change system of the silicone membrane with clamps around the external borders of the laminator. Membrane change in less than 30 minutes and change can be performed with the plates still in working temperatures.</li> <li>• Additional Vacuum pump installed in the pump housing for non-stop operation</li> <li>• The Condenser unit absorbs the gasses / fumes formed during the lamination process in order to not damage the pumps and to not let out this gas in the environment. Internet connection for assistance and supervision.</li> <li>• Cooling of the Modules on unload belt</li> </ul>		1		
10		Transport System	Transport System consists of:		1		



			<ul style="list-style-type: none"> <li>• 1 No. of long Motorised Conveyor Belt with PLC control</li> <li>• 2 Nos. Direction Changer.</li> <li>• Ladder for reaching between the laminator.</li> </ul>				
11		Buffer After Lamination	<ul style="list-style-type: none"> <li>• Buffer system to store up to 15 modules for a temporary storage.</li> <li>• This buffer works autonomously and it is provided with a PLC and electrical control panel.</li> </ul>		1		
12		EdgeTrimming Station	<ul style="list-style-type: none"> <li>• Inline motorized trimming station.</li> <li>• Turn able table with vacuum blocking system.</li> <li>• The edge trimming is done manually.</li> </ul>		1		
13		Automatic Inline Framing	<ul style="list-style-type: none"> <li>• Inline Framing Machine with Centering Conveyor &amp; PLC Control for easy Operation</li> <li>• Sunny side down operation with Motorised Loading &amp; Unloading</li> <li>• Suitable for silicone &amp; Double Sided Tape framing.</li> <li>• Frame punching on long side &amp; Short Side at same time.</li> <li>• Auto locking system for Corner Blocks</li> </ul>		1		
14		Automatic Silicon Dispensing Machine	<ul style="list-style-type: none"> <li>• Automatic dispenser / Pneumatic silicone pump for neutral silicone drums of 25 kg.</li> <li>• It is an automatic machine developed to put in automatic way an even and correct amount of silicone in the frame that later will be installed around the photovoltaic module.</li> <li>• The machine is composed by a load unit that feeds the frames to the silicone station that after applying the silicone on the frame pushes it to the operator.</li> <li>• The machine has a sensor that reads the state of the unload station in order to interrupt the cycle automatically when the belt is full.</li> </ul>		1		



			<ul style="list-style-type: none"> <li>• Additional Nozzle for Junction Box Fixing</li> </ul>				
15		90° Flip & Inspection	<p><b>Inline Visual inspection station with 90 degree rotation consist of following</b></p> <ul style="list-style-type: none"> <li>• Visual Inspection Station with Auto Lifting System &amp; Illumination</li> <li>• Motorised Transport System with 90 Degree Rotation.</li> </ul>		3		
16		Transport System For Reject Modules	<ul style="list-style-type: none"> <li>• Motorised Exit rolling conveyor with direction changer for rejected modules.</li> </ul>		1		
17		JB Fixing	<ul style="list-style-type: none"> <li>• 2 Nos. of Multistation for fixing junction box on Twin Peak module</li> </ul>		1		
18		Motorized Conveyor Before Hi-Pot Testing	<ul style="list-style-type: none"> <li>• Motorized conveyor for loading the module on Hi-pot Testing.</li> </ul>		1		
19		Hi-Pot Tester (High Voltage) With Auto Centering	<ul style="list-style-type: none"> <li>• In order to guarantee a long life of the photovoltaic module and the safety of the installation, An instrument which controls the electrical insulation of the modules during the production process in respect of the norm IEC 61215/61730.</li> <li>• The instrument permits to perform the Hi-Pot test with a maximum voltage of 6kV DC &amp; IR test upto 1500V</li> <li>• The Machine incorporates Motorised Loading / Unloading of the module with Manual Contact testing</li> </ul>		1		
20		Motorized Conveyor Before Sun Simulator	<ul style="list-style-type: none"> <li>• Motorized conveyor for loading the module on sun simulator.</li> </ul>		1		
21		Automatic Sun Simulator with Centering - (Automatic Loading/Unloading)	<ul style="list-style-type: none"> <li>• Sun Simulator represents a new generation of sun simulator with use of LED/Lamp, more than consenting a supply of radiation. Light source more than A+ Class</li> <li>• Suitable for module with cells: Mono, Poly, PERC, HIT, Bifacial, Back Contact, Thin Film – Sun</li> </ul>		1		



		Soaking			
		• Spectral Range : 300nm – 1200nm			
		• Range of intensity : 200W/m <sup>2</sup> – 1200W/m <sup>2</sup>			
		• Spectrum : ± 8%			
		• LTI / STI : ± 0.125%			
		• Non-Uniformity of Irradiance < 1% (A+ Class at 1000 W/m <sup>2</sup> )			
		• Repeatability Error < 0.3 /0.5 % at continuous test 40/100 respectively			
		• No recharging time between the tests			
		• Standard pulse duration : 100ms – 200ms			
		• Long pulse capabilities : 3 – 5s			
		• Possibility to personalize the pulses up to 30s			
		• Calibrated pyranometer for irradiance measurements			
		• Compact dimensions			
		• Precise Electronic load for the characterization of the module with customized I-V range			
		• Sensor to measure the module and the environment temperature			
		• Uniformity constant over LED/Lamp source life time			
		• LED/Lamp source with high life time			
		• Nr. 1 Thermal Printer for bar code and back labels with Ribbon, Barcode label & Backside Label			
		• Nr. 1 Laser printer for printing IV Curve			
		• Bar Code Reader			
		• Inline work height 1000 mm			
		• SQL database for data storage			
		• RFID compatible with suitable hardware			
		• 8 Sets of JB Extension cable for module testing			
		• Motorised load/unloading system with Manual contact			



22		Motorized Conveyor Before EL Tester	<ul style="list-style-type: none"> <li>Motorized conveyor for unloading the module after sun simulator as well as input for EL Testing.</li> </ul>		1		
23		In-Line Electroluminescence Tester - (For Finished Modules)	Characteristics:		1		
			<ul style="list-style-type: none"> <li>Capability to detect Microcracks, Contamination, Sintering Defect, Defects of Solar cell material (Debris, Cracked, Broken Gate, pollution), Defects from the Welding Process (Weld, De-Solder, Broken Fingers), Mix Different levels Cells sorted wrongly</li> </ul>				
			<ul style="list-style-type: none"> <li>Exposition time: from 1s to 10s per snap</li> </ul>				
			<ul style="list-style-type: none"> <li>Analysing time for a complete module: less than 30s</li> </ul>				
			<ul style="list-style-type: none"> <li>PC based software</li> </ul>				
			<ul style="list-style-type: none"> <li>Dark current test in-built in the machine</li> </ul>				
			<ul style="list-style-type: none"> <li>Motorised Loading / Unloading with Manual Contact</li> </ul>				
			<ul style="list-style-type: none"> <li>Bar Code Reader</li> <li>43" monitor for clear vision</li> </ul>				
24		Motorized Conveyor After EL Tester	<ul style="list-style-type: none"> <li>Motorized conveyor for unloading the module after final EL Testing</li> </ul>		1		
<b>Off-Line Equipments</b>							
25		EVA / Back sheet Automatic Cutting Machine	Off-line Automatic film cutting machine for EVA and back sheet.		1		
			<ul style="list-style-type: none"> <li>Easy and quick change of the cutting measures.</li> </ul>				
			<ul style="list-style-type: none"> <li>Easy and quick change of the material type.</li> </ul>				
			<ul style="list-style-type: none"> <li>The speed and all measures are adjustable from the touch screen.</li> </ul>				
			<ul style="list-style-type: none"> <li>Automatic piece Counter.</li> </ul>				
			<ul style="list-style-type: none"> <li>Quick Remote assistance and supervision via internet.</li> </ul>				
			<ul style="list-style-type: none"> <li>Prepares incision for the ribbon exit</li> </ul>				
			<ul style="list-style-type: none"> <li>Punching for Twin Peak Module</li> </ul>				



26		Ribbon Cutting Machine	<ul style="list-style-type: none"> <li>• It has been developed to cut ribbon of variable length and thickness. This Automatic Machine gives the benefit of bending the ribbon in an “L” shape, making the bussing procedure easier and faster. This compact 2 in 1 solution is the best system for a high efficiency productivity.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Characteristics:</li> <li>• Easy and quick change of the cut measures</li> <li>• Easy and quick change of the material type</li> <li>• Possibility to cut &amp; bend ribbon with a width from 5mm up to 10mm</li> <li>• Repeatability of the cut measure [+/- 1mm]</li> <li>• Automatic pieces counter</li> <li>• This machine has a very little need of maintenance which can all be performed by the operator, without an external help needed</li> <li>• Forming Length: Short Side – 50-140mm, Long Side - &lt; 9999.9mm</li> <li>• Forming Angle: 90° ± 5° (Adjustable)</li> </ul>		1		
27		Miscellaneous Accessories required for the Production Line	<p>Lab Test Equipments (GEL Content Kit &amp; Peel Tester)</p> <p>Support Wagon for Storing Cut EVA / Backsheet</p> <p>Turnable wheels to store Modules after rework</p> <p>Support Wagon for storing Laminates</p> <p>Soldering Stations</p> <p>Maintenance tools for complete line.Tools such as scissors, knives, Gloves etc</p> <p>String Repare Station</p> <p>Patterns for soldering of Head Connections</p> <p>Module shifting Karts/trollies</p> <p>Glass Transfer Karts/trollies</p> <p>Cell Transfer Karts/ trollies</p> <p>EVA / Backsheet Transfer</p>		1		



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

			Karts/ trollies				
			Aluminium Frame Transfer Karts/ trollies				
			Buffer Stacks for Layup and Laminates				
			Spares & consumable kits				



Tender ref.: REIL/MM/22-23/E-PROC./22046

**Compliance sheet-3 (Commercial Terms and Conditions)**

SNo	Description	Complied/ Not complied	Deviation if any
01.	<b>Delivery Terms:</b> FOR REIL, Jaipur .		
02.	<b>Delivery Period:</b> Pre-Dispatch Inspection call will be given by supplier to REIL within 30 days from date of LC. All the equipments will be dispatched within 15 days from date of inspection.		
03.	<b>Guarantee/ Warranty:</b> The supplier should give comprehensive Guarantee/ Warranty for a period of 24 months of overall line from the successful installation & commissioning of the line. During this period manufacturer should replace/ repair the defective parts and consumables. The entire expenditure including freight, customs duty, customs clearing charges, GST and local transportation if any for such replacement shall be borne by the supplier. Supplier will also undertake for after sales support for supplied item for the next 5 years after completion of warranty period on chargeable basis.		
04.	<p><b>Payment Terms:</b></p> <p>i. 75% of the invoice value will be paid through irrevocable L/C payable at 90 days from date of receipt of complete material at REIL Works, Jaipur subject to submission of copy of Performance Bank Guarantee for 5 % of basic value of purchase order and shall be valid up to 60 days beyond the successful completion of all the obligation of Purchase Order including entire guarantee/ warranty period</p> <p>ii. 25% of the invoice value will be paid through irrevocable L/C after 120 days from the date of receipt of complete material at REIL Works, Jaipur subject to submission of signed successfully completion report of installation &amp; commissioning and hands on training on operations and maintenance of the Line (Both on software as well as on hardware) at Buyer's site signed by representative of REIL.</p> <p><b>Note:</b> L/C of First Mile stone payment ie. 75% of the invoice value will be open with in 30 days after receipt of performance bank Guarrantee. Whereas L/C of Second Mile stone payment ie. 25% of the invoice value will be open with in 30 days after receipt of complete material at REIL Works, Jaipur .</p>		
04.	<b>Pre-dispatch Inspection:</b> Pre-dispatch inspection will be carried out at manufacturer's site by the representative of buyers (REIL) . Manufacturer will impart training at their works by providing hands-on experience on operation and maintenance of equipment and understanding the process technology. The Manufacturer-Supplier will facilitate for the same free of cost.		
05.	<b>Mode of Dispatch:</b> By Road/train as per instructions by buyers		
06.	<b>Goods Identification:</b> The goods must be clearly identifiable with the shipping documents.		



Notice Inviting Tender for Setting up of 100 MW Automatic Solar Photovoltaic (SPV) Module Manufacturing Line ( On Turnkey Basis)

07.	<b>Marking:</b> Item Sr. No. should be mentioned on invoice & engraved on the equipments of line which should be matching with each other.		
8.	<b>Time for Supply, Installation and Commissioning:</b> The supplier will supply, install & Commission the machine at buyer's site within 7 months from date of Purchase Order. Hands on training for operation as well as preventive maintenance of the machine (Both on software as well as hardware) will be the part of supply at buyer's site during installation & Commissioning of the equipments of Line.		
9.	<b>Liquidated Damage:</b> If the delivery of the item is not made by the stipulated date then the supplier shall have to pay liquidated damages @ 0.50% of the value of the item per week subject to a maximum of 5% of the value.		
10.	<b>Replacement:</b> If Purchase Order is placed and goods are found defective then supplier will be responsible for free of cost replacement against defective goods upto warranty period. All expenditure pertaining to replacement will be borne by supplier.		
11.	<b>Validity:</b> Offer must be valid at least for 3 months from date of opening of tender.		
12.	<b>Disputes:</b> In case of any dispute the decision Of Managing Director, RajasthanElectronics & Instruments Limited, Jaipur will be final and binding on both the parties. Further dispute, if any, will be settled in the court of Law at Jaipur jurisdiction only		
Note: The above General Terms & Conditions will deemed to be confirmed when the column for Complied or not complied is filled with the words complied or not complied. In case of not complied of any condition then use the column of Deviation by writing deviation reason.			



**BANK DETAILS FOR E-PAYMENT & BANK GUARANTEE (BG)**

<b>SNO.</b>	<b>DESCRIPTION</b>	<b>REIL DETAIL</b>
01.	Name & Address	Rajasthan Electronics & Instruments Ltd., Jaipur 2, Kanakpura Industrial Area Sirsi Road,Jaipur
02.	Contact No.	Tel.: (0141)2471083, 2470908, Fax No. 0141-2470531
03.	Name and Address of the Bank	Punjab National Bank, Large Corporate Branch, M.I. Road, Jaipur, Rajasthan
04.	Branch Code	0221
05.	Account No.	0221008700000152
06.	MICR Code	302024003
07	IFSC Code	PUNB0022100
08.	GSTIN of REIL	08AABCR1528G1ZL
09.	PAN No. of REIL	AABCR1528G



**List of Banks**

<b>1. SCHEDULED COMMERCIAL BANKS</b>	<b>2. OTHER PUBLIC SECTOR BANKS</b>
<b>SBI AND ASSOCIATES</b>	1. IDBI Bank Ltd.
1. State Bank of India	
	<b>3. SCHEDULED PRIVATE BANKS</b>
	1. Federal Bank Ltd.
2. State Bank of Indore	2. Kotak Mahindra Bank Ltd.
	3. Axis Bank Ltd.
	4. ICICI Bank Ltd.
	5. HDFC Bank Ltd.
<b>NATIONALISED BANKS</b>	6. Yes Bank Ltd.
1. Allahabad Bank	7. IDFC Bank Ltd.
2. Andhra Bank	8. IndusInd Bank
3. Bank of India	9. KarurVysya Bank
4. Bank of Maharashtra	10. South Indian Bank
5. Canara Bank	
6. Central Bank of India	
7. Corporation Bank	
8. Dena Bank	
9. Indian Bank	
10. Indian Overseas Bank	
11. Oriental Bank of Commerce	
12. Punjab National Bank	



13.Punjab & Sind Bank	
14.Syndicate Bank	
15.Union Bank of India	
16.United Bank of India	
17.UCO Bank	
18.Vijaya Bank	
19.Bank of Baroda	