

AYCL/Electrical Division KO/75/17-18/ET/274

**ANDREW YULE & COMPANY LIMITED
(A Government of India Enterprise)
ELECTRICAL DIVISION, SWITCHGEAR UNIT
14, MAYURBHANJ ROAD, KOLKATA - 700024**

TENDER DOCUMENTS FOR SOLAR PHOTOVOLTAIC MODULE

TENDER DOCUMENTS FOR SUPPLY OF SOLAR PHOTOVOLTAIC MODULE FOR 10kWp SOLAR POWER PROJECT AT KALYANI WORKS, ENGINEERING DIVISION.

ANDREWWYULE & CO. LTD. Invites Tender under single stage two-part system (Part I : Techno-Commercial Bid and Part II : Price Bid from bonafide and reputed Company/OEM for above mentioned Job. The Item details are available in **Annexure-VI** of this tender document.

Tender document may be downloaded from MSTC website www.mstcecommerce.com/eprhome/aycl. Corrigenda or clarifications, if any, shall be hosted on the above mentioned websites only. AYCL reserves the right to accept or reject any tender.

| Sl. No. | Item Description | Qty |
|----------------|---|------------|
| 1 | Solar PV Module of minimum capacity 250wp or higher (detail specification attached below). 1set = 40 no module of minimum Capacity of 250wp or higher | 1 set |

Price quoted should be FOR destination/Site i.e. Andrew Yule & Co. Ltd., Kalyani Works, Plot No – 16 A&B, Block – D, Kalyani, Nadia – 741235 (WB).

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Schedule of Tender

| | | |
|-----|---|--|
| 1. | TENDER NO. | AYCL/Electrical Division KO/75/17-18/ET/274 |
| 2. | MODE OF TENDER | e-Procurement System Online submission of Part I - Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome/aycl The intending bidders are required to submit their offer electronically through this e-tendering portal. No physical tender is acceptable by AYCL/MSTC |
| 3. | E-Tender No. / Event No. | AYCL/Electrical Division KO/75/17-18/ET/274 |
| 4. | Date of publication of e-Tender through publication MSTC/AYCL websites and Central Public Procurement Portal | 09.01.2018 |
| 5. | Date of availability of NIT to the Vendors for downloading | 09.01.2018 |
| 6. | Tender Fee | “Tender Fee” of Rs. 200/- (Rupees Two Hundred only) may be paid by Cash Receipt/D.D. favouring Andrew Yule & Co Ltd , payable at Kolkata |
| 7. | Earnest Money Deposit | “Earnest Money Deposit” of Rs.3,000/- (Rupees Three Thousands only) may be paid by Cash Receipt/D.D. favouring Andrew Yule & Co Ltd , payable at Kolkata . Other document as described in Annexure I, Sl. No.2 |
| 8. | Last date of submission of EMD & other documents to AYCL Ltd. | 03.02.2018-4:00 PM |
| 9. | Opening of Techno-commercial Bid | 03.02.2018 - 4:30 PM |
| 10. | Date & time of opening of Part-II (Price Bid) | To be intimated to the eligible vendor separately by email. |

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List of Annexure

| | |
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| Important Instructions for E-procurement | Annexure-I |
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Annexure-I

Important Instructions for E-procurement

This is an e-procurement event of ANDREW YULE & COMPANY LTD

You are requested to read the Terms & Conditions (Annexure- II, III, and IV) of this tender before submitting your online tender. Tenderers who do not comply with the Conditions with documentary proof (wherever required) will not qualify in the Tender for opening of Price Bid.

1. Process of E-tender:

A) **Registration:** The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type Digital Signature Certificate. Vendors are to make their own arrangement for bidding from a PC connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).

SPECIAL NOTE: THE PRICE BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT www.mstcecommerce.com/eprochome/aycl

1) Vendors are required to register themselves online with www.mstcecommerce.com e-Procurement PSU / Govt. depts. → Register as Vendor under AYCL- Filling up details and creating own user id and password → Submit.

2) Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.

In case of any clarification, please contact MSTC/AYCL (before the scheduled time of the e-Tender).

Contact person (ANDREW YULE & COMPANY LTD):

- | | |
|---|--|
| 1. Shri Bhaskar Bandopadhyay Sr. Manager (Materials) Ph. No: (033) 2449-1601 Email: bhaskar.bandopadhyay@andrewyule.com | 2. Shri Pallab Naskar Asst. Manager (Materials) Ph. No.: (033) 2449-1770 Email: pallab.naskar@andrewyule.com |
| 3. Shri Krishna Gopal Nag Sr. Manager (Projects) Ph. No. - (033) 2422 8210 (Extn - 113) Email - krishnagopal.nag@andrewyule.com | 4. Shri Nadeem Asghar Asst. Manager (Technical) Ph. No. - (033) 2422 8210 (Extn - 206) Email nadeem.asghar@andrewyule.com |

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Contact person (E-Commerce, MSTC Ltd):

- | | |
|---|---|
| <p>1. Shri Arindam Bhattacharjee Deputy. Manager (E-commerce) Ph. No.: (033) 22901004 Mobile No: 09330102643 Email : arindam@mstcindia.co.in</p> <p>3. Smt SumonaMaity Management Trainee (E-Commerce) Mobile-09831155225 Email : smaity@mstcindia.co.in</p> | <p>2. Shri Sabyasachi Mukherjee Assistant Manager (E-commerce) Ph. No.: (033) 22901004 Mobile- 07278030407 Email : smukherjee@mstcindia.co.in</p> |
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System Requirement:

- i) Windows XP-SP3 or above / Windows 7 Operating System
- ii) IE-7 or above Internet browser.
- iii) Signing & Encryption type digital signature
- iv) JRE 7 updates 79 software to be downloaded and installed in the system. Security level should be medium
- v) To enable ALL active X controls and disable 'use pop up blocker' under Tools → Internet Options → custom level (Please run IE settings from the page www.mstcecommerce.com once)

1. Part-I: Submission of Tender Fee, EMD & other Documents:

Within specified Date & time the vendor must submit the following documents to Sr. Manager (Materials) Electrical Division, Andrew Yule & Co. Ltd., 14, Mayurbhanj Road Kolkata-23. Off-line.

- "Tender Fee" of Rs. 200/- (Rupees Two Hundred only) may be paid by Cash Receipt/D.D. favouring Andrew Yule & Co Ltd, payable at Kolkata Earnest Money of Rs.3000.00 (Rupees three thousand only) by Cash Receipt/Cheque/DD favouring Andrew Yule & Co. Ltd. Payable at Kolkata.
- "Earnest Money Deposit" of Rs. 3,000/- (Rupees Three Thousands only) may be paid by Cash Receipt/D.D. favouring Andrew Yule & Co Ltd, payable at Kolkata.
- General information, under Annexure-II complete in all respect alongwith desired document.
- Supporting documents in support of Pre-Qualification Requirements (as per Annexure - V).

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- **In case of failure to submit the Tender Fee & EMD within the stipulated time, the Tender may be rejected.**
- **Part-II: Online Bid Submission: After proper submission of EMD and Tender Fee at Andrew Yule & Co, the prospective bidder to submit online Techno commercial and price bid through MSTC portal.**

Supporting documents in support of Pre-Qualification Requirements (as per Annexure - V) are to be uploaded at the E-Tender Portal as a credential of the prospective bidder.

Bidding in e-Tender:

- a. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by ANDREW YULE & COMPANY LTD. EMD to be paid along with the Document within the last date as mentioned in Schedule of Tender.
- b. The process involves Electronic Bidding for submission of Techno Commercial Bid as well as Price Bid.
- c. The bidder(s) who have submitted the EMD & Tender Fee to Andrew Yule can submit their Techno Commercial Bids and Price Bid through internet in MSTC website www.mstcecommerce.com → e-procurement → PSU / Govt depts. Login under AYCL → My Menu → Auction Floor Manager → live event → Selection of the live event.
- d. The bidder should allow to run an application namely enApple by accepting the risk and clicking on run. This exercise has to be done twice immediately after opening of Bid floor. Then they have to fill up Common terms /Commercial specification and save the same. After that clicking on the Techno-Commercial bid, if this application is not run then the bidder will not be able to save / submit his Techno-Commercial bid.
- e. After filling the Techno-Commercial Bid, bidder should click 'save' for recording their Techno-Commercial bid. Once the same is done, the Price Bid link becomes active and the same has to filled up and then bidder should click on "Save" to record their Price Bid. Then once both the Techno-Commercial bid & Price Bid has been saved, the bidder can click on the "Submit" button to register their bid.
- f. Vendors are instructed to use link in My Menu to Upload Documents in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.
- g. Once documents are uploaded in the library, vendors can attach documents through Attach Document link against the particular tender. For further assistance, please follow instructions of vendor guide.

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- .h. In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.
- i. During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
- h. The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
- j. Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can download Technical Comparative statement.
- k. Price bid will be opened electronically on specified date and time given in the NIT. Bidder(s) can download Price Comparative statement.
- l. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
- m. All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply. Such successful tenderer shall be called hereafter SUPPLIER.
- n. It is mandatory that all the bids are submitted with Digital Signature Certificate otherwise the same will not be accepted by the system.
- o. Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
- p. No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.
- q. Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.

E-tender cannot be accessed after the due date and time mentioned in NIT.

All notices / corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by ANDREW YULE & COMPANY LTD/MSTC LTD. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with MSTC. Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).

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Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.

No deviation to the technical and commercial terms & conditions are allowed.

ANDREW YULE & COMPANY LTD has the right to cancel this e-Tender without assigning any reason thereof.

The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website www.mstcecommerce.com/eprhome/aycl of MSTC Ltd.

The bidders must upload all the documents required as per terms of NIT. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.

The bid will be evaluated based on the filled-in technical & commercial formats.

Bidders are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprhome/mstc of MSTC Ltd. to familiarize them with the system before bidding.

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Annexure-II

ANDREW YULE & COMPANY LIMITED
Electrical Division, Kolkata Operation
14, MAYURBHANJ ROAD, KOLKATA - 700023

General Information

(This document should be dully filled up and attached along with EMD)

The applicants are required to furnish full information to the queries included in this form. In giving the particulars, the supporting documents/certificates as called for per queries at places, must be tagged with the application for evidencing the information furnished in the application.

1. Name of the firm in full :

2. Address, Telephone No.,
Fax No. & E-mail :
a) Address :

b) Telephone No. :

c) Fax No. :

d) E-mail ID :

3. Status of the organization :

4. Trade License No.
**(Please attach a photo
copy of the license)** :

5. Banker's name
(a) Name of the Bank :

(b) Name of the Branch :

(c) Account No. :

Note : A copy of Banker's Certificate to be attached.

6. Sales tax Registration No.
(a) Central :

(b) State :

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7. GST No :

8. I. T. Permanent Account No.
& assessed up to (latest clearance
Certificate to be attached):

9. Turnover in last three financial
years (Audited Balance Sheet and P&
L Account to be submitted) :

10. Name of present customers
(Photo copy of few contracts may
be enclosed) :

11. Details of EMD (DD Details) submitted:

12. Details of Tender Fee (DD Details) submitted:

I/we hereby certify that the particulars furnished by me/us above are true to the best of my / our knowledge and belief and mis-representations of facts will render me/us liable to my/our action as may be deemed fit by Andrew Yule & Co. Ltd. & have the sole discretion to reject or accept my/our candidature.

(Signature of the Applicant)
Office Stamp/Seal.

Place :

Date ;

List of Enclosures:

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Annexure II (A)

The following are to be submitted to Sr. Manager (Materials), Andrew Yule, Electrical Division, Kolkata Operation, Switchgear Unit, in a sealed envelope.

1. EMD Rs:3000/= *

*Bidder may request for exemption from submitting EMD (Refer details given in Annexure-IV, General terms & condition).

2. DD /RTGS detail for Rs: 200 /= in favour of ANDREW YULE & CO.LTD, Payable at Kolkata towards cost of tender document.

3. Supporting documents in support of Pre-Qualification Requirement (as per Annexure - V)

4. Balance sheets and P&L Account. (2014-2015, 2015-2016& 2016-2017).

Our Bank details for making RTGS payment.

| | |
|------------------------------|--|
| Bank Name and Address | IDBI BANK, GROUND FLOOR 101, PARK STREET, KOLKATA, WEST BENGAL-700016 |
| IFSC Code | IBKL0000012 |
| Account No | 012103000000718 |
| Account Name | ANDREW YULE & COMPANY LIMITED |

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Annexure-III

TECHNO-COMMERCIAL TERMS FOR SOLAR PHOTOVOLTIC MODULE

(To be filled online in mstc portal).

| SL NO | TERMS & CONDITIONS | VENDOR RESPONSE |
|--------------|---|------------------------|
| 1 | The price quoted above should be for free delivery at our Site i.e. Andrew Yule & Co. Ltd., Kalyani Works, Plot No - 16 A&B, Block - D, Kalyani, Nadia - 741235 (WB) | AGREE |
| 2 | Taxes & Duties along with rates to be indicated by the bidder. | REMARKS |
| 3 | Inspection: Inspection will be made at our Site as per relevant IS. AYCL reserves the right to inspect at supplier's premises also. | AGREE |
| 4 | Liquidated damage - If the delivery is delayed beyond the date of scheduled date of despatch in the purchase order, penalty will be levied @ 1/2% per week subject to a maximum of 5%. Please confirm acceptance. | AGREE |
| 5 | Guarantee / Warranty: Guarantee / Warranty: As mentioned in the Technical Specification of the Solar PV Module (Annexure - VI) | AGREE |
| 6 | Payment Terms: 90% of the basic amount along with taxes & Duties will be paid within 30 days from the date of delivery at site. Balance 10% will be released after 12months of successful commissioning. However, balance 10% payment can be released against submission of equivalent amount of Bank Guarantee valid for 12 months. Any deviation in payment terms will be at sole discretion of AYCL & if the deviation is accepted, price of bidders who quote other payment terms will be loaded as per AYCL Norms. Any advance payment terms will not be accepted. | REMARKS |
| 7 | Risk purchase clause: The company reserve the right to impose risk purchase clause as " For delay in execution / supply we shall have every right to do the same through some other agency/s which shall deemed fit and the additional cost of the same (Incidental/Consequential) shall be to your account which with respect to our intimation or observation whatsoever. Please confirm acceptance. | AGREE |

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| SL NO | TERMS & CONDITIONS | VENDOR RESPONSE |
|-------|---|-----------------|
| 8 | Legal Clause-Any contract entered against this tender will be as per the following legal condition. It is recorded that this purchase order/contract/ agreement is executed and concluded by and between the parties hereto at premises NO. 14 Mayurbhanj Road, Kolkata 700 023 and in the event of any dispute arising out of this agreement between the parties only the appropriate civil Court in the City of Kolkata shall have the exclusive jurisdiction to entertain, try and determine the said proceedings in exclusion of all other courts. Please confirm acceptance. | AGREE |
| 9 | Security Deposit - The EMD amount of the successful Bidder will be retained as security deposit towards the execution of the order and the same will be released after completion of Erection of material at Site. Please confirm acceptance. | AGREE |
| 10 | Validity of offer: Offer should be valid for a minimum period 3 months. | AGREE |
| 11 | Note: Proper loading in the price shall be made by us for important terms e.g. "payment terms" cost of deliver to the destination, GST, having financial implication. | AGREE |
| 12 | Delivery: Material to be delivered at site within 20 days from the date of placement of order. | AGREE |
| 13 | EMD of Rs 3000/- to be paid by DD/RTGS within scheduled date. Please mention DD no. or RTGS details in the remarks. | REMARKS |
| 14 | EMD of Rs 3000/- to be adjusted against the outstanding dues between the vendor & AYCL. Please write accepted in the remarks field if agreed. | REMARKS |
| 15 | EMD of Rs 3000/-to be waived as vendor's turnover more than Rs. 50crore. Please mention the turnover of last year in the remarks. Also upload supporting document. | REMARKS |
| 16 | EMD of Rs 3000/- to be waived as per vendor's attached MSME certificate. Copy of certificate to be attached. | REMARKS |
| 17 | TENDER FEES :Bidders should submit a DD for Rs: 200 /= in favour of ANDREW YULE & CO.LTD, Payable at Kolkata towards cost of tender document or may submit in the form of cash. In case DD, please mention the DD no. otherwise write CASH. | REMARKS |
| 18 | Packing: Packing should be done properly at avoid any transit damage. | AGREE |
| 19 | In case of new vendor, they should send filled up vendor registration form as per attached format along with the Rs: 100/- in the form of DD as registration fee. | AGREE |
| 20 | Freight & Insurance will be covered by you. | AGREE |

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Annexure-IV

GENERAL TERMS AND CONDITIONS

EMD:Rs. 3,000/- (Rupees three Thousand only) by way of Cash Receipt/ Demand Draft drawn in favour of M/S ANDREW YULE & CO.LTD Payable at KOLKATA. Bank Guarantee from any nationalised / Scheduled / Multinational Bank for the EMD amount can also be accepted.

For bidders already enlisted with AYCL- Electrical Division, having outstanding amount more than the EMD amount or who have already submitted the EMD against our earlier tenders or those who have security deposit with Andrew Yule may apply for adjustment of the same. The total EMD should be Rs: 3,000/-

Bidders who are MSMED units may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same.

Bidders whose turnover is more than Rs: 50 crores may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same

If reason for non-submission of EMD or adjustment against the outstanding balance for EMD is not mentioned in Techno-commercial bid of tender, the tender will be rejected.

Bidders should enclose a DD for Rs: 200 /= in favour of ANDREW YULE & CO.LTD., Payable at Kolkata towards cost of tender document.

The Techno-commercially qualified parties shall be enlisted with Andrew Yule & Co. Ltd. for Solar related future projects.

THE RIGHTS OF THE COMPANY

The company reserves the right to reject any tenderer based on their past performance.

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PRE-QUALIFICATION CRITERIA (PQR)

1. Financial Criteria:

- i) The bidder should be a registered company incorporated in India under the Companies Act, 1956 or 2013 or Partnership Firm registered as per Partnership Act 1932 or Statutory Body and must submit Trade license, Certificate of Incorporation / Registration Certificate, GST Registration (GSTIN), PAN Card, PF registration, Profession Tax Registration as per the applicability.
- ii) Average Annual financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least INR 1.0 Lac.
- iii) The bidder shall submit Income Tax return for the last 03 (three) Assessment years (2014-15, 2015-16, 2016-17).
- iv) The bidder should submit reports on the financial standing i.r.o. solvency of bidder company / firm as certified by bankers, Audit report for companies registered under companies act and tax audit report for partnership firms for last 03 (three) financial years (2014-15, 2015-16, 2016-17).

2. Technical Criteria:

- i) The bidder should have successfully supplied Solar PV Module in last 7 years ending 30.11.2017 as mentioned below.
- ii) The Modules should have been operating successfully for minimum 01 (one) year from the Bid submission start date.
- iii) Bidder should submit, in support to the above, the list of projects commissioned along with their work order/ LOI and the commissioning certificates along with the Certificate of Successful Operation/ satisfaction from the Solar PV Module.

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Annexure-VI

TECHNICAL SPECIFICATION & BOQ FOR SOLAR PHOTOVOLTAIC (PV) MODULE**TECHNICAL SPECIFICATION**

The PV modules must conform to the latest edition of the following EC/
Equivalent BIS Standards for PV module design qualification and type approvals:

Standards:

| Sl. | Standard | Description |
|-----|----------------------------------|---|
| 1 | IEC:61215/IS: 14286 | Crystalline silicon terrestrial photovoltaic modules – Design qualification and type approval. |
| 2 | IEC:61730-Part 1 | Photovoltaic (PV) module safety qualification – Requirements for construction. |
| 3 | IEC:61730-Part 2 | Photovoltaic (PV) module safety qualification – Requirements for testing. |
| 4 | IEC:61701/IS: 61701 | Salt Mist Corrosion Testing of the module. |
| 5 | IEC:62804 | Test method for detection of Potential Induced Degradation of photovoltaic (PV) modules. |
| 6 | IEC62716 | Photovoltaic (PV) Modules–Ammonia(NH ₃) Corrosion Testing (Advisory-As per the site condition like dairies, toilets) |
| 7 | IEC61853-Part1/ IS16170:Part1 | Photovoltaic (PV) module performance testing and energy rating – Irradiance and temperature performance measurements, and power rating |
| 8 | IEC62759-1 | Photovoltaic (PV) modules – Transportation testing, Part1: Transportation and shipping of module package units |

The proposed PV Module must have the Test Certificate issued from accredited test laboratories of **Ministry of New and Renewable Energy, Government of India**. The manufacturers should get their samples tested as per the new format / procedure which are effective from 1st April 2013 onwards as per MNRE, Govt. of India Guideline.

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Identification and Traceability:

Each PV module must use a RF identification tag (RFID), which must contain the following information:

1. Name of the manufacturer of PV Module.
2. Name of the Manufacturer of Solar cells.
3. Month and year of the manufacture (separately for solar cells and module).
4. Country of origin (separately for solar cells and module).
5. I-V curve for the module.

6. Peak Wattage, I_m , V_m and Fill Factor for the module
7. Unique Serial No and Model No of the module.
8. Date and year of obtaining IEC PV module qualification certificate.
9. Name of the test lab issuing IEC certificate.
10. Other relevant information on traceability of solar cells and module as per ISO9000 series.

RFID shall be placed inside of each solar module laminate and must be capable to withstand environmental conditions as per latest Guide line of MNRE, Govt. of India.

PV modules must qualify (test reports/certificate from IEC/NABL accredited laboratory should be enclosed) as per the relevant IEC standard. Additionally, the performance of PV modules at STC conditions must be tested and approved by one of the IEC/NABL Accredited Testing Laboratories including Solar Energy Centre(SEC).

Guarantee / Warranty:

1. **Material Warranty:** The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than Ten (10) years from the date of sale to the original customer.
 - I. Defects and/or failures due to manufacturing
 - II. Defects and/or failures due to quality of materials
 - III. Non conformity to specifications due to faulty manufacturing and/or inspection processes.

If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owner's sole option.

2. **Performance Warranty:** The manufacturer should warrant the output of Solar Module(s) for at least 90% of its rated power after initial 10 years & 80% of its rated power after 25 years from the completion of trial run at site/date of final commissioning.

If, Module(s) fail(s) to exhibit such power output in prescribed time span, the manufacturer's will bound to either deliver additional PV Module(s) to replace the missing power output with no change in area of site used or replace the PV Module(s) with no extra cost claimed at Owner's sole option.

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Manufacturer of proposed PV modules must have the ISO9001:2008 & ISO14001 Certification for their manufacturing unit for their said manufacturing item.

Specification:

| SL | Item | Description |
|-----------|---|--|
| 1 | Type | Crystalline Silicon-Poly |
| 2 | Efficiency of module | Minimum 15% at STC |
| 3 | Cell efficiency | Minimum 17% at STC |
| 4 | Fill Factor | Minimum 74% |
| 5 | No. of cells per module | 60/72 |
| 6 | Module Frame | Non-corrosive and electrolytically compatible with the structural material, preferably anodized Al. |
| 7 | Termination box | Thermo-plastic, IP65, UV resistant |
| 8 | Bypass Diode | Minimum 3or more |
| 9 | Power Rating | The nominal power of a single PV module shall be 250Wp or higher.250Wp to 300 Wp Wp, 60 / 72 cells (without any negative tolerance) |
| 10 | Power tolerance | upto+5% |
| 11 | Temperature co-efficient of power | Less than- 0.45%/°C |
| 12 | Glass | High transmittance glass |
| | Thickness | 3.2 mm (minimum) for 60 Cell PV Module/4.0mm (minimum) for 72 Cell PV Module |
| 13 | RF Identification tag for each solar module | Shall be provided inside the module and must be able to withstand environmental conditions and last the life time of the solar module as per MNRE Norms. |

Other General Requirements:

- i. The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2(two) percent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
- ii. The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP 65 rated.

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Preferred Make -Vikram Solar / Sova Solar / Waaree / ICON Solar / Goldi Green or any reputed make with valid IEC Certificates.

BILL OF QUANTITY

| Sl. No. | Item Description | Qty |
|----------------|---|------------|
| 1 | Solar PV Module of minimum capacity 250wp or higher. 1 set = 40 no module of minimum Capacity of 250wp or higher | 1 Set |

The quantities mentioned are indicative only and the order will be released based on actual requirement.

Andrew Yule reserves the right to increase/decrease the tender quantity by 20 %.

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PRICE FORMAT FOR SOLAR PV MODULE:

| Sl. No. | DESCRIPTION | UOM | Basic Price (RS./No) | CGST (%) | SGST (%) | IGST (%) | Total per unit cost (T)(In Rs) |
|---------|---|-----|----------------------|----------|----------|----------|---|
| 1 | Solar PV Module of minimum capacity 250wp or higher. 1 set = 40 no module of minimum Capacity of 250wp or higher | Set | (a) | (b) | (c) | (d) | $T = \frac{a+a*b/100+a*c}{100+a*d/100}$ |

L-1 DETERMINED BASED ON ABOVE FORMULA IS PROVITIONAL.

ACTUAL L-1 WILL BE DETERMINED CONSIDERING OTHER CHARGES DUE TO CHANGE IN PAYMENT TERMS, TAX ETC.

Contd.....

(21)

ANDREW YULE & COMPANY LIMITED
NAME OF THE UNIT

Application for Enlistment Form

The application form should be submitted along with the registration fee of Rs.100/- (Rupees Hundred) only by Bank Draft No..... dated..... in favour of Andrew Yule & Company Ltd.

- 1) Date of Advertisement for Registration :
- 2) Name of the Firm in Full :
- 3) Address of the Firm :
 - a)
 - b)
 - c)
 - d)
 - e)
- 4) Telephone/Telegram/Fax No./E-mail :
 - a)
 - b)
 - c)
 - d)
 - e)
- 5) Status of the Organization :
- 6) Whether :
Manufacturer/Contractor/Fabricator/Sub-
Contractor/Stockist/Agent/Dealer
- 7) Item for which enlistment is sought :

Contd.....

(22)

- 8) Banker's Name :
- a)
 - b)
 - c)

Note : *Confidential Report of financial position will be requested for by AY & Co. Ltd from the Bankers*

- 9) Trade License No. :
(Please attach a Xerox copy)

- 10) Factory License No. :
(Please attach a Xerox copy)

- 11) Whether registered as an SSI Unit. :
If yes, Registration No.
(Please attach a Xerox copy)

- 12) Sales Tax Registration No. :
a)
b)
(Please attach a Xerox copy of Registration :
Certificate)

- 13) I.T. Permanent Account No. :

- 14) Photo copies of current I.T. & Tax :
clearance Certificates are to be attached

- 15) Whether the applicant is already enlisted :
in this enterprise. If so, the details are to
be furnished stating the types of jobs
executed, etc. i.e.

(a) Description of the job (b) Year (c) :
Amount & (d) Authorized by

Contd.....

(23)

- 16) Whether the applicant is enlisted with any :
other Public Sector Undertaking/other
reputed manufacturers.
If so, the details are to be furnished
- 17) Financial (Year) :
Capacity
a)
b)
(Copies of Balance Sheet & Profit & Loss :
A/c for last 3 years should be attached)
- 18) Technical capacity :
(i)
(ii)
- 19) Manpower on Rolls :
Total Manpower in Roll:
a)
b)
c)
d)
e)
- 20) Name & Residential address of :
Partners/Directors/Proprietors, as the
case may be
- 21) Whether any Govt. Servant(s) or :
dismissed Employee(s) of Andrew Yule &
Co. Ltd/any other Govt. Undertaking is in
employment under the applicant

Contd.....

(24)

- 22) Whether the applicant or any of its :
Partners/Directors has been banned or
removed from the approved list of
suppliers by the Enterprise or
Undertaking/any other Enterprise or
Undertaking in the past

I/We hereby certify that the particulars furnished by me/us above are true to the best of my/our knowledge and belief and misrepresentations of facts will render me/us liable to any action as may be deemed fit by Andrew Yule & Co. Ltd.....Unit/Division have the sole discretion to reject or accept my/our candidature for enlistment.

Place:

(Signature of the Applicant)
Office Stamp/Seal

Date:

FOR OFFICE USE ONLY

- (a) Technical assessment of capabilities to perform as per Units's /Divisions's requirements.
(To be done and signed by Technical Dept.)
- (b) Financial Strength analysis to be made and signed by Finance.
- (c) Comments to Banker's Confidential Report to be made and signed by Finance
(to be attached)
- (d) Purchase Dept's Recommendation (to be made by Purchase Dept.)
- (e) Tender Committee's comments for approval.

Sd/-

(Signature of the members of
Tender Committee)

TO BE ALLOTTED BY PURCHASE DEPT.

Reg.....

Folio Ref. No.....

Enlistment Register