

PPT Presentation delivered on Pre-bid Conference II
on
RESCO tender for Rooftop Solar PV Projects in the State of Madhya Pradesh



22 June 2018

Madhya Pradesh Urja Vikas Nigam Limited

Introduction

1. RESCO tender for Roof Top Solar PV Projects at Various Locations in the State of Madhya Pradesh;
2. Total capacity of projects under different Project Group is estimated of 28 MWp;
3. The projects are categorized in different Project Groups as mentioned here;
4. Each group might have different size of projects within but enjoy uniform tariff.
5. The contract would be awarded to one bidder for a group at the uniform tariff
6. Bid shall be valid for 180 Days from the Bid Deadline Date;

| Project Group | Type of Institution | Count of projects | Est. Capacity (kWp) |
|---------------|---------------------------------------------------------|-------------------|---------------------|
| A | Colleges under Dept. of Higher Educations. | 311 | 5,754 |
| B | Govt. Medical Colleges under Dept. of Medical Education | 3 | 3,800 |
| C | Institutions of Central Govt./ National Importance | 16 | 4,760 |
| D | Institutions of State Govt. | 3 | 210 |
| E | Govt. Universities | 11 | 2,850 |
| F | MP Police Establishments | 59 | 1,640 |
| G | Govt. Engineering/ Poly-Technic/ ITI Colleges | 130 | 2,232 |
| H | Municipal Corporations/ Nagar Palika Parisad | 6 | 3,800 |
| I – U | Private Institutions | 14 | 3080 |
| Total | | | 28,126 |

One tender for each project group

1. Tenders are available for purchase from www.mperproc.gov.in.
2. Each Project Group is a separate tender - Total 22 tenders are hosted
3. RfP and draft PPA are hosted under 'Tender Notification' which can be accessed without fees.
4. Details of project sites and access to the Data Room is provided through a document hosted in a paid section named as 'Tender Document'
5. Bidder can view the master table and Link for the data room only after paying the bid processing fee.
6. Bid processing fee for each tender is Rs. 50,000. However, if it is paid once, the bidder can claim exemption from subsequent fees by uploading the payment slip.
7. There is a nominal registration fees charges by the portal for each tender.
8. Two envelope bid, Financial bid online submission;

Eligibility Criteria

1. The Bidder should be a Company or a Partnership Firm or a Limited Liability Partnership Firm (LLP) or registered Sole Proprietor;
2. No Technical Eligibility Criteria;
3. Financial Eligibility Criteria:
 - I. Bidder should have minimum net worth of INR one crore MWp; Net worth requirement for each project group is provided in the tender
(Min. 5 Lakhs for project group “T”, Max 5.75 Cr for project group “A”)
 - I. In case of Consortium, Net Worth should be fulfilled by Lead Member;
 - II. If Bidder bids for multiple Project Group, Net worth requirement will be assessed individually for each project group, however, it will not be additive.

Project groups and important parameters

| Proj. Group | Type of Institution | No. of Sites | Est. capacity (kWp) | NW required (Rs. Lac) | Bid Security req. (Rs. '000) |
|--------------|---------------------------------------------------------|--------------|---------------------|-----------------------|------------------------------|
| A | Colleges under Dept. of Higher Education | 311 | 5,754 | 575 | 6,905 |
| B | Govt. Medical Colleges under Dept. of Medical Education | 3 | 3,800 | 380 | 4,560 |
| C | Institutions of Central Govt./ National Importance | 16 | 4,760 | 476 | 5,712 |
| D | Institutions of State Govt. | 3 | 210 | 21 | 252 |
| E | Govt. Universities | 11 | 2,850 | 285 | 3,420 |
| F | MP Police Establishments | 59 | 1,640 | 164 | 1,968 |
| G | Govt. Engineering coll./Poly-Technic/ITI | 130 | 2,232 | 223 | 2,678 |
| H | Municipal Corp. / Nagar Palika Parisad | 6 | 3,800 | 380 | 4,560 |
| I | Private Institution | 1 | 100 | 10 | 120 |
| J | Private Institution | 1 | 500 | 50 | 600 |
| K | Private Institution | 1 | 500 | 50 | 600 |
| L | Private Institution | 1 | 150 | 15 | 180 |
| M | Private Institution | 1 | 200 | 20 | 240 |
| N | Private Institution | 1 | 100 | 10 | 120 |
| O | Private Institution | 1 | 200 | 20 | 240 |
| P | Private Institution | 1 | 200 | 20 | 240 |
| Q | Private Institution | 1 | 200 | 20 | 240 |
| R | Private Institution | 1 | 200 | 20 | 240 |
| S | Private Institution | 1 | 100 | 10 | 120 |
| T | Private Institution | 1 | 50 | 5 | 60 |
| U | Private Institution | 1 | 80 | 8 | 96 |
| V | Private Institution | 1 | 500 | 50 | 600 |
| Total | | 553 | 28,126 | | |

General Features of RFP

1. **Pre-identified Procurers** including Govt./ Pvt. Institutions;
2. More than **28 MW** capacity already identified under RESCO Mode;
3. No need to go for **Procurer** search in Market;
4. Revision in project capacity **allowed** before signing PPA if agreed by procurer;
5. Neither prior **experience** of solar required nor **technical partner** in the consortium;
6. Net worth required is only 1 Cr./MW;

Enhancing Features of RFP

1. **Data room** containing site wise survey report along with past electricity bills.
2. Operational Life is for **25 Years** from Scheduled COD (SCOD);
3. **No operational** performance bank guarantee;
4. Liquidated damages (LD) on delay in commissioning of project from SCOD;
5. LD also on **not fulfilment** of defined milestone during construction period;
6. **Advance payment** of subsidy, on Procurer's demand, up to 50% of subsidy for Procurer is permissible;
7. Remaining **payment of subsidy** within 45 days from COD;
8. Bidder with **Lowest first year quoted tariff** would be a winner;
9. Annual tariff **escalation of 3%** up to 25 years;
10. **Concessional World Bank** loan for Commercial and Industrial Group;
11. **Concessional IDBI bank loan** for all project group;

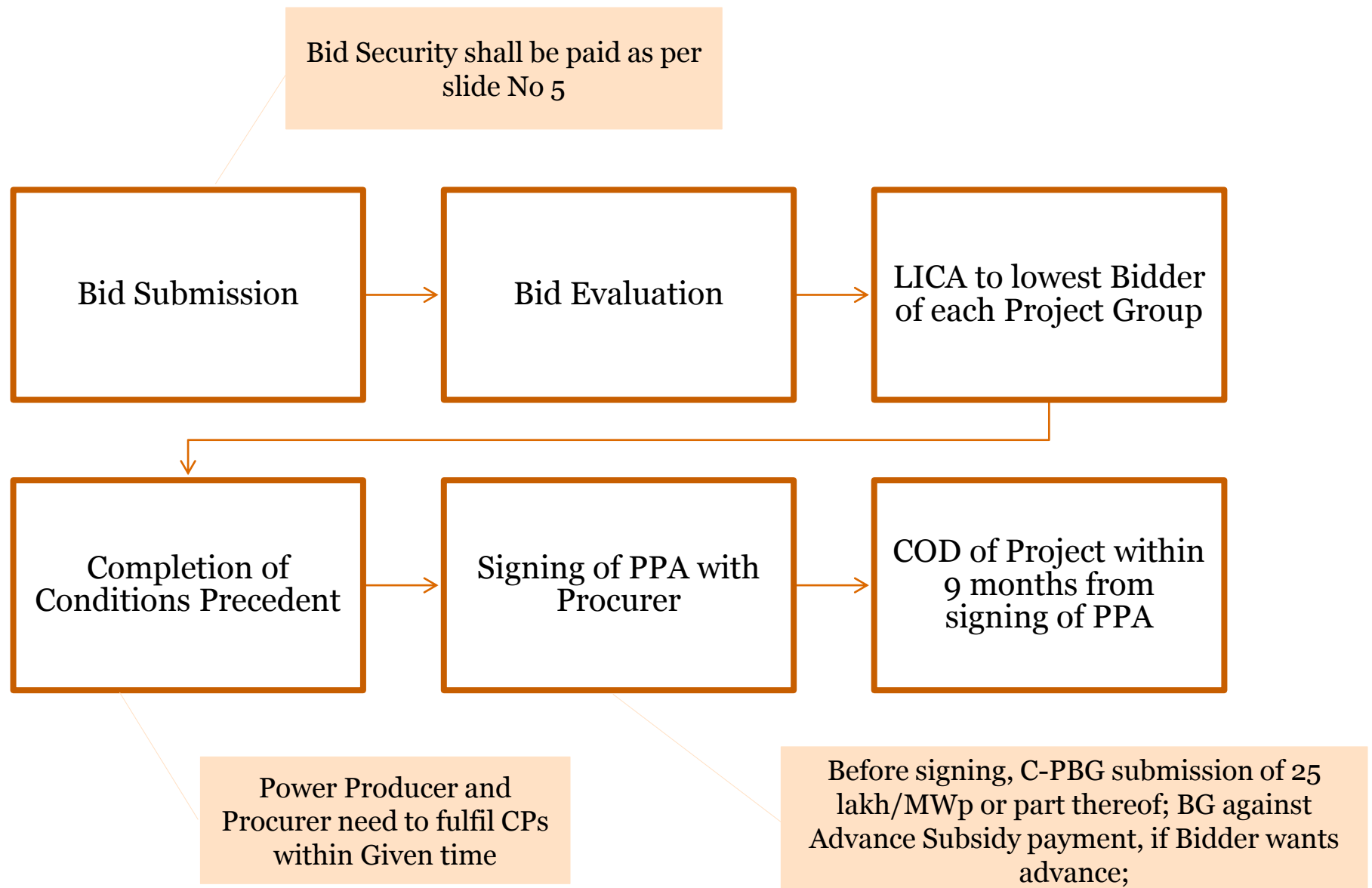
General Features of PPA

1. Term of PPA is **25 years from SCOD**;
2. Commissioning within 9 Months from PPA signing; **Part Commissioning** allowed;
3. Extension in SCOD on **Procurer's delay** in fulfilment of CS or on account of receipt of **Commissioning certificate** from concerned DISCOM;
4. **Payment security mechanism** need to be established by Procurer and **Net Metering application** need to be submitted in concerned DISCOM by Power Producer within 2 months from the Signing of PPA;
5. 5% of C-PBG value as **LD per week of delay** in commencement of power supply;
6. Monthly Bill Payment within 15 days from receipt of invoice;

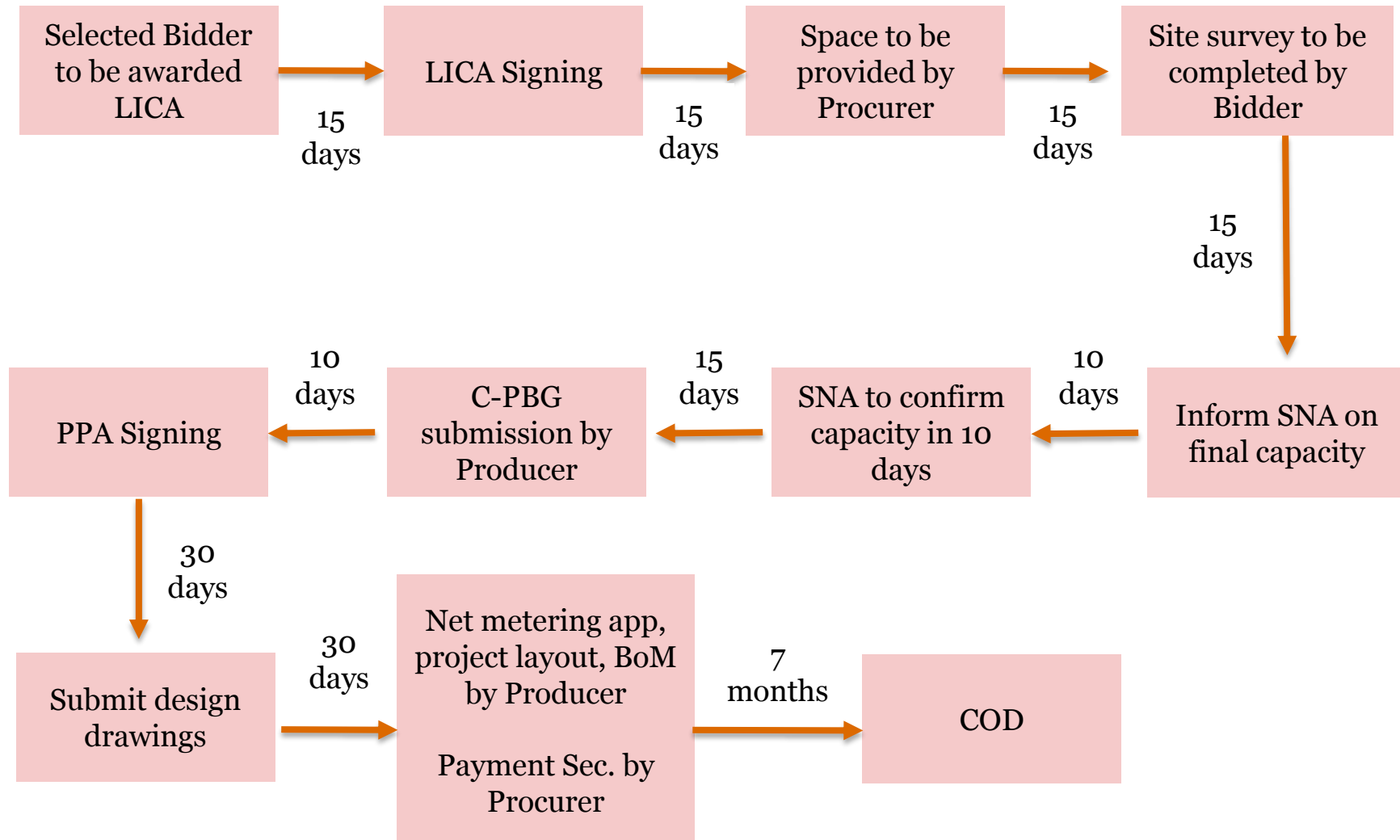
Enhancing features of PPA

1. **Payment security** from Procurer or Agency under which Procurer falls;
2. **No termination** (pre-mature) allowed before 5 Operational Years;
3. **Termination payment provision** in case of Procurer default as well as Power Producers default; **Higher termination payment** on procurer's default;
4. Procurer agreement to **procure 100%** of the energy generated; In case of lower demand, **loss in revenue** is made good by Procurer based on Deemed Generation;
5. Payment on **Deemed Generation** during Project disruption period;
6. In case of under generation, the penalty of **20% of tariff** is imposed on shortfall; If CUF falls **below 10%** on a monthly basis for **continuous 6 months**, it will be termed as power producer event of default and Procurer can trigger PPA termination.
7. Late payment **surcharge (1.5% pm)** and early payment **rebate (1% pm)**;
8. **No delay** in payment of disputed bill, adjustment are allowed in later bills; 90% disputed amount should be paid within 15 days of invoice;
9. Substitution right of Lender;
10. Timelines for O &M defined to reduce the interference during working hours;

Process Flow from Bid Submission to COD



Key Milestone from issuance of LICA to CoD



Payment Terms for release of Subsidy and Liquidated Damages

Payment Terms

Subsidy for each Projects shall be released in two parts:

1. Advance subsidy payment of 50% of the subsidy value for PPA Capacity of each Project. Bank Guarantee shall be submitted against the advance subsidy requirement by Power Producer;
2. Remaining subsidy payment shall be released within 45 days from the COD;

Liquidated Damages (LD)

1. LD on delay in Commissioning: 5% of C-PBG value per week of delay from the SCOD subject to maximum of 20 Weeks;
2. LD on non-compliance during Construction Period: 2% of C-PBG per week of delay or part thereof, in case of failure in adhering in submission of details as mentioned in CS of the Project.
3. LD on delay in achieving any milestone mentioned in COD schedule by Power Producer: 0.5% of C-PBG per week of delay or part thereof except for final milestone;
4. If CoD is achieved in time, accrued penalty during Construction Period would not be levied

Payment Security Mechanism

Procurer or Procurer's Administrative Department can provide payment security in any one of the below form:

1. Letter of Credit;
2. Unconditional and irrevocable bank guarantee;
3. Fixed Deposit Receipt with Nodal Agency;
4. Cash Receipt with Nodal Agency;
5. Guarantee of the concerned Department;

For Government entities: ~ 120% of the estimated average monthly billing/ previous Operational Year.

For Private entities ~ 400% of the estimated average monthly billing/ previous Operational Year.

Compensation on Termination

Power Producer's event of default:

1. Procurer have a right to terminate the PPA and Project ownership shall be transferred to procurer after paying termination payment to Power Producer which is equivalent to 50% of Net Asset Value;

$$\text{Net Asset Value} = \text{Benchmark Capex X (1 - (4\% x No of operational years))}$$

Procurer's event of default:

1. Power Producer have a right to terminate the PPA and ownership of asset will be transferred to Procurer. Procurer has to pay termination payment which is equivalent to Net Asset Value;
2. In case, Power Producer's removes the asset from the Premises, termination payment received by Power Producer would be only 10% of Net Asset Value;

$$\text{Net Asset Value} = \text{Benchmark Capex X (1 - (4\% x No of operational years))}$$

Termination on request of Procurer:

1. Procurer can request for termination of PPA after completion of 5 years. In such case, Procurer shall termination payment which is equivalent to Net Asset Value;

Nodal Agency shall keep the share of termination payment in the ratio of subsidy paid to total Benchmark Cost.

World Bank Loan for Projects under Commercial and Industrial Project Group

1. Only Commercial and Industrial Project Group is eligible for World Bank Loan;
2. Sole proprietorship Firm, Partnership Firm including LLP and Company/SPV/NBFC;
3. Bidder should have at least one year experience in power sector;
4. Door to door term loan for 15 years tenor is available up to 75% of project cost. Need based NFB facility is available;
5. Interest rate would range from one year SBI MCLR plus 20 basis point to 90 basis point, depending on risk rating of Successful Bidder;
6. Bidder should comply with EHSS guideline and must have secured all required clearances/approvals;
7. Borrower's Guarantee would be required;
8. DSRA equivalent to 3 months' principal and interest should be maintained;
9. Developer should maintain average DSCR of 1.25 at P75 and minimum interest coverage ratio of 1.75;

Project Group wise Master Table

A Master table has been prepared for each project group which contains the following fields:

| Name of the Institution | District | Lat (N) Long (E) | Est. capacity (kWp) | Est. energy generation from solar (MWh/yr) | Present Contract Demand | Present Supply Voltage (V, kV) | DT capacity | GOI + GoMP Subsidy (net of 2% as UVNL's admin charges) Rs. |
|-----------------------------------------------|----------|--------------------------|---------------------|--------------------------------------------|-------------------------|--------------------------------|--------------|------------------------------------------------------------|
| Maulana Azad National Institute of Technology | Bhopal | 23.213880° 77.407808° | 1000 (2 X 500) | 1,609.0 | 2 X 1000 | 33 kV | 2 X 1000 KVA | 2,27,90,000 |
| Motilal Vigyan Adarsh Mahavidyalya | Bhopal | 23.244151° 77.407629° | 80 | 125.5 | <10kW | 400V | 2 X 200 KVA | 18,92,000 |

Explaining Subsidy Computation

| Project Capacity (kWp) | Benchmark (Rs/Wp) | Net Subsidy (Govt. Buildings) |
|------------------------|-------------------|-------------------------------|
| 1 – 10 | 60 | 43% x 60 x Capacity in Wp |
| 10 – 100 | 55 | 43% x 55 x Capacity in Wp |
| 100 – 500 | 53 | 43% x 53 x Capacity in Wp |

| Project Capacity (kWp) | Benchmark (Rs/Wp) | Net Subsidy (Private Institutions) |
|------------------------|-------------------|---------------------------------------------------------------------------|
| 1 – 5 | 60 | 28% x 60 x Capacity in Wp |
| 5 – 10 | 60 | (28%+20%)*60*Capacity in Wp |
| 10 – 100 | 55 | (28%+20%)*55*Capacity in Wp (20% subsidy is available for up to 25 kW) |
| 100 -500 | 53 | (28%+20%)*53*Capacity (20% subsidy is available for up to 25 kW) |

A Data Room is created for bidders facilitation

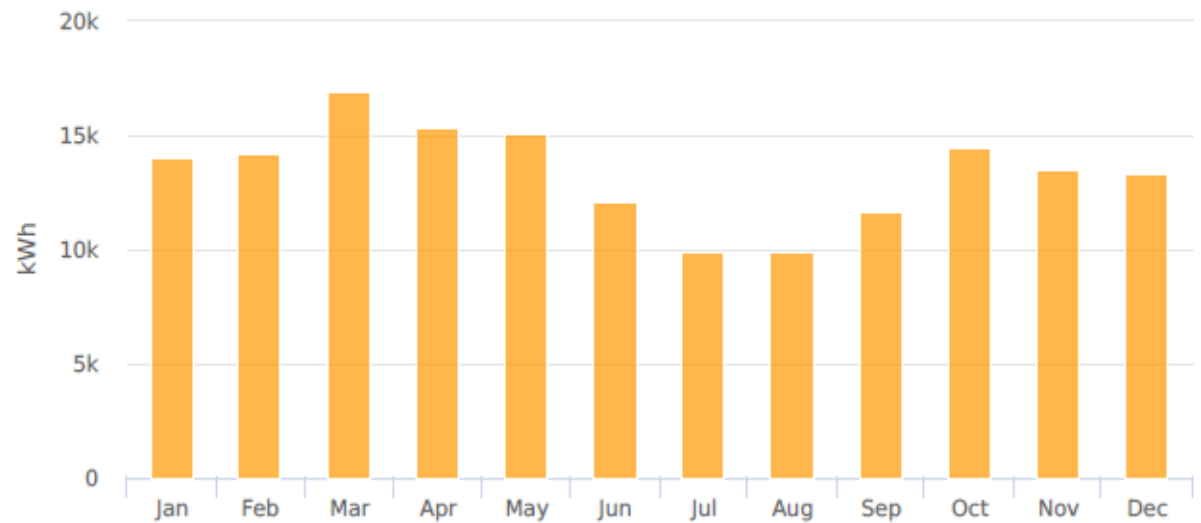
1. A data room have been prepared to facilitate bidders in decision making.
2. The data room will contain the following documents for each project site:
 - i. Document explaining the Approach and Methodology followed during site survey and creation of Annual Production Report.
 - ii. Annual Production Report with details such as Irradiance, Module DC Capacity, Inverter AC Capacity, Month wise expected generation, Sources of system losses, photograph of rooftop with panel placement for each site.
 - iii. Electricity Bills for project site.

The data room can be accessed after paying the bid processing fee.

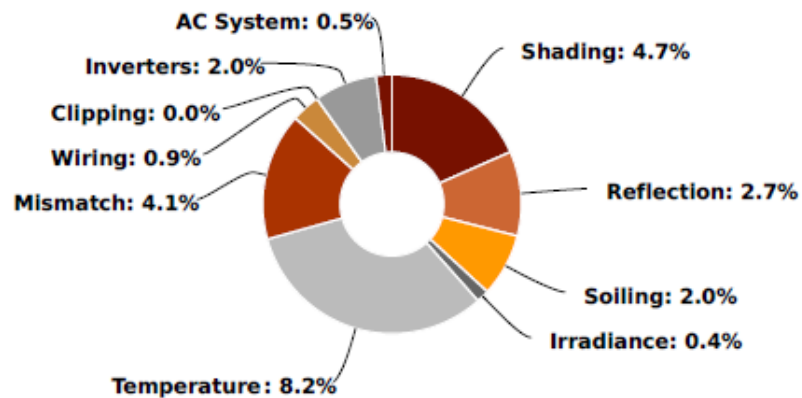
Contents in Annual Production Report

| System Metrics | |
|-----------------------|---------------------------------------|
| Design | Site No. 26 |
| Module DC Nameplate | 99.8 kW |
| Inverter AC Nameplate | 100.0 kW Load Ratio: 1.00 |
| Annual Production | 160.3 MWh |
| Performance Ratio | 77.1% |
| kWh/kWp | 1,606.9 |
| Weather Dataset | TMY, 10km Grid, meteonorm (meteonorm) |

Monthly Production



Sources of System Loss



Timelines

| S. No. | Nodal Agency Stage | Date | Time (Hrs.) | |
|--------|--------------------------------------------------------------|------------|-------------|------|
| 1. | Purchase of RFP Start Date | 27-07-2017 | 1500 | |
| 2. | Pre Bid Meeting (II nd) | At Bhopal | 08-06-2018 | 1100 |
| | | At Delhi | 22-06-2018 | 1100 |
| 3. | Purchase of RFP End Date | 09-07-2018 | 1500 | |
| 4. | Bid Submission End Date | 09-07-2018 | 1800 | |
| 5. | Mandatory Submission Hard Copy of Bid (except Financial Bid) | 12-07-2018 | 1330 | |
| 6. | Technical Bid & Bid Security Opening Date | 12-07-2018 | 1500 | |
| 7. | Financial Bid Opening Date | 19-07-2018 | 1500 | |

Towards cleaner and greener future...

Thank you