

**Ministry of New and Renewable Energy  
(Jawaharlal Nehru National Solar Mission)**

**Form B for Project Proposals for  
Grid Connected Rooftop and Small SPV Power Plants  
(For the project above 5 kWp & upto 50 kWp)**

Photo of the  
beneficiary  
with signature

**PART- I: Project Details****[A] General Details**

<b>Sl. No.</b>	<b>Description</b>	<b>Remark</b>
1.	<b>Title of the Project</b>	
2.	<b>Capacity of the plant (kWp)</b>	
3.	<b>Category of the Applicant/Project Proponent</b> Government Organization/ PSU/ State Nodal Agency/ SECI/ Channel Partner/ RESCO/ System Integrator/ Finance Integrator/ Manufacture/Supplier of Solar equipment's/ Developer/ NGO/Financial Institutions/Financial Integrator/ Any other (please specify)	
4.	<b>Details of the Applicant/ Representative/ Project Proponent</b> Name Designation Mailing Address Telephone, Fax & Email (Web site, if any)	
5.	<b>Executive Summary of the Proposal</b> (Please attach a separate sheet)	
6.	<b>Objective for implementing the Plant</b> (a) Sale of electricity to the distribution licensee at feed-in tariff or competitively discovered rate (b) Sale of electricity to the distribution licensee at Average Pooled Price Cost (APPC) and participation in REC Mechanism (c) Sale of electricity to third party (d) Self-consumption total or partial generation (e) Diesel saving (f) Combination of above (please mention) (g) Any other, please specify	
7.	<b>Any Other detail relevant for consideration of support under the scheme by the evaluation committee</b>	

**[B] Details of the plant site/location**

<b>Sl. No.</b>	<b>Description</b>	<b>Remark</b>
1.	<b>Is the plant located at the address mentioned in [A] 4 above; if No, Address of the location of the plant(s)</b> Name H. No. Street/Locality/Road District State Pin code	
2.	<b>Is the beneficiary same as [B] 1. If No, Details of Project Beneficiary/ Organization</b> Head of the organization Name of the contact person full address, phone, mobile and e-mail	
3.	<b>Details of Proposed Power Plant</b> (a) Proposed capacity of the SPV Power Plant (kWp) (b) Plant proposed at single site/multiple sites (c) Interconnection with the electricity network at single point or multiple point (d) Availability of shadow free south facing rooftop/ land area for the power plant with photograph (e) Total loads to be energized by SPV Power Plant (kW) (f) Calculations and justification for the proposed capacity (Please elaborate) (g) Expected annual energy generation (h) Space for housing the plant control systems and battery bank (if any)	
4.	<b>Details of electrical load where the plant is to be installed</b> i. Total connected electrical load in kW (as per electricity bill) ii. Applicable consumer category (domestic/commercial/individual/others, please specify) iii. Total electrical load to be met by the SPV power plant (kW)	
5.	<b>Technology Description &amp; System Design /Specification</b>	

Sl. No.	Description	Remark
	<ul style="list-style-type: none"> <li>i. Sketch/Line diagram of the complete SPV System with details (please attach drawing)</li> <li>ii. Capacity/ Power of each PV Module (kWp)</li> <li>iii. Number of modules and total array capacity (nos. &amp; kWp)</li> <li>iv. Solar cell technology and Module efficiency proposed to be used (mono-crystalline/ poly-crystalline/ thin film/ any other)</li> <li>v. Details of Tracking of PV Array, if proposed (single axis/ double axis tracking etc.)</li> <li>vi. PCU/inverter capacity with detailed specifications (kVA) (Details of quality of output power, standards)</li> <li>vii. Type of inverter (central/ string/ multi string/any other), inverter efficiency</li> <li>viii. Number of PCU/inverters proposed to be used</li> <li>ix. DC Bus voltage</li> <li>x. Capacity of battery bank (Current, Voltage and AH), if used, any</li> <li>xi. Type of battery proposed (lead acid tubular/ lithium ion/ NaS/ any other)</li> <li>xii. Details of protections to be deployed on PV array and AC output side</li> <li>xiii. Details of Metering, Indication, Data logging operation</li> <li>xiv. Schematic diagram of the system including protecting interlocking devices, monitoring and data logging points to be provided.</li> <li>xv. Details of training of manpower to be provided for successful operation of the plant. (Compliance to BIS/IEC Standards is mandatory).</li> <li>xvi. Details of Mounting system: <ul style="list-style-type: none"> <li>- Roof mounted system</li> <li>- Ground mounted system</li> </ul> </li> </ul>	
6.	<p><b>Details of Building to install the Electronics Control Panel and Battery Bank (if any)</b></p> <ul style="list-style-type: none"> <li>i. Whether any existing building is to</li> </ul>	

Sl. No.	Description	Remark
	<p>be used as control room, if so, details to be provided.</p> <p>ii. If a new building is to be constructed, area, estimated cost and layout, etc. to be provided and time frame to construct the building.</p>	

**Notes:**

- It is mandatory to provide technical performance specifications of each component of the power plant proposed to be installed under the project as applicable and for which the performance will be warranted.
- All technical parameters and warranty requirements must meet or exceed the requirements mentioned in the guidelines issued by the Ministry.

**[C] Operation and Maintenance Arrangements**

Sl. No.	Description	Remark
	<ul style="list-style-type: none"> <li>– Details of Operation and Maintenance Arrangements</li> <li>– Arrangements for Generation Data Collection through remote monitoring (<i>applicable for SPV Power Plants having more than 5 kWp capacity</i>)</li> <li>– Is dedicated staff being trained for O&amp;M of the plant?</li> <li>– No. of personnel to be trained in O&amp;M</li> </ul>	

**[D] Project Duration and Implementation Schedule**

Completion schedule with milestones (*Please attach PERT CHART preferably*)

**[E] Monitoring Mechanism**

Details of Data Monitoring on Daily, Monthly and Annual energy generation (*Data logging and compilation and sharing with MNRE*)

**Please provide details in the following format**

Own Mechanism (up to 5 kWp)	
Third Party	
Remote Monitoring (for SPV power plants of 10kWp and above)	

**[F] Costing of Project**

Sl. No.	Systems	Unit Cost (Rs. in lakh)	Quantity	Total Cost (Rs. in Lakh)
1.	Cost of Systems Hardware <ul style="list-style-type: none"> <li>– SPV modules</li> <li>– Inverters</li> </ul>			

	<ul style="list-style-type: none"> <li>- Installation structure</li> <li>- Electrical Wires</li> <li>- Battery Bank (if any)</li> <li>- Meter</li> <li>- Any other</li> </ul>			
<b>2.</b>	Cost of transportation and insurance			
<b>3.</b>	Cost of civil works and electrical works			
<b>4.</b>	Cost of installation and commissioning			
<b>5.</b>	Cost of Annual Maintenance for 5 years			
<b>6.</b>	Cost of Battery replacement			
<b>7.</b>	Any other related costs			
	<b>Total Cost</b>			

**[G] Means of Finance**

**(Rs. in lakh)**

1.	Envisaged Central Financial Assistance from MNRE	Rs.
2.	Contribution of Beneficiaries	Rs.
3.	Contribution of Project Proponent	Rs.
4.	Other Source (s) of Funding	Rs.
5.	Envisaged Soft Loan assistance, if any	Rs.
	Details of Revenue to be collected with payback period	

**[H] ANY OTHER INFORMATION**

**PART – II . Details of Grid Connectivity of the Project**

(The developer shall submit “Single line diagram elaborating Interconnection of the Solar Photovoltaic Plant to the Grid”)

SI. No.	Description	Remarks
A.	<p><b>Grid Connectivity Level</b></p> <ul style="list-style-type: none"> <li>• Low Voltage single phase supply (Up to 10 kW SPV system)</li> <li>• Three phases low voltage supply (Up to 100 kW SPV system)</li> <li>• Connected at 11kV level. (100 kW to 1.5 MW SPV systems)</li> <li>• Connected at 11kV/33 kV/66kV level (1.5 MW to 5.0 MW SPV systems)</li> <li>• Any Other level</li> </ul>	
1.	Distance of interfacing point of the SPV Plant with the Grid	
2.	Type of Grid available	
3.	Letter of Consent for Synchronization of SPV Plant with the Network of Distribution Licensee/NOC (enclose letter)	
4.	Applicable Fee & Charges made for the Grant of Connectivity if any	
B.	<p><b>Details of Distribution Licensee providing Grid Interconnection</b></p> <p>Name and complete address of Distribution Licensee            Details of Contact Person            E-mail            Phone Number            Mobile            Fax</p>	
C.	<p><b>Metering Arrangement for the Project</b>  <i>(Along with the application for the consideration of Central Financial Assistance, the developer shall submit “Single line diagram elaborating type and location of Meter(s))</i></p> <ul style="list-style-type: none"> <li>I. Export Import meters/</li> <li>II. Two way meters</li> <li>III. Three Meter system</li> </ul>	

	<p>IV. Any other (PI specify)</p> <p>V. Price of meter</p> <p>VI. Whether meter is approved by Distribution Licensee:</p> <p>VII. Class of Energy Meter</p>	
D.	<p><b>Power Purchase Agreement</b>  <i>(A copy of agreement made with distribution licensee and/or third party shall be enclosed)</i></p>	
E.	<p><b>Business Model Proposed for the project</b></p> <p>i. Solar installations owned by consumer</p> <ul style="list-style-type: none"> <li>– <i>Solar Rooftop facility owned, operated and maintained by the consumer(s).</i></li> <li>– <i>Solar Rooftop facility owned by consumer but operated and maintained by the 3<sup>rd</sup> party</i></li> </ul> <p>ii. Solar installations owned, operated and maintained by 3rd Party</p> <ul style="list-style-type: none"> <li>– <i>Arrangement as a captive generating plant for the roof owners</i></li> <li>– <i>Solar Lease Model, Sale to Grid</i></li> </ul> <p>iii. Solar Installations Owned by the Utility</p> <ul style="list-style-type: none"> <li>– <i>Solar installations owned operated and maintained by the DISCOM</i></li> <li>– <i>Distribution licensee provides appropriate viability gap funds</i></li> </ul> <p>iv. Any Other Model (PI specify)</p>	
F.	<p><b>Commercial Arrangement</b></p> <ul style="list-style-type: none"> <li>• Sale to Distribution Licensee</li> <li>– Sale at Feed-in-Tariff determined by SERC</li> <li>– Sale at rate discovered under competitive bidding and adopted by SERC</li> <li>– Sale at Average power purchase cost determined by SERC and participation in REC Mechanism</li> <li>• Self or Captive Consumption</li> <li>– Participation in Net Metering Mechanism</li> <li>– Sale of Surplus Power to Grid or 3<sup>rd</sup> party</li> <li>• Sale to 3<sup>rd</sup> Party</li> <li>– Rate committed for sale of electricity</li> <li>– Sale of Power on Short Term (Negotiation of rate at Regular Intervals) or</li> <li>– Sale of Power on Long Term Basis</li> <li>– Participation in REC Mechanism</li> </ul>	

	<ul style="list-style-type: none"> <li>• Any Other system, please specify</li> </ul>	
<b>G.</b>	<p><b>Undertakings from Involved Parties</b></p> <p>I. Undertaking from the consumer/ beneficiary regarding the acceptability and cost sharing of the project</p> <p>II. Undertaking from the third party/project developer regarding Quality assurance, installation, operation and maintenance of the system</p>	
<b>H.</b>	<p><b>Any other relevant information</b></p> <p>I. Incentives availed from any other Agency (National/International)</p> <p>II. Likely Capacity Utilization Factor</p> <p>III. Any other.</p>	



**Ministry of New and Renewable Energy  
(Jawaharlal Nehru National Solar  
Mission)**

Photo of the  
beneficiary

**Format for Detailed Project Report for  
Grid Connected Rooftop and Small SPV Power  
Plants (Capacity above 50 kWp to 500 kWp)**

- 1. Introduction**
- 2. All Information as per Form B**
- 3. Rooftop Solar Power Generation System description**
- 4. System Description and Specifications of the Components**
  - (a) Solar PV module
  - (b) Grid Tie inverter
  - (c) Module mounting structure
  - (d) Array Junction Box
  - (e) AC Distribution Board
  - (f) Cable (All type)
  - (g) Earthing Kit (maintenance free)
  - (h) Installation Kit
  - (i) Meters
  - (j) Online monitoring system
  - (k) Any other component
- 5. Bill of material/ system (no. /quantities) (For above components)**
- 6. Calculation for unit cost of power generation**
- 7. Cost benefit analysis, pay back period**
- 8. Expected output**
- 9. Respective drawings for layout, connection, components etc.**
- 10. Connectivity details with grid and metering arrangement (with sketch diagram)**
- 11. Agreement with distribution licensee/ DISCOMs**
- 12. Any other information**

# Affidavit / Declaration Certificate

(To be furnished by Implementing Agency in Appropriate Stamp Paper)

1. It is certified that I/we have read the guidelines issued by the Ministry vide No.-----  
-----dated ----- and the related provisions/terms and conditions for availing  
**Central  
Financial Assistance (CFA) from the Ministry of New and Renewable Energy and I/ We  
agree to abide by these guidelines and related terms and conditions. Failure to  
comply with these guidelines will result in denial of CFA by the Ministry.**

2. This is to certify that Shri ..... (Name & Designation) of .....  
**(Organization) visited the proposed site on (Date) ..... and found that there  
is.....  
Sq.m of south facing shadow free area is available at the site for installation of the  
power plant. The latest Photograph of the front view of the proposed site with date is  
enclosed with the certificate. After installation photograph will be taken in same view  
and will be submitted with completion report.**

3. We confirm that the present proposal in full or part has not been submitted / has been  
submitted to any other agency for seeking support (In case proposal has been submitted to  
any other agency or under consideration all details and a copy of the proposal must be  
submitted along with the present proposal). The present proposal has neither been  
submitted to MNRE nor the CFA has been availed from MNRE for the same proposal.

4. This is to certify that the various components of the PV module/ inverter/ meter/ battery(if  
any), electric wires, BOS etc. will conform to the Relevant Standards, as mentioned in the  
Guidelines for Off-grid and Decentralized Solar Applications for SPV modules and  
components/ Grid Connected Rooftop and Small Solar Power Plants under JNNSM. Copies  
of the Relevant IEC/ BIS certificates has been maintained in the office.

5. We confirm that the individual applications, beneficiary's identification, photograph of the  
systems and the beneficiary of each alongwith detailed specifications of various components  
have been received in the prescribed format. It has been kept and maintained in our office.  
For any audit and inspection, it will be shown to the concerned officer/ authority.

6. We agree to place the details and photographs of the system and beneficiary on our  
website for all systems.

7. We will provide/feed the data in the online monitoring system regularly as per instruction  
of MNRE.

8. The plant site has been/ will be inspected/ verified by us and the final claim will be made  
after the plant/system has been found satisfactory in all respect and Fit/ eligible for receiving  
subsidy/CFA from MNRE.

9. The failure to comply with these guidelines will result in denial of CFA by MNRE.

**I also hereby declare that all information submitted in the proposal are true to the best  
of knowledge and belief. This is to confirm that in case of any dispute, the decision of  
Secretary, Ministry of New and Renewable Energy, Government of India will be final  
and binding on all.**

**Signature.....  
Name & Designation of Authorized Signatory\*  
of Implementing Agency**

**Place**

**:**

**Date:**

**\*Authorized signatory should be at least in the rank of General Manager of SNA/PSU or  
MD/ CEO/ Director in case of Channel Partner.**

# Agreement / Consent/ Certificate from User/ Beneficiary

(To be furnished by User/ beneficiary in Appropriate Stamp Paper)

1. This is to certify that I ..... S/o Shri ..... Resident of ..... herewith agree to install the Grid Connected Rooftop Project / Small Power Plant of ..... kWp capacity as per details submitted in the Form B / DPR of the proposal.
2. I confirm that the CFA received will be utilized for this project only and not for any other purpose. I herewith also confirm that the balance cost in addition to the CFA will be met by me from my own/ other resources.
3. I agree that the roof space will be made available in the proposed project site and is owned by me/ leased to me by the owner.
4. This is also confirmed that I will extend full cooperation including access to the project site premise to the implementing/ executing agency during installation and O&M, of the plant.

**Signature.....**  
**Name & Designation, Organization, Address**  
**of the User/ Beneficiary**  
**(with Seal if available)**

**Place:**  
**Date:**