

**INSPECTION, COMMISSIONING & SYNCHRONIZATION REPORT  
For Grid Connected RTS Plant**

Application No (Rodalee.com) ..... dated .....

**Sub: Inspection and Commissioning of .....kWp Grid Connected Rooftop Solar PV Power Plant and approval for Synchronization.**

**A. INSPECTION REPORT:**

Under Rule No. 47-A of I.E Rules 1956, Approval is hereby accorded to commission the Solar Rooftop Photovoltaic Generating System with a capacity of.....kWp Single phase/ Three phase of Smt/Sri ..... (Name and address) installed in the installation bearing consumer No :.....& Application No .....

**Component Inspection Checklist**

Sl. No	Item type	Yes	No
1	Installation layout – is it as per drawing?		
2	Inverter IS/ IEC standards qualified		
3	PV panel IS/ IEC standards qualified		
4	PV isolators/PV cables IS/ IEC standards qualified		
5	AC disconnect manual switch provided		
6	Meters from T&C staff tested? (as per meter regulations)		

**Grid -Functional Safety Checklist**

Sl. No	Item type	Yes	No
1	Check-PV inverter anti islanding (utility side). Disconnect Grid and check whether PV generator seizes Generation immediately		
2	Check Reconnect time. Reconnecting the Grid, PV generator reconnects minimum 60 seconds later (Single phase) or minimum 300 seconds later( Three phase connectivity)		
3	Bi-directional flow recorded on APDCL Meter		
4	PV inverter anti islanding tested at array side		
5	Solar Generation meter OK?		
6	Check all earthings provided at ACDB/DCDB/LA		

**Power Quality Measurement Checklist**

Sl. No	Item type	Yes	No
1	Check – Harmonic current injections from a RTS plant shall not exceed the limits specified in IEEE 519		

2	Check – Photovoltaic system must be equipped with a grid frequency synchronization device		
3	Check – Voltage operating window should minimize nuisance tripping and should be under operating range of 80% to 110% of the nominal connected voltage. Beyond a clearing time of 2 seconds, the Photovoltaic system must be isolate itself from the grid		
4	Check – Operation of Photovoltaic system shouldn't cause voltage flicker in excess of the limits		
5	Check – When the RTS plant frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side), the photovoltaic system shouldn't energize the grid and should shift to island mode		
6	Check – Photovoltaic system should not inject DC power more than 0.5% of full rated output at the interconnection point or 1% of rated inverter output current into distribution system under any operating conditions		
7	Check – While output of the inverter is greater than 50%, a lagging power factor of greater than 0.9 should operate		
8	Check – The inverter should have the facility to automatically switch off in case of overload or overheating and should restart when normal conditions are restored		
9	Check – Parallel device of Photovoltaic system shall be capable of withstanding 220% of the nominal voltage at the interconnection point		

This approval is subject to the following condition:

The consumer of the installation shall ensure that at any point of time the Solar supply should not feedback into the grid when APDCL grid supply is off.

----- Authorized Official  
**CEI, Government of Assam**  
**(For the Plant capacity > 500 KVA)**

..... Authorized Official  
**T&C Division, APDCL**  
**(For the Plant capacity <= 500 KVA)**

**SDE, Concerned Electrical Sub – Division,**  
**Assam Power Distribution Company Limited**

B. **REPORT OF COMMISSIONING AND SYNCHRONIZING:**

<b>A</b>	<b>Consumer Details</b>		
1	Name of the Consumer		
2	Category		
3	Consumer No.		
4	Pole Number		
<b>B</b>	<b>Meter Details</b>	<b>EXIM Meter (Bi-directional Meter)</b>	<b>Solar Generation side Meter</b>
1	Meter make: 1ph / 3 ph		
2	Type		
3	Serial number		
4	Capacity		
5	Meter MF		
6	<b>Initial reading (Tri-vector parameters)</b>		
	i) Import		
	ii) Export		
<b>C</b>	<b>Grid Tied Inverter</b>		
1	Make		
2	Serial number		
3	Capacity		
4	Input voltage		
5	Output voltage		
6	Whether Anti-islanding feature is in working condition	Yes / No	
<b>D</b>	<b>PV Module</b>		
1	Make		
2	Serial number		
3	Type of module		
4	Capacity of each module		
5	Number of modules		

6	Total capacity of module	
E	Earthing verified: DC earthing, AC earthing, LA earthing of Solar Rooftop PV system	Yes / No
F	Details of protective system available	<input type="checkbox"/> AC & DC DB: Yes/No <input type="checkbox"/> Manual Switch solar side: Yes/No <input type="checkbox"/> Relay operated automatic switch at EXIM/Net Meter side: Yes/No
G	CEI, GoA/SDE, APDCL inspection & approval letter obtained	Yes / No
H	Work completion report of Solar Rooftop PV system obtained from agency	Yes / No
I	Date of synchronizing with APDCL grid	dd/mm/yyyy

**Encl:-** 1) Copy of the EXIM Meter test reports.

**AGM**  
**T&C Division, -----,**  
**APDCL**

**SDE,**  
**----- Electrical Sub – Division,**  
**APDCL**

**Copy submitted to:**

1. Chief General Manager (NRE), Annex Buildin, Bijulee Bhawan, Paltanbazar, Guwahati – 01 for kind information.
2. CGM (Commercial), APDCL, Bijulee Bhawan, Paltanbazar, Guwahati – 01 for kind information
3. CEO, \_\_\_\_\_ Electrical Circle, APDCL for kind information.
4. .... (Name & Address of the Applicant). This is to inform you that synchronization test of Solar Rooftop PV system of ..... kWp, installed on the roof of your premises, has been conducted and your Solar Rooftop PV system found satisfactory and successfully synchronized with APDCL's grid on date ..... through installation of meter no..... for EXIM metering purpose