ANNEXURE-II

CHECK LIST FOR REGISTRATION FORM

S. No.	DOCUMENTS	REQUIRED	SUBMITTED
1	Registration form signed by Registered consumer on each page with stamp	Yes	
2	Detailed SLD of solar plant signed by Registered Consumer and Solar Plant Installer with stamp	Yes	
3	Certificates of system such as IEC 61727, IEC 62116, etc. for Inverter, IEC 61215, IEC 61730, etc. for PV modules signed by Registered Consumer and Solar Plant Installer with stamp	Yes	
4	Detailed list of components to be used in Renewable Energy System signed by Registered Consumer and Solar Plant Installer with stamp	Yes	
5	Net Metering Connection Agreement on Rs.100/- non judicial stamp paper, duly attested by Notary public signed by Registered Consumer on each page with stamp	Yes	
6	Solar Plant Installation Certificate signed by Registered Consumer and Solar Plant Installer with stamp, post installation of plant	Yes	
7	MNRE certificate of Installer (for On-Grid system)	Optional	

Application for Registration
Of the Scheme for Renewable Energy System

To,
The Nodal officer-Net metering cell
Renewables Department, 2nd floor, C-Block
BSES Bhawan, Nehru Place
Behind DTC Bus Terminal
New Delhi-110019

BSES Rajdhani Power Limited

I intend to register for the scheme for Renewable Energy System, in compliance of Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014.

1	Name of Registered Consumer			
2	Address of Registered Consumer			
3	CA No		Sanctioned load as per latest Electricity Bill	
4	Net-metering Application No.	NM-	Supply voltage (230V, 415V, 11kV, 33kV, 66kV)	
5	Mobile No. of Consumer:		Mobile No. of Installer:	
6	E-Mail ID of Consumer (In Capital letters)			
7	E-Mail ID of Installer (in Capital letters)			
8	Renewable Energy Source type	(solar / wind / other)	Capacity of Renewable Energy System	
9	Name of solar plant Installer		Proposed date of completion of the installation	

I ..... (Name of Consumer) undertake that ownership of the roof/land where solar PV system is installed is with me. I shall comply with the terms and condition of Model Connection Agreement .I agree to pay the Registration charges (details as provided below) as stipulated under Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014 once this application for registration is approved. Also, I agree to pay registration charges & all other applicable charges raised by the DISCOM through my electricity bill.

Sr . No.	Capacity (KWp)	Charges(Rs)	Please tick any one as per your plant capacity
1	1 to ≤ 10	1000/-	
2	>10 to ≤ 50	3000/-	
3	> 50 to ≤ 100	6000/-	
4	>100 to ≤ 300	9000/-	
5	>300 to ≤ 500	12000/-	
6	>500	15000/-	

Enclosure: Documents as per "Checklist of Registration form" (annexure -II)

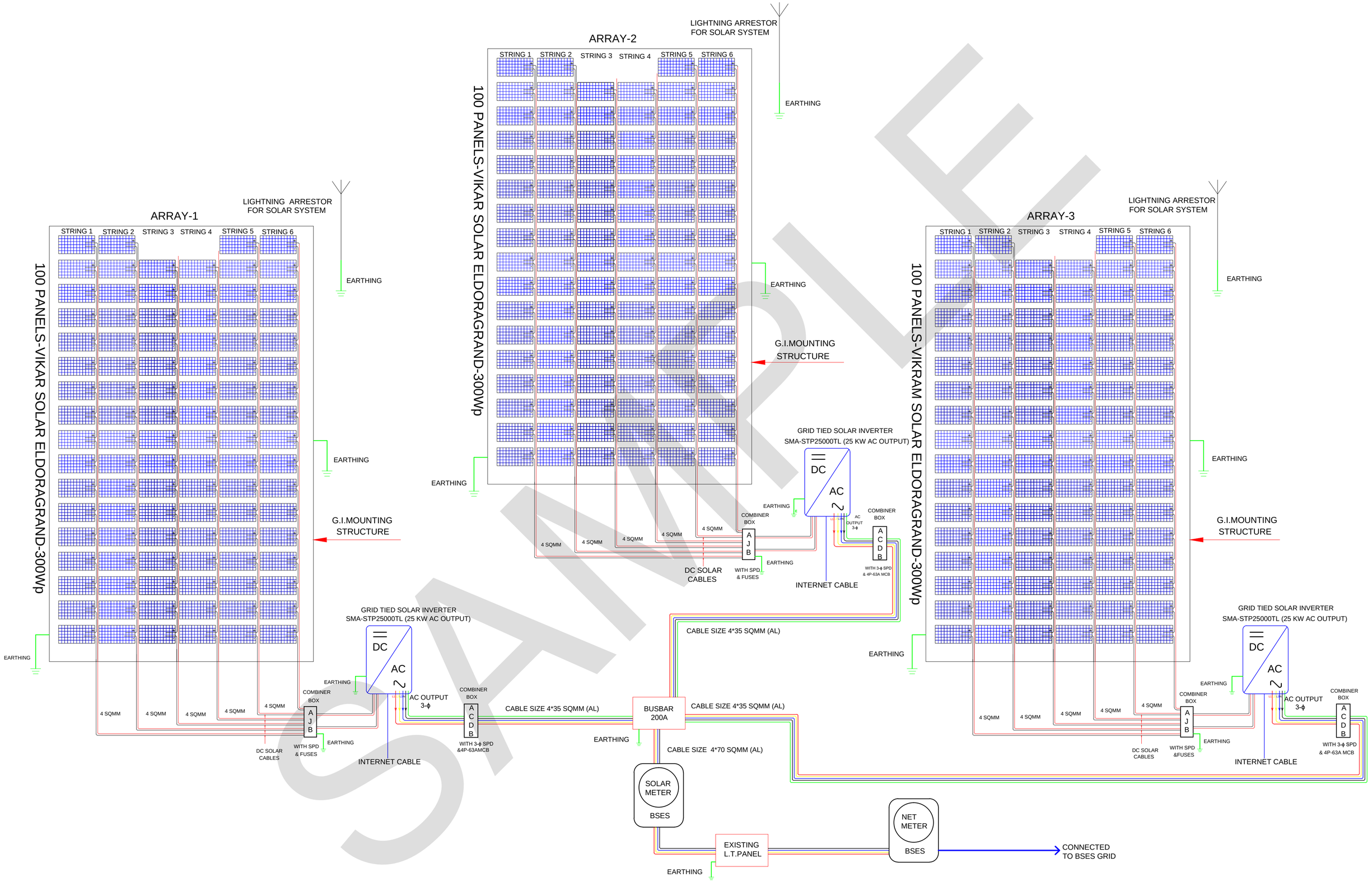
Place: Date:

Signature of Registered Consumer with stamp

FOR OFFICE USE ONLY

Registration Number:		**Registration Date:**	

For any query call us on Solar Helpline No. 011-3999 9707 (Ext. 9) or E-Mail us on **netmetering.brpl@relianceada.com**



SINGLE LINE DIAGRAM FOR ROOF TOP SOLAR SYSTEM-75KW

TOTAL CAPACITY OF MODULES : 90 KWp TOTAL CAPACITY OF INVERTERS : 75 KW	CLIENT NAME & ADDRESS:	INSTALLER'S DETAILS:

Detail list of components to be used in Renewable Energy System

CA No: _____, Sanction Load_____ KW, Contact no of Consumer: _____

Address:_____

Company name of installer:_____ Contact no of inataller:_____

Details of Solar Capacity:- Existing :_____ KW, Proposed :_____ KW, Total: _____ KW

Sr no	Name of equipment	Make	Model no	Serial no	Capacity	Quantity	Standards / Certification	Attachments
1	Solar Inverter							
2	Solar PV modules							
3	Structure							
4	Solar cable							
5	AC cables							
6	Switches/ Circuit Breakers/ Connectors							
7	Earthing							
8	Connector & Conduits							
9	Junction Boxes/ Enclosures for Charge Controllers/ Luminaries							

I/We ……(Name of Consumer) shall comply with the terms and condition of Model Connection Agreement.
I/We also undertake to comply with any subsequent amemdment to these standards of Technical Compliance as notified by competent authority and any other technial standards relevant for compliance in respect to solar plant to be connected to BRPL distribution system.

Signature of Installer with stamp

Signature of Registered consumer with stamp

(On Rs.100/- non judicial stamp paper, duly attested by Notary public)

Net Metering Model Connection Agreement For Renewable Energy

This Agreement is made and entered into at New Delhi on date _____ between the Registered consumer name _____CA no _____ & applied solar capacity _____ (in KW) residing at_____ as first party and BSES Rajdhani Power Ltd. (herein after called as Discom) and having its registered office at BSES Bhawan, Nehru place, New Delhi, 110019 as second party of the agreement.

1. Eligibility

1.1 Eligible consumer is required to be aware, in advance, of the standards and conditions his system has to meet for being integrated into grid/distribution system.

1.2 Eligible consumer agrees that connection of Photovoltaic system to Discom's distribution system shall be bound by requirements of state Distribution Code and/or Discom's conditions of service and Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014. The grid shall continue to perform with specified reliability, security and quality as per the Central Electricity Authority (Grid Standard) Regulations 2010 as amended from time to time.

2. Technical and Interconnection Requirements

2.1 Eligible consumer agrees that he has installed or will install, prior to connection of Photovoltaic system to Discom's distribution system, an isolation device (both automatic and inbuilt within inverter and external manual relays) and agrees for the Discom to have access to and operation of this, if required, for repair and maintenance of the distribution system.

2.2 Eligible consumer agrees that in case of a power outage on Discom's system, photovoltaic system will shut down, unless special transfer and isolating capabilities have been installed on photovoltaic system.

2.3 Technical specification of net meter and renewable energy meter should be in compliance to Discom.

2.4 All the equipment connected to distribution system must be complaint with relevant International (IEEE/IEC) or Indian standards (BIS) and installations of electrical equipment must comply with Indian Electricity Rules, 1956 and Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013.

2.5 Eligible consumer agrees that Discom will specify the interface/inter-connection point and metering point.

2.6 Eligible consumer agrees to adhere to following power quality measures as per International or Indian standards and/or other such measures provided by Commission / Discom.

A. Harmonic current: Harmonic current injections from a generating station shall not exceed the limits specified in IEEE 519.

B. Synchronization: Photovoltaic system must be equipped with a grid frequency synchronization device. Every time the generating station is synchronized to the electricity system, it shall not cause voltage fluctuation greater than +/- 5% at point of connection.

C. Voltage: The voltage-operating window should minimise 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 isolate itself from the grid.

D. Flicker: Operation of Photovoltaic system shouldn't cause voltage flicker in excess of the limits stated in the relevant sections of IEC 61000 standards or other equivalent Indian standards, if any.

E. Frequency: When the Distribution system frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side), the Photovoltaic system must isolate itself from the grid beyond a clearing time of 0.2 seconds.

F. DC Injection: 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.

G. Power Factor: While the output of the inverter is greater than 50%, a lagging power factor of greater than 0.9 should operate.

H. Islanding and Disconnection: The Photovoltaic system in the event of voltage or frequency variations must island/disconnect itself within the stipulated Period as per applicable IEC standards / Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013.

I. Reconnection: The photovoltaic (PV) system shall be equipped with a voltage and frequency sensing and time-delay function to prevent the PV system from energising a de-energised circuit and to prevent the PV system from reconnecting with electricity system unless voltage and frequency is within the prescribed limits and are stable for at least sixty seconds.

J. Overload and Overheat: The inverter should have the facility to automatically switch off in case of overload or overheating and should restart when normal conditions are restored.

K. Paralleling device: Paralleling device of Photovoltaic system shall be capable of withstanding 220% of the nominal voltage at the interconnection point.

2.7 As per Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013, measurement of Harmonic current injection, Direct Current injection and flicker shall be done with calibrated meters before the Commissioning of the project and once in a year in presence of the parties concerned.

2.8 Eligible consumer agrees to furnish all the data such as voltage, frequency, and breaker, isolator position in his system, as and when required by the Discom. He shall also provide facilities for online transfer of the real time operational data.

3. **Safety**

3.1 Eligible consumer shall comply with the Central Electricity Authority (Measures Relating to Safety and Electricity Supply) Regulations 2010.

3.2 Eligible consumer agrees that the design, installation, maintenance and operation of the photovoltaic system are performed in a manner conducive to the safety of the photovoltaic system as well as the Discom's distribution system.

3.3 Due to Discom's obligation to maintain a safe and reliable distribution system, eligible consumer agrees that if it is determined by Discom that eligible consumer's photovoltaic system either causes damage to and/or produces adverse effects affecting other distribution systems' consumers or Discom's assets, eligible consumer will have to disconnect photovoltaic system immediately from the distribution system upon direction from the Discom and correct the problem at his own expense prior to a reconnection.

4. **Clearances and Approvals**

4.1 The eligible consumer agrees to attain all the necessary approvals and clearances (environmental and grid connected related) before connecting the photovoltaic system to the distribution system.

5. **Access and Disconnection**

5.1Discom shall have access to metering equipment and disconnecting means of photovoltaic system, both automatic and manual, at all times.

5.2 In emergency or outage situation, where there is no access to a disconnecting means, both automatic and manual, such as a switch or breaker, Discom may disconnect service to the premise.

6. **Liabilities**

6.1 Eligible consumer and Discom will indemnify each other for damages or adverse effects from either party's negligence or intentional misconduct in the connection and operation of photovoltaic system or Discom's distribution system.

6.2 Discom and eligible consumer will not be liable to each other for any loss of profits or

revenues, business interruption losses, loss of contract or loss of goodwill, or for indirect, consequential, incidental or special damages, including, but not limited to, punitive or exemplary damages, whether any of the said liability, loss or damages arise in contract, or otherwise.

6.3 Discom shall not be liable for delivery or realization by eligible consumer for any fiscal or other incentive provided by the central government.

7. Commercial Settlement

7.1 All the commercial settlement under this agreement shall follow the Net metering regulations of Delhi Electricity Regulatory Commission (Net Metering for Renewable Energy) Regulations, 2014.

8. Conditions For System Connectivity

8.1 The parties shall abide by the Central Electricity Regulatory Commission Regulations in respect of procedure of grant of Connectivity. The consumer shall submit the following documents to discom for the grant of connectivity:

- ✓ Synchronization Circuit Details
- ✓ Safety Report
- ✓ Protection Circuit Details
- ✓ Test Certificates of System
- ✓ Schematic diagram of Renewable Energy system

9. Connection Costs

9.1 The eligible consumer shall bear all costs related to setting up of photo-voltaic system including metering and interconnection costs as per estimate by BRPL. The eligible consumer agrees to pay the actual cost of modifications and upgrades to the distribution facilities required to connect photo-voltaic system in case it is required.

9.2 Cost for interconnection equipment including the isolators, meters etc. are also to be borne by the eligible consumer.

10. Termination

10.1 The eligible consumer can terminate agreement at any time by providing Discom with 90 days prior notice.

10.2 Discom has the right to terminate Agreement on 30 days prior written notice, If eligible consumer breaches a term of this Agreement and does not remedy the breach within 30 days of receiving written notice from Discom of the breach.

10.3 Eligible consumer agrees that upon termination of this Agreement, he must disconnect the photovoltaic system from Discom's distribution system in a timely manner and to Discom's satisfaction.

In the witness, where of Mr. _____for and on behalf of _____(Registered consumer) and Mr _____for and on behalf of BSES Rajdhani Power Limited agree to this agreement.

Date :

_____	_____
Name & Signature of Registered Consumer	Signature of Head Net Metering BSES Rajdhani Power Limited

All Pages to be Printed on Letter Head of Installer and signed by installer with stamp & consumer with stamp (if applicable)

Solar Plant Installation Certificate

Registered Consumer Name			
Address			
BRPL CA Number		Net Metering Application No	
BRPL Sanction Load		Solar Capacity	
BRPL Supply Voltage		Solar Plant Connecting Voltage	
Consumer Mobile No		Solar Plant Installation Date	
Consumer Email ID		Warranty Period	
Installer Email ID		Installer Mobile No	
Total Cost of solar plant Installation (Rs.)		Financial model (CAPEX/ RESCO)	

The system has been installed with equivalent standards which correspond to the required technical & interconnectivity specifications as per **Annexure III (important clauses related to the technical & interconnection requirements) of Guidelines under DERC (Net Metering for Renewable Energy) Regulations, 2014 as under:**

Parameter	**Reference**	**Requirement**	**Installer Remarks**
Overall conditions of Service	State Distribution/Supply Code	Reference to State Distribution Code	
Overall Grid Standards	Central Electricity Authority (Grid Standard) Regulations 2010	Reference to regulations	
Equipment	BIS / IEC / IEEE	Reference to standards	
Meters	Central Electricity authority (Installation & operation of meters) Regulation 2006	Reference to regulations and additional conditions issued by the Commission.	
Safety and Supply	Central Electricity Authority (Measures of Safety & Electricity Supply) Regulations, 2010	Reference to regulations	
Harmonic Current	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	Harmonic current injections from a generating station shall not exceed the limits specified in IEEE 519	
Synchronization	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	Renewable Energy System must be equipped with a grid frequency Synchronization device. Every time the generating station is synchronized to the electricity system. It shall not cause voltage fluctuation greater than +/- 5% at point of connection.	

Voltage	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	The 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 second, the Renewable Energy system must isolate itself from the grid.	
Flicker	IEEE 519 CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013	Operation of Renewable Energy System should not cause voltage flicker in excess of the limits stated in IEC 61000 standards or other Equivalent Indian standards, if any.	
Frequency	IEEE 519 CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013	When the Distribution system frequency deviates outside the specified conditions (50.5 Hz on upper side and 47.5 Hz on lower side), There should be over and under frequency trip functions with a clearing time of 0.2 seconds.	
DC Injection	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	Renewable Energy 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.	
Power Factor	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	While the output of the inverter is greater than 50%, a lagging power factor of $\geq$ 0.9 operates.	
Islanding and Disconnection	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	The Renewable Energy System in the event of fault, voltage or frequency variations must island/disconnect itself within IEC standard on stipulated period.	
Overload and Overheat	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	Inverter has the facility to automatically switch off in case of overload or overheating and restarts when normal conditions are restored.	
Paralleling Device	IEEE 519 CEA (Technical Standards for connectivity of the DG Resources) Regulations, 2013	Paralleling device of Renewable Energy System is capable of withstanding 220% of the normal voltage at interconnection point.	

The system has been installed and tested for grid stability, grid protection and specified environmental influences and is found to have equivalent standards which correspond to the required technical & interconnectivity specifications as per **Annexure III (important clauses related to the technical & interconnection requirements) of Guidelines under DERC (Net Metering for Renewable Energy) Regulations, 2014 as under:**

Solar Installer Name, Signature with stamp **Consumer Name, Signature with stamp (if applicable)**