

## Hybrid Rooftop Solar Power Electrical Installation - LV Metered Customers

### (Annex 5) Compliance Inspection (For Hybrid Inverters Type I/Type II)

<b>Customer Name and Electricity Account No.</b>	<b>Contact No:</b>
<b>Installation address:</b>	<b>Date:</b>
<b>Description of Work under Test:</b>	<b>Test Instruments:</b>

DETAILS OF THE HYBRID INVERTER				
1.	Brand(s) of the Inverter(s)	a.	2.	Country of Origin
3.	No. of Inverters		4.	Model No. & Serial No
5.	Rated Output Voltage (AC) and Rated Input Voltage	Output(AC) Input (DC)	6.	Rated Power Output (W)
7.	Max. input voltage (DC)		8.	Max. input current (DC)
9.	Max. output voltage(AC)		10.	Max. output current (AC)
11.	Rated Power Frequency		12.	Max. Efficiency
13.	Operating temperature range		14.	Degree of Protection
DETAILS OF THE SOLAR PANELS				
1.	Brand of the Panel			
2.	Country of Origin			
3.	Model No. & Serial No.		4.	Peak Power (W) /Panel
			5.	No. Of Panels
6.	Panel Efficiency		7.	PV Cell Type
8.	Panel Open Circuit Voltage (DC)		9.	Panel Rated Voltage ( $V_{MPP}$ )
10.	Panel Short Circuit Current (DC)		11.	Panel Rated Current ( $I_{MPP}$ )

**Note:** Insert ✓ to indicate that an inspection has been carried out and the results of the inspection comply with CEB requirement, or ✗ to indicate that an inspection has been carried out and the results of the inspection do not comply with the CEB requirement.

Items		CEB Requirement			Outcome
		Unit	Reference	Value	
1.	Synchronization w.r.t nominal voltage level	%	CEB Manual 7.2.3	+/-6% of the Nominal Voltage	
2.	Output voltage waveform		CEB Manual 7.6	50Hz sinusoidal	

3.	Reconnection time of the utility supply after stable service voltage and frequency	Min.	CEB Manual 7.2.3	at least 3 minutes	
4.	Islanding Protection	s	CEB Manual 7.2.4	Within 0.5s of loss of utility power	
5.	Limitation of dc injection current w.r.t full rated output current at the point DR connection	%	IEEE 1547.4.3.1	<0.5%	
8.	Total Demand Distortion (TDD)	%	CEB Manual 7.7	<5% (95th percentile)	
Individual harmonic current distortion limits as a percentage of the minimum of rated current of the inverter and current of 85% of PV panel capacity at the Point of Common Coupling					
9.	h<11 (Odd harmonic current)	%	CEB Manual 7.7	<4 % (95 <sup>th</sup> percentile)	
10.	11=< h <17 (Odd harmonic current)	%	CEB Manual 7.7	<2% (95 <sup>th</sup> percentile)	
11.	17=< h <23 (Odd harmonic current)	%	CEB Manual 7.7	<1.5% (95 <sup>th</sup> percentile)	
12.	23 =< h < 35 (Odd harmonic current)	%	CEB Manual 7.7	<0.6% (95 <sup>th</sup> percentile)	
13.	h>=35 (Odd harmonic current)	%	CEB Manual 7.7	<0.3% (95 <sup>th</sup> percentile)	
14.	h<11 (Even harmonic current)	%	CEB Manual 7.7	<1% (95 <sup>th</sup> percentile)	
15.	11=< h <17 (Even harmonic current)	%	CEB Manual 7.7	<0.5% (95 <sup>th</sup> percentile)	
16.	17=< h <23 (Even harmonic current)	%	CEB Manual 7.7	<0.375% (95 <sup>th</sup> percentile)	
17.	23 =< h < 35 (Even harmonic current)	%	CEB Manual 7.7	<0.15% (95 <sup>th</sup> percentile)	
18.	h>=35 (Even harmonic current)	%	CEB Manual 7.7	<0.075% (95 <sup>th</sup> percentile)	
<b>Operation of External Automatic Back Feed Protection as Per CEB Requirements (CEB Manual 7.2.6 &amp; 7.11)</b>					<b>Yes/No</b>
<b>COMMENTS ON EXISTING INSTALLATION :</b> ..... ..... ..... ..... .....					
<b>I certify that the above filled particulars are true and correct</b>					
Inspected by:					
Name <sup>b</sup> (Capitals).....		Signature.....		Date.....	

- a. If there are more than one inverter in the installation, provide the particulars of each inverter in the same format in additional sheets.
- b. Inspected by an CEB Officer