



International Copper
Association
Copper Alliance

Electrical safety in PV Installations - Building Rooftop Inspection

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Checklist for Inspection –Safety Guideline for Inspection of Solar PV Rooftop Installations

1. Solar PV Array
2. Array Structure
3. DC Combiner Box (DCCB)
4. AC Combiner Box
5. PCU/ Inverter
6. PV Array/ Inverter capacity ratio (DC/AC ratio)
7. Integration of PV power plant with grid
8. Data acquisition system/ plant monitoring
9. Energy Meter
10. Power Consumption
11. Protections
12. DC Cables
13. AC Cables
14. Connectivity
15. Drawings and manuals
16. Meeting of annual energy requirement
17. Safety observation
18. Shadow analysis
19. Performance ratio
20. Customer feedback

Check list in Tabular format

Installation Details

General Information	Description
Name of the System Owner	
System location (physical address)	
Geo-spatial coordinates	<i>(Take GPS data up to 6 decimal place)</i>
System capacity as per record	
Date of installation	
Implementing agency	
Reference of NIT	

Check list in Tabular format

Sample tabulation sheet for Solar PV array

Sl. No.	Parameters for inspection as per NIT	Description of findings	Compliance to NIT	
			Yes	No
1	Solar PV Array			
1.1	Make			
1.2	Model No.			
1.3	Power at STC with Tolerance	<i>(Take picture of the module name plate)</i>		
1.4	Total number of modules			
1.5	Plant DC capacity (kWp)			
1.6	PV technology	<i>(Mono/ poly crystalline, Thin film, mono-PERC, half cut cell etc.)</i>		
1.7	Presence of RFID tag			
1.8	Quality Standard as per datasheet [IEC 61215 / IS14286, IEC 61646, IEC 61701, IEC 61853 – Part 1/ IS 16170 – Part 1, IEC 62716, IEC 62804]	<i>(Mention BIS/ IEC standard under which the module is certified)</i>		
1.9	Safety Standard as per datasheet [IEC 61730-1, IEC 61730-2]	<i>(Mention BIS/ IEC standard under which the module is certified)</i>		
1.10	Is module junction box is as per NIT? Yes/ No	<i>(Take picture of the JB)</i>		
1.11	General condition of PV array (clean/ little dirty/very dirty)	<i>(Take picture of the PV array)</i>		
1.12	Any broken modules?	<i>(Take picture of broken module)</i>		
1.13	Presence of snail trail, micro cracks, white patch, browning	<i>(Take picture of such findings)</i>		

Safety Guideline to follow during inspection

General Guidance

Before going to the site, ensure all personnel health & safety resources are available and are in good condition

- ❑ Wear appropriate electrical safety shoe before going to the site.
- ❑ Wear appropriate clothing which can make you comfort during the inspection. Make sure you are not wearing any kind of loose clothing.
- ❑ Don't climb or jump to any roof or structure if proper accessibility is not available
- ❑ Never go alone to the site
- ❑ Check all equipment, accessories, tools and measuring devices are functioning and accurate
- ❑ Keep first aid kit, sun protection

Safety guidelines to follow during inspection

Before going to the site, ensure all personnel health & safety resources are available and are in good condition

Electrical safety shoe having proper rated electrical insulation



Electrical Safety Glove having proper rated electrical insulation



Safety helmet



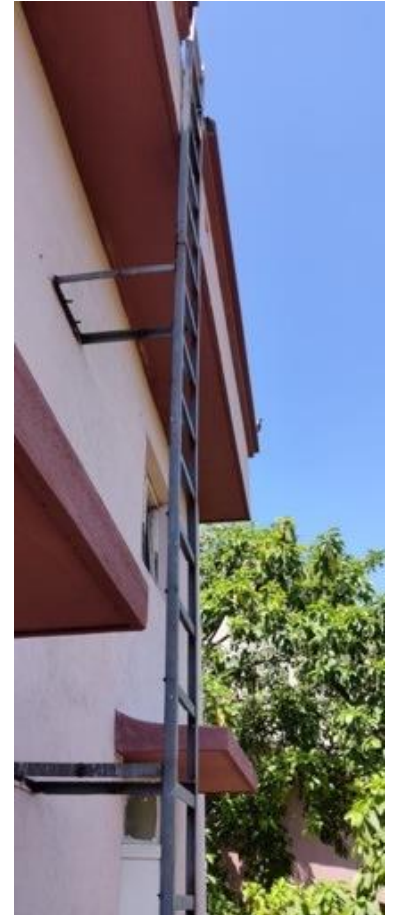
First Aid Kit



Cotton Safety Gloves for general safety



Before going to the site ensure all personnel health and safety resources are available and in good condition





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THANKYOU

For more information, get in touch

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