



“ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षणप्रसार” - शिक्षणमहर्षी डॉ. बापूजी साळुंखे

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**ARTS, SCIENCE, COMMERCE (Senior)**

► Established : June 1962 ► P. B. No. : 14 ► Sr. College Code No. :  $\frac{SIAC/4}{X}$



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## Solar roof top maintenance policy

**Purpose:** To identify the checkpoints in maintenance of solar power plant which is one of the major concerns plant heads have while deciding to go for on-site solar.

Under the **Build-Own-Operate (BOO) model**, maintenance of solar power plant is handled by the solar developer. This ensures equipment life is maximized, and incentives are perfectly aligned with both the parties. Solar power plants require very little maintenance as there are no moving parts. This article provides an insight as to how preventative maintenance is performed on major components of a solar PV system:

### Solar modules and Solar mounting structures

- To keep the surface (glass) dust free.
- **Cleaning:** To remove a layer of dust, panels are simply washed with soft water. If the module has thick dirt or grime and bird droppings, which are harder to remove, cold water is used, and the panel surface is cleaned with a sponge. Sometimes, soft detergents are also used along with water for easier cleaning. Metal brushes should be avoided to prevent wearing of the panel surface.
- **Defect Checking:** A visual inspection of the modules is done periodically to look for possible defects such as cracks, chips, de-lamination, fogged glazing, water leaks and discolouration. If any obvious defects are found, their location is noted down in the system logbook so that they can be monitored for generation output. If the damage causes the modules to perform lower than the rated value, they should be replaced.





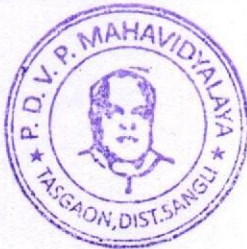
- **Structure Stability:** Solar module mounting frames are examined to make certain that the frames and modules are firmly secured, and mounting bolts are rust free. Junction boxes are inspected to ensure that the wires are not chewed by rodents or insects.


- **Inverter / charge controller:**

This component is maintained by minimizing dust accumulation. A dry cloth is used to wipe away any accumulated dirt/dust. After which a visual inspection ensures that all the indicators such as LED lights are working and the wires leading to and from this device are not loose. If self-checks are done, note that the charge controller should indicate that the system is charging when the sun is shining.

- **Wiring and connections**

Wiring installations are regularly checked for any cracks, breaks or deterioration in the insulation. Panel boxes are scrutinized to prevent the box becoming a home for rodents and insects. Moreover, the connections are inspected for corrosion and/or burning.



  
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