

GLOSSARY

- 1. Active Solar Techniques:** Methods that directly convert solar energy into usable energy, including photovoltaic systems, concentrated solar power, and solar water heating.
- 2. Blocking Diode:** A diode used in solar panels to prevent reverse flow of current and protect the panel from damage.
- 3. Charge Controller:** A device that manages the flow of electricity between solar panels and batteries, preventing overcharging or damage to the batteries.
- 4. Grid-Connected System:** A solar power system that is connected to the traditional electrical grid, allowing excess electricity to be fed back into the grid.
- 5. Inverter:** A device that converts direct current (DC) electricity from solar panels into alternating current (AC) electricity suitable for powering household or commercial appliances.
- 6. Open Circuit Voltage (V_{oc}):** The voltage across a solar panel when no current is flowing through it.
- 7. Passive Solar Techniques:** Approaches that utilize building design or materials to harness solar energy indirectly, like orienting a building to the sun or using materials with good thermal mass.
- 8. Peak Power Output (P_{max}):** The maximum power output of a solar panel/module under standard test conditions.
- 9. Photovoltaic (PV) Cell:** An electrical device that converts light energy into electrical energy through the photovoltaic effect.
- 10. Renewable Energy Source:** A form of energy that is replenished naturally and can be utilized indefinitely, such as solar energy, wind energy, or hydroelectric power.