

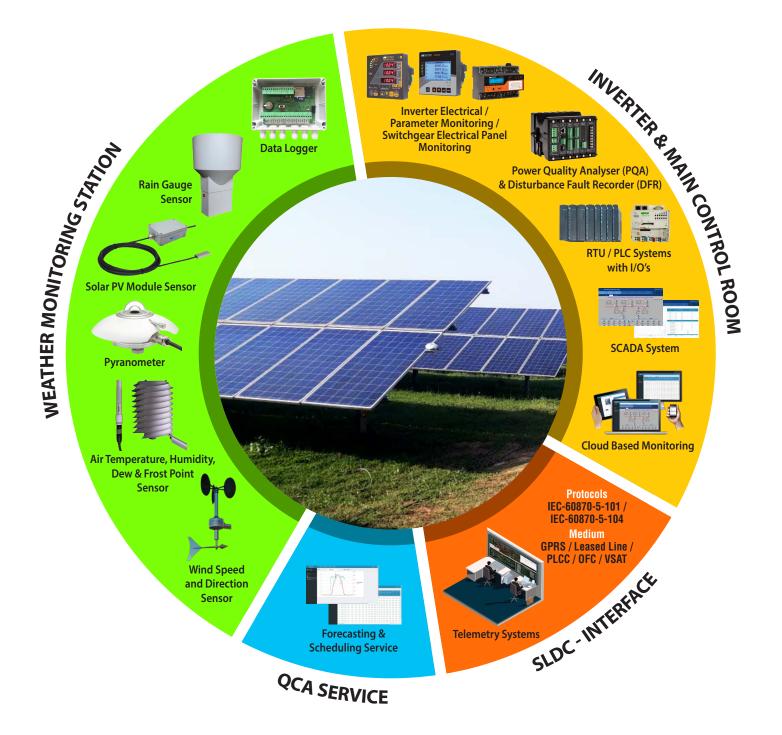
# **SOLAR PLANT MONITORING AND CONTROL - GROUND MOUNTED (MW SCALE)**

- Monitor parameters from strings, inverters, meters and other IED's
- Weather Monitoring Station (WMS)
- Data logging
- ICR communication to MCR via RF / OFC

- SCADA System with control functionalities
- Telemetry System SLDC Interface
- Monitor solar plant generation performance
- Remote user access and reports
- Forecasting and scheduling service

### INTRODUCTION

There is increasing use of grid connected solar power plants. Managing these plants require precise monitoring and a SCADA system designed to address the unique challenges of maximising Photovoltaic (PV) power generation. We offer an economical solution to monitor performance of the solar plants, through data logging, weather parameters, SCADA operation, telemetry system, required reports and forecasting & scheduling services.



#### **SOLAR PLANT MONITORING & CONTROL - SMART SOLUTIOMN**

In solar plants, it becomes essential to ensure optimal performance of the solar plant and to monitor the same to ensure high returns for the investor. We offer complete solution for monitoring and control of the solar plant to meet the above stated objectives as per latest IEC standards.

Solar plant monitoring and control is done using PLC / RTU systems, SATEC intelligent smart meters, Weather Monitoring station, MB SCADA software, Telemetry system and Forecasting & Scheduling service.

Required parameters and status information of Inverters, meters, weather Station, IED's, relays, etc will be collected from each Inverter Control Rooms (ICR). All these parameters will be displayed via local SCADA HMI pages in the main control room. All SCADA HMI pages are also available to remote clients via web log-in.



#### Function performed by Solar Plant Monitoring and Control System:

- PLC / RTU System will communicate with all SMB, Inverter, Transformer, MFM etc. via Modbus RTU / TCP protocol
- Monitor digital status via optically isolated digital inputs
- Provide control commands via relays or digital outputs
- Monitor time stamped (one msec. resolution) SOE
- Provide required time stamped parameters and SOE to local and remote SCADA
- Monitor weather parameters through weather sensors
- Local SCADA system provides display of all parameters from the solar plant
- Communicate with all protection and control relays used in the plant via Modbus protocol
- Provide required reports and performance analysis
- Provide reports and alarm event alerts via emails
- Communicate with SLDC can be via any available mediums GPRS / Leased lined / PLCC / V-SAT / Radio etc.
- Redundant telemetry communication links and communication with multiple SLDC's
- Forecasting & Scheduling service to forecast generation as per SLDC norms.



**Local & Remote Monitoring** 

## Why MBCS?

With over 35+ years of experience in delivering automation systems combined with the expertise in solar plants makes us the perfect technology partner for anyone in the solar industry. We offer 360° approach in solar automation solutions package reducing integration costs, delivery time and ensuring high performance of the plants.

- Leading automation solution combined with efficient inhouse solar power expertise.
- Manufacturing, engineering, testing, commissioning and after sales service provided by us, ensuring reliability and cost advantage.
- Integrated automation solution package, from string level monitoring to big data forecasting & scheduling and SLDC data interfacing.



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