

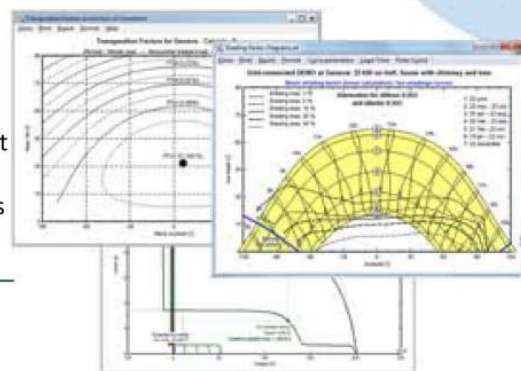
DESIGN & MONITORING

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Euroelec-Smart Energy is an innovative environmentally friendly company expert in consulting and engineering which develops the best sustainable solutions for the customers.

1. DESIGN - PVSYS

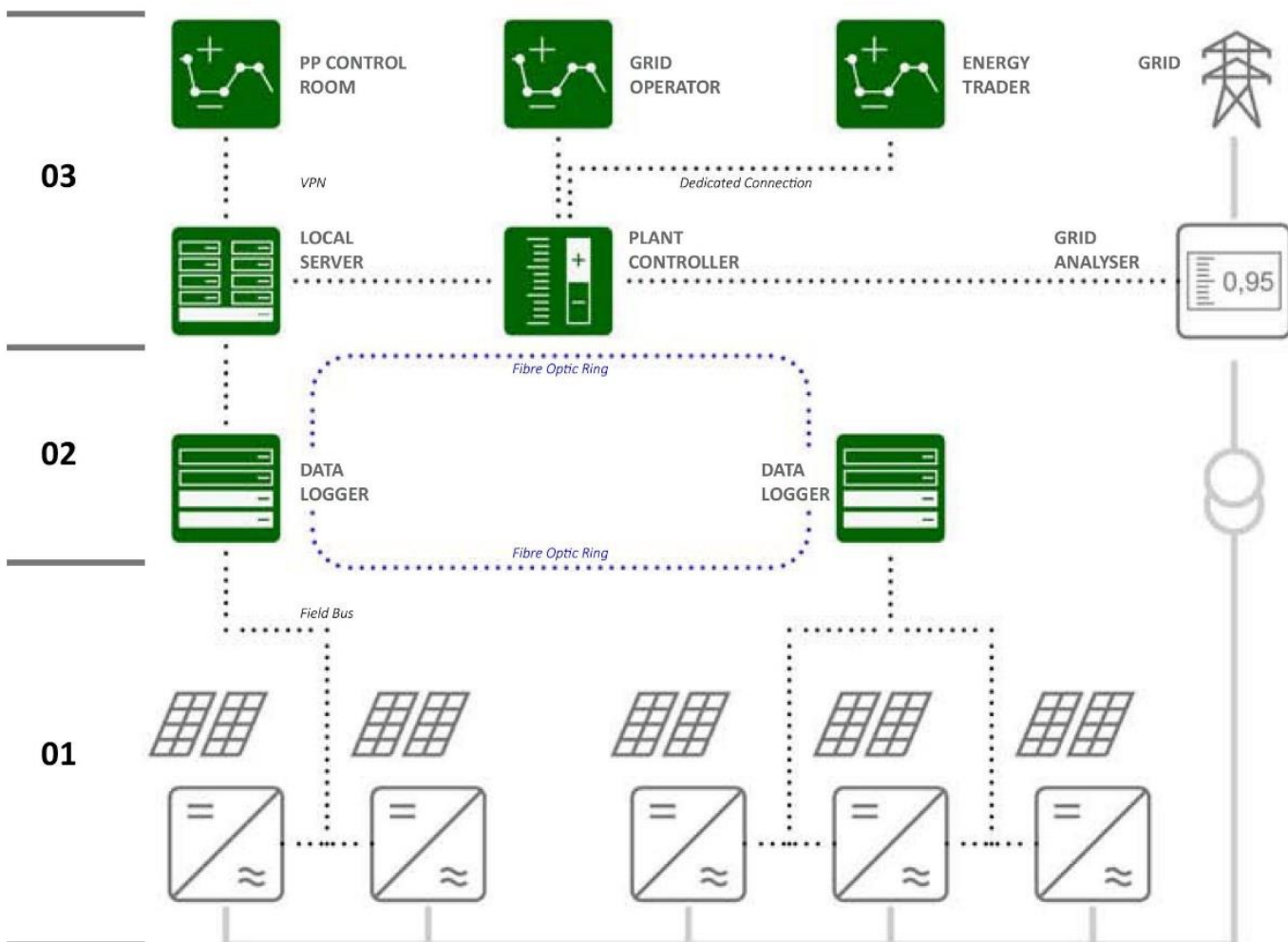
Preliminary desing tool	Quick estimation for an early study
Projet design tool	Detailed study, results in a complete printable report
Databases	Meteo data and components management
Tool	Comparison of the simulation with measured results



2. MONITORING - SKYTRON

Hardware: Device - Installation - Commissioning

SKYCONTROL - Integration of PV into Power Grids
COMMUNICATION SCHEME



Level 01

Reliable field busses (RS-485, CAN,...) between data logger and inverter

Level 02

Fibre Optic Ring (Etherned based, redundant, wide area connection) between data logger and plant controller

Level 03

Dedicated secure connecting to grid operator and/or energy trader, and Internet to monitoring provider, data base, and supervision platform.

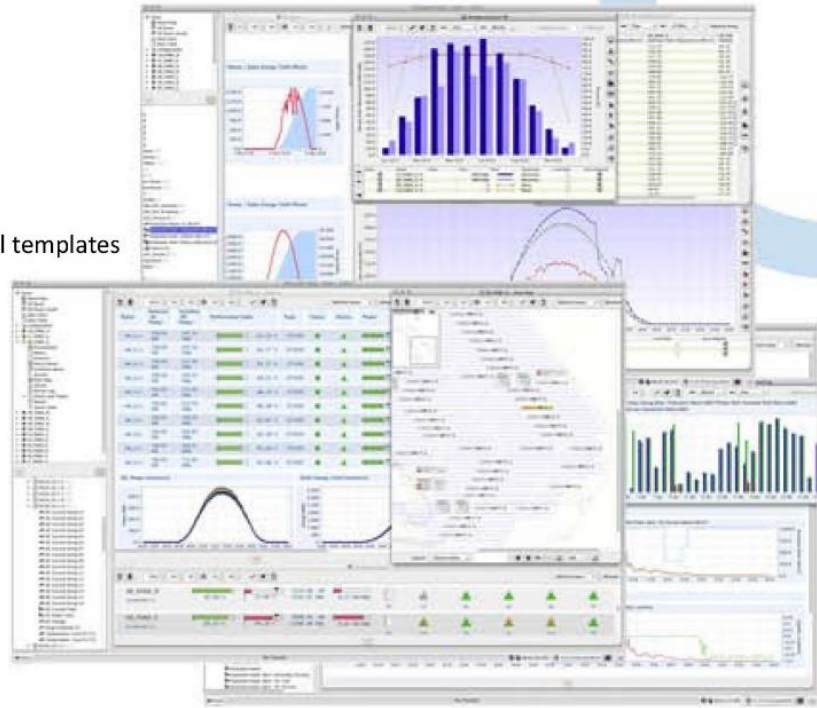
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3. MONITORING - SKYTRON

PVGuard - Supervision Platform

- Provides vendor-independent monitoring
- Manages all your power plants, worldwide
- Visualizes all acquired data and stores individual templates
- Compares your PV data
- Reports alarms
- Visualizes PV plant output curtailment
- Stores historic data
- Generates flexible plant reports and views
- Produces production forecasts
- Incorporates an integrated service Log



4. ANALYSIS

Performance indicators (KWh/kWp PR) according to IEC Standard 61724 using field data contain the following informations:

- | | | |
|------|--------------------|--|
| Yr | Reference yield | Energy production if the system was always running at "nominal" efficiency, as defined by the array Pnom (nameplate value) at STC.
This is numerically equivalent to the Goblnc value expressed in (kWh/m ² /day). |
| Ya | Array yield | Energy production of the array |
| Yf | Final System yield | Energy to the grid |
| Lc = | Yr-Ya | Array capture losses |
| Ls = | Ya-Yf | System losses |
| PR = | Yf/Yr | Performance Ratio = E_Grid/ (Goblnc Pnom (nameplate)) |

5. OPERATIONS

- Yield measurement
- MPPT adjustment efficiency, Conversion efficiency and the overall efficiency

6. REPORTING

We are able to deliver high quality and easy-to-read reports

CONTACT

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