



Photovoltaic design software

BlueSol is a software for the design of photovoltaic systems in every country in the world. It allows you to perform the entire process of designing a PV system, from the preliminary assessment of energy generation to the production of final system documentation. BlueSol is a product made with a standard Microsoft interface, very easy to use but at the same time manages every detail of the PV system.



FEATURES INCLUDE:

Model the PV system scheme

- Model the system scheme in every detail
- Use of wizards or direct editing
- Edit scheme tree via copying and pasting
- Easily achieve any system configuration
- Create templates of the system

Panels, cables and electrical components

- Calculate the voltage drops on the cables
- Checks on electrical components
- Automatic size of the electrical components
- Archives to store the most used components
- Bill of electrical components

Integrated CAD System

- Import planimetry map as a DXF, DWG or image
- Arrange modules and strings, cables, panels, inverters and connection to the grid
- Insert near obstacles
- Check the result in the 3D integrated
- Export to DWG

Layout 3D

- 3D visualization of layout
- Simulations of shading of near obstacles
- Assessments of irradiations on surfaces
- Export to DWG or to image

Electrical scheme

- Automatically created
- Edit using CAD tools
- Export to DWG

Wizards

- Dimensioning of the photovoltaic system
- Definition of the cables
- Dimensioning of electrical components
- Insertion of the modules
- Insertion of cables

World wide Location

- NASA-SSE world wide irradiations
- Insertion of new data of irradiation by the user
- Importing of the irradiations from PVGIS
- Internet maps support

Economic evaluation

- Detailed economic analysis
- Options to suit needs of different countries

Production of project documentation

- Default and user templates of documents
- Integrated word processor

Screenshots



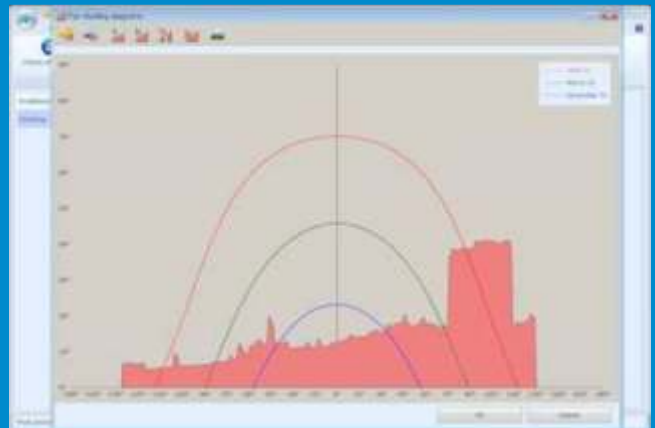
Wizard: arrangement of the strings in the photovoltaic field



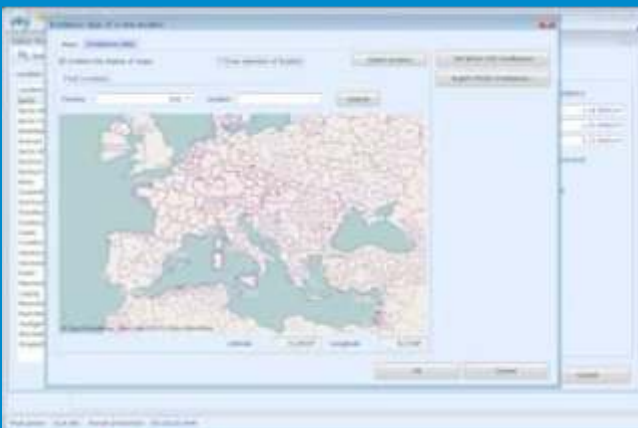
Wizard: choosing grid of the photovoltaic field



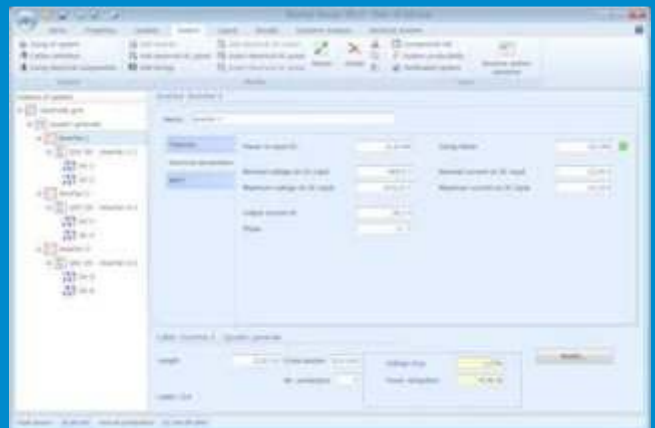
Location: average monthly irradiance



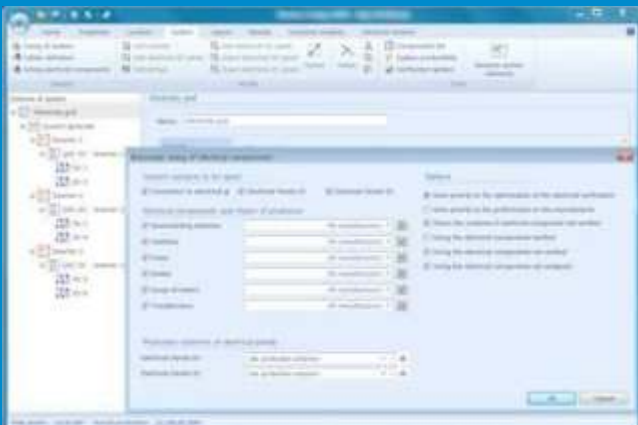
Location: far shading



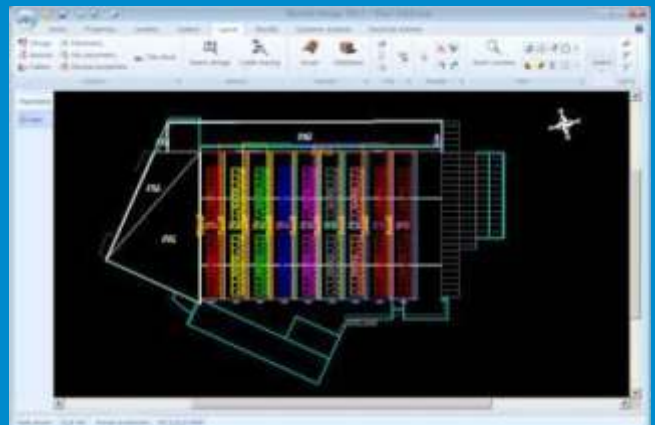
Location: choosing a new location by map



System: inverter properties



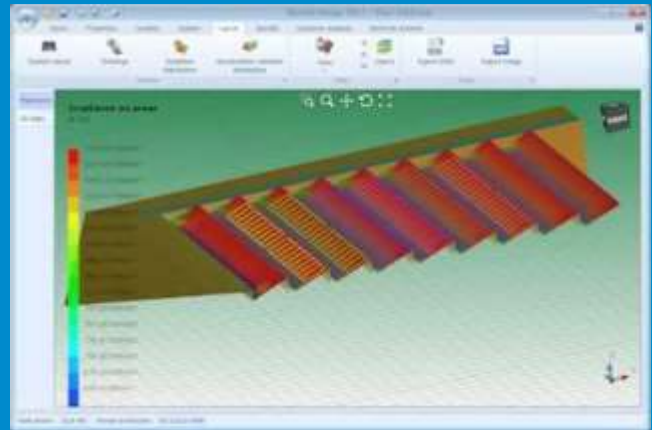
System: automatic sizing of electrical components



Layout: planimetry



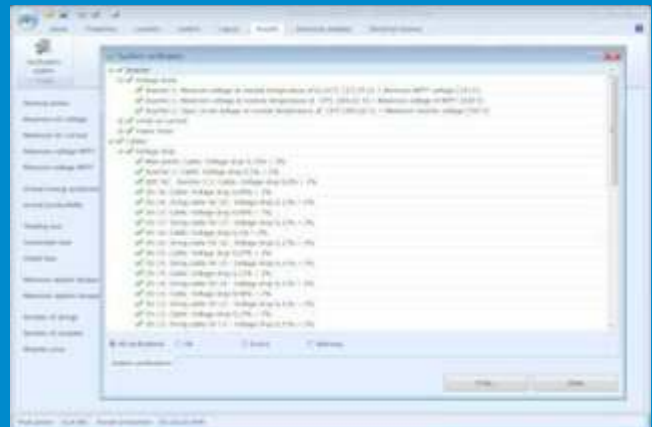
Layout: 3D view



Layout: irradiance



Results: monthly production



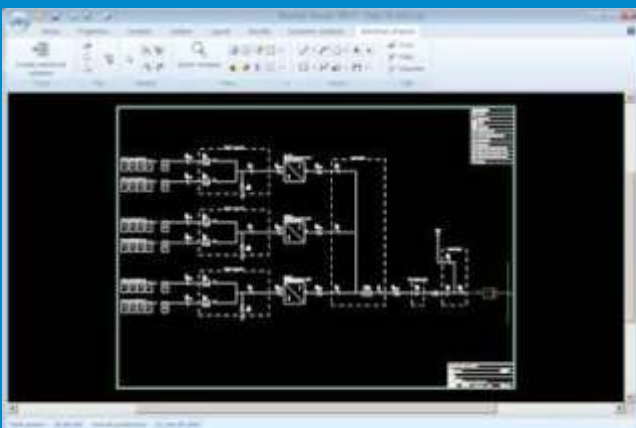
Results: system verification



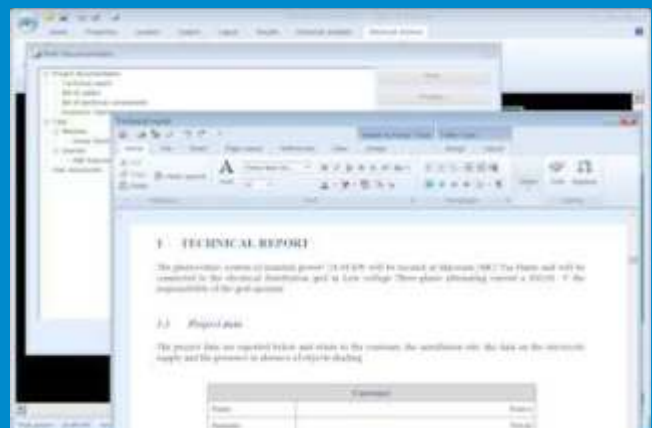
Economic Analysis: profitability

Year	Energy yield (kWh)	Net present value (€)	Internal rate of return (%)
2020	12000	15000	12.5
2021	12500	15500	12.5
2022	13000	16000	12.5
2023	13500	16500	12.5
2024	14000	17000	12.5
2025	14500	17500	12.5
2026	15000	18000	12.5
2027	15500	18500	12.5
2028	16000	19000	12.5
2029	16500	19500	12.5
2030	17000	20000	12.5

Economic analysis: detailed table by year



Electrical scheme generated by the program



Print documentation: detail of the Technical report

Product Features

Features Available

Operating system

Windows® 2000 Service Pack 3, XP, Vista, Windows 7 (32/64 bit), Windows 8



Projects

Creating a new project using the wizard for the dimensioning of the photovoltaic system



Creating a new project from a template



Archives

Archives of photovoltaic modules and inverters, data obtained from Photon, with more than 20,000 modules and more than 1600 inverters



Archive of photovoltaic modules, modifiable and expandable



Archive of the inverters, editable and expandable



Archive of cables and other electrical components managed by the user



Archive for consumption of electrical devices



Archive consumption profiles



Project properties

No limit to the power of the system



Data input: system, designer, customer, additional user data



Project Settings: system temperatures, sizing on power of the inverters, dispersions



Location

Data tables for the average irradiation of locations most important



Insertion of new data of irradiation by the user



Importing of the irradiations from PVGIS



NASA-SSE world wide irradiations



Choice of locations and geographical coordinates with the aid of maps (requires internet connection)



Analysis of azimuth and tilt optimal. Possibility of differentiating the period of the year



Automatic insertion of far shading from digital images



Editing far shading



Possibility of multiple far shading on the same system



System

Representation of the schema of the system in all its parts



Calculation of the irradiation on the plane of the panels



Calculation of the producibility of the photovoltaic system



Checks on the coupling between strings and inverters



Calculation of cables according to CEI-UNEL tables



Determination of the voltage drops and the flow rates of the cables



List of the electrical components of the system



Management of MPPT



Commands to cut, copy and paste the elements of the schema within the system schema



Selection commands by type of the elements of the system



Management of AC Panels connected to the main panel



Ability to explicitly specify the cable lengths



Verifications of the electrical components



Management of the electrical protection groups in the panels



Dimensioning wizard of the photovoltaic system



Scheme of producibility of the sections of the system



Automatic rename of the system components



Wizard for the dimensioning of the photovoltaic system



Wizard for the definition of cables



Wizard for the dimensioning of electrical components



Layout

Importing planimetry from DWG or image



Inserting strings easy and automated



Inserting Inverters, panels and counters



Cables arrangement with measurement of the lengths, that will be used in the verification



Editing and printing of the layout with advanced CAD capabilities



Exporting to DWG and DXF



Wizard for the guided insertion of strings



Wizard for guided arrangement of cables



Inserting the Title Block



3D visualization of the layout
Shadowing due to obstacles next to the system
Distribution of irradiations over the areas
Animation of shadings on the PV system



Results

Verifications on the inverter: limits on the voltage, limits on the current, limits on the power
Verifications on the inverter: calculation of the input voltage to the inverter calculated by reference to MPPT trackers
Verifications on the cables: voltage drop, capacity, calculation of the maximum voltage drop in the system
Verifications of electrical components



Economic analysis

Analysis of profitability of the plant with assessment of financing
Diagram of cash flow over the life of the system
Management of taxation
Management of incentive rates
Tools of analysis of the consumption and self-consumption of the system
Export in xls format of the summary tables



Electrical scheme

Automatic generation of single-line electrical scheme
Schema creation options: choice of layout, paper size, height of the character of the texts, display full or partial of modules and strings. The options for creating the schema are saved in the project
In the regeneration of the electrical scheme the user can keep the primitives he had created
Editing and printing of the electrical scheme with advanced CAD capabilities
Exporting to DWG and DXF



Print Documentation

The technical documentation of the project is produced as editable Word documents obtained from customizable templates
Technical report
Economic report
Bill of cables
Bill of electrical components
User-created documents
Integrated RTF editor



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4/90, Catalano Circuit, Canning Vale, WA 6155.

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