

## Fields of application

- **City-wide potential analyses**  
for municipalities, energy supply companies,  
marketing and sales companies of the solar energy  
industry
- **Potential analysis within the architectural  
planning process**  
for municipalities, architects, investors
- **Single object analysis of the building stock**  
for individuals, craftsmen, building societies, trade  
firms and industrial companies, planning  
companies of the solar industry
- **Optimisation of solar power system planning**  
for individuals, building societies, investors,  
craftsmen, planning companies of the solar industry



**simuSOLAR** Solar Potential Analysis



**simuSOLAR** is a product of:

**simuPLAN**

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Co-operation partner



The use of **simuSOLAR** facilitates  
the systematic planning and  
realization of solar power systems.

Numerical simulation program for the calculation of the solar  
energy potential on urban roofs.

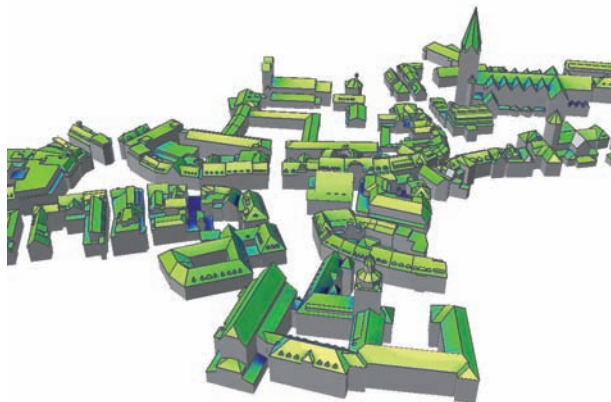
[www.simusolar.de](http://www.simusolar.de)

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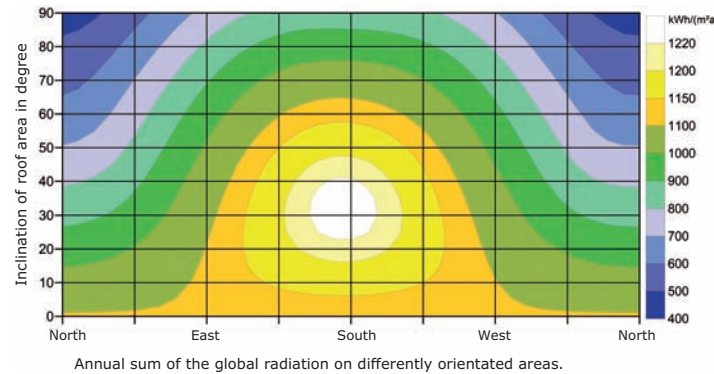
The use of solar energy constitutes a considerable CO<sub>2</sub> savings potential. Roof surfaces are often ideal for the installation of photovoltaic and solar heating systems because no sealing of additional surfaces will occur here.

With the program simuSOLAR, developed by the engineering company simuPLAN, the solar potential of the roof surfaces of whole cities can be calculated in a precise and economic way.

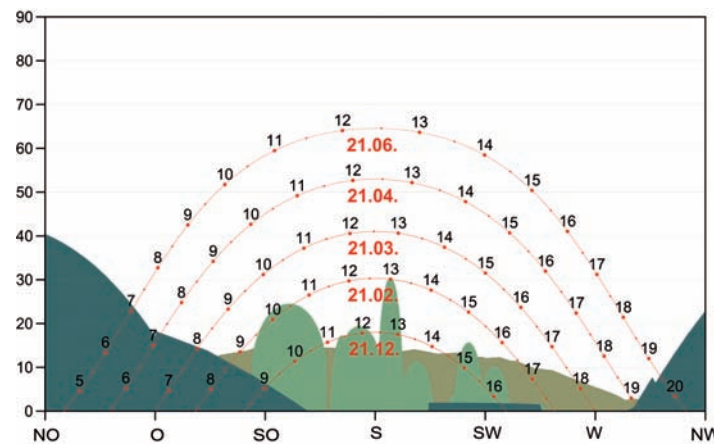
The calculation of solar potential with simuSOLAR is based on exact 3D city models that cover more and more areas. If no city model is available, the corresponding geo data can be generated with high quality by our cooperation partner AEROWEST GmbH.



The parameters size, orientation and inclination which are relevant for the suitability of roof surfaces are evaluated automatically by simuSOLAR on the basis of existing city models.

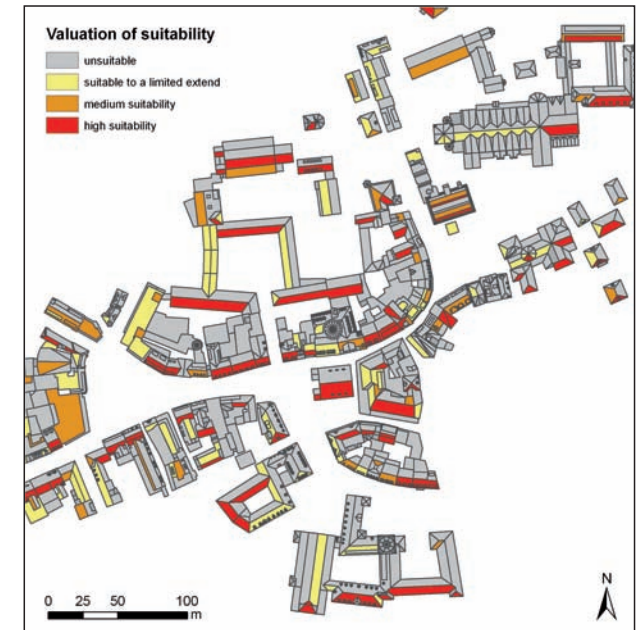


The calculation of the yearly radiation is based on a representative time series with a temporal resolution that is exact to the minute. Shadowing effects caused by surrounding buildings, trees and topography that could lead to yield cuts of solar power systems will be accounted for in detail by horizon lines.



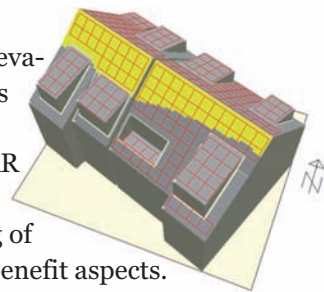
simuSOLAR provides the following results for each roof surface that has been evaluated: orientation, inclination and size, radiation amount per year, CO<sub>2</sub>

savings per year, probable yield per year. A classification of roof surfaces can be made on the basis of these results.



The decision-making regarding an ecologically and economically sensible use of solar power systems is simplified significantly.

On the basis of a city-wide evaluation detailed simulations for single buildings can be carried out with simuSOLAR that help optimize the positioning and dimensioning of a solar system under cost-benefit aspects.



simuSOLAR supports the intention of sustainable building, the preservation of resources and the reduction of CO<sub>2</sub> emissions in the area of urban development and building strategy already at an early planning stage.