

Calibrate, document, design and simulate

A newly developed app from ETU Software enables quick and precise measurements of a building, by taking digital measurements based on a photo and target-oriented inputs to simulate the photovoltaic system. This allows the user to document and provide initial estimates while still on site. SimpleMeasure saves time in the bidding phase and enables the workflow to be documented precisely in advance. Subsequent processing time in the office is also remarkably reduced.

Taking individual images from different appropriate perspectives to access difficult areas such as roof surfaces is possible as well. This makes it easy to take measurements for roofing work and PV planning. As an advantage, a tabular list is automatically output, which contains all recorded areas, extraction areas and PV modules. This documentation can be exported in various formats for further use.

The approach: the app can be purchased directly via the Play store/App Store. After registration, the first project is created easily

without many instructions. An assistant guides you through the individual steps.

The captured or selected photo can be rectified and edited in different resolutions. This ensures a more accurate method of working. The photographed area is selected and calibrated with the help of a grid to determine the layer. For more precise positioning of the corner points, the zoom function displays the selected corners. One or two known reference dimensions can be entered for calibration. The more precise the work, the more accurate the result.

The selected area can now be measured. In addition to rectangles, polygons are also available for selection, which can be used for cut out areas. Furthermore, areas can be provided with lines, dimension chains and labelling fields. This facilitates the bid preparation and structures the documentation process.

In order to cover the roof with the appropriate PV modules, the corresponding widths and heights as well as the distances between the modules are entered. This input enables a manufacturer-neutral working method and reduces the selection from catalogues. The final selection of suitable modules and inverters is made using the catalogue from the PV simulation.

Once the areas and dimensions have been determined and the PV modules are placed, a corresponding tabular listing is output. Several formats are available for export: Area lists in CSV format, a project report as PDF or the image file as a screenshot.

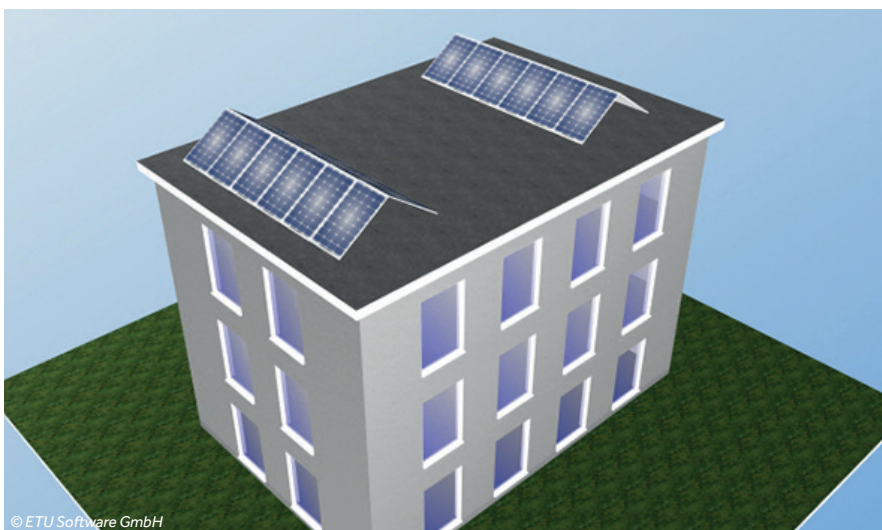
In addition to the area and building survey with SimpleMeasure, the dimensions and the occupancy can be entered into PV Simulation 3D and used to simulate the photovoltaic system. The intuitive user interface including a complete CAD (HottCAD) leads step by step through the program. The system is designed based on a few relevant characteristic values by simplified



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consideration. Alternatively, a complete roof design can be carried out in 3D based on a digital model. Shading calculations of the building and Meteoronorm climate data are already included.

Besides an extensive and monthly updated manufacturer database, own inputs can also be added and thus enable a multitude of interconnections. For each selected combination of module and inverter, the program determines the interconnection options and lists the variants in comparison. Battery storage can optionally be considered and simulated in the same system model. The display of the state of charge for each day enables to draw conclusions about the selection of the right size of storage.

The cost-effectiveness of a system is determined with the integrated profitability calculation. In addition to the profitability calculation with payback period, risk analysis with various financing and loan options can be taken into account as well. The transfer of parts lists in common formats is implemented for the preparation of offers. Descriptive diagrams and detailed tables enable complete documentation, which can be output in a comprehensive report.

The approach: After creating a new project, the simple building entry is selected. The relevant dimensions for the occupied roof area can be entered from the app. Inverters and modules are selected from the manufacturer catalogue and interconnected. The optimal connection is evaluated based on various performance data and the smiley on the right. The output includes the annual



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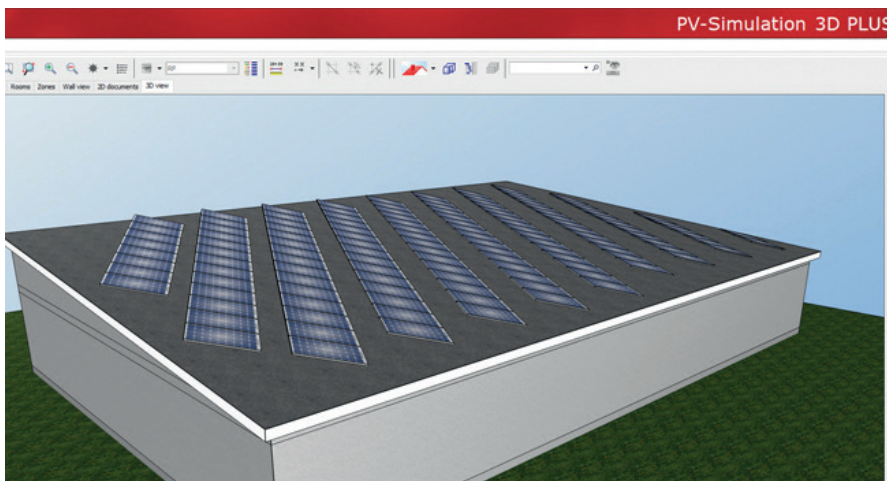


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yield and self-consumption, detailed diagrams of the climate data such as

corresponding radiation data, the electricity generation (DC, AC yields), the electricity

distribution and the state of charge of the battery (if a battery storage was selected).



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The 'SimpleMeasure' is available for €99 (2-year license) or for €3.99/month in the App or Google Play Store. In addition, the PV Simulation 3D can be purchased for €399 as a yearly license.

For further information, the team of the ETU Software will be happy to assist you. Contact us via email or phone:

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