

MICROGENERATION
AUGUST 2009

MICROGEN SYSTEM PERFORMANCE

MCS COMPLIANCE MADE SIMPLE

SAP MICROGENERATION MODULE is aimed at installers certified under the MCS installation standards.

Microgeneration module is based upon our SAP calculation software which is approved by the BRE for England, Wales and Scotland. In order to meet the requirements of the Microgeneration Certification Scheme (MCS) the householder should be provided with an energy usage calculation which is representative of the proposed microgeneration installation. The MCS installation standards establish criteria for system performance. Requirement 4 is an estimate of the annual energy performance where the calculation should be based upon the SAP 2005 specification.

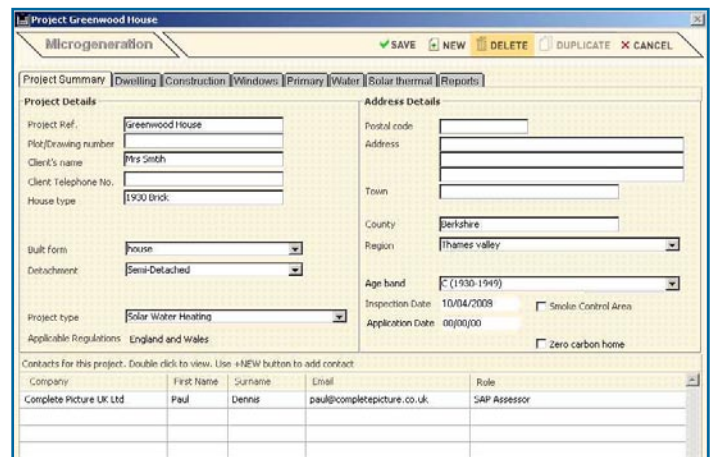
We have created a module within our SAP software which uses the sap calculation engine with a simplified user interface and specific reports to demonstrate the system performance before and after the installation of the microgeneration equipment.

The software generates a calculation using generic U values from the sap specification these are applied to the project to generate an energy calculation for the dwelling before installation. Details of the MCS installation are entered into the software and a second calculation is generated and the comparison checklist shows the estimate of the annual energy performance of the dwelling. The regulations compliance checklist can then be presented to the householder to meet your requirements under the MCS installation standards.

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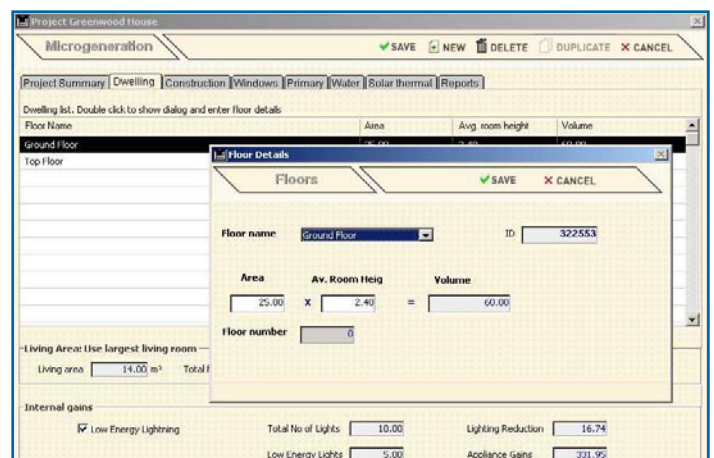
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The screenshot shows the 'Project Summary' tab of the SAP Microgeneration software. It contains several input fields for project details:

- Project Details:** Project Ref. (Greenwood House), Plot/Drawing number, Client's name (Mrs Smith), Client Telephone No., House type (1930 Brick), Built form (House), Detachment (Semi-Detached), Project type (Solar Water Heating), and Applicable Regulations (England and Wales).
- Address Details:** Postal code, Address, Town, County (Berkshire), Region (Thames valley), Age band (1930-1949), Inspection Date (10/04/2008), and Application Date (00/00/00).
- Contacts:** A table listing contacts for the project, including Paul Dennis, SAP Assessor.

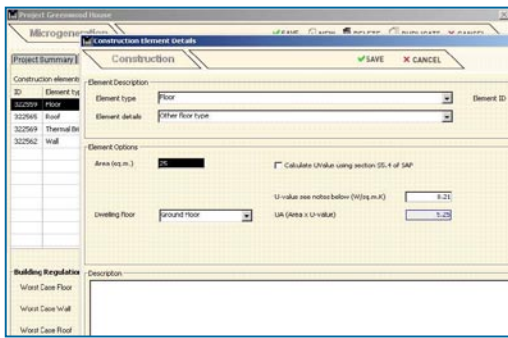
01: Capture the key details of the project. The new module is designed to make data entry as simple as possible for example when creating a new project the software automatically generates many of the default sap data entry items



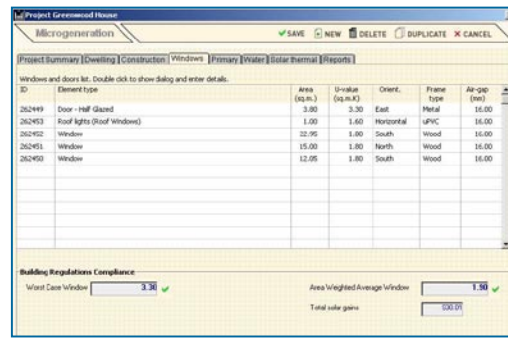
The screenshot shows the 'Floor Details' dialog box within the SAP Microgeneration software. It displays the following information:

- Floors:** A table with columns for Floor Name, Area, Av. Room Height, and Volume.
- Ground Floor:** Floor name: Ground Floor, ID: 322553, Area: 25.00, Av. Room Height: 2.40, Volume: 60.00.
- Living Area:** Use largest living room. Living area: 14.00 m², Total floor area: 25.00 m².
- Internal gains:** Low Energy Lighting (checked), Total No of Lights: 10.00, Lighting Reduction: 16.74, Low Energy Lights: 5.00, Appliance Gains: 231.95.

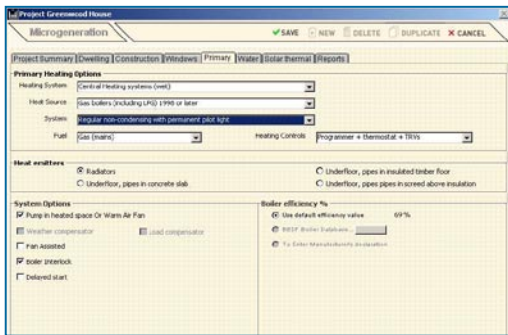
02: For the installer you need to simply edit the project by entering the dwelling dimensions and living area fraction.



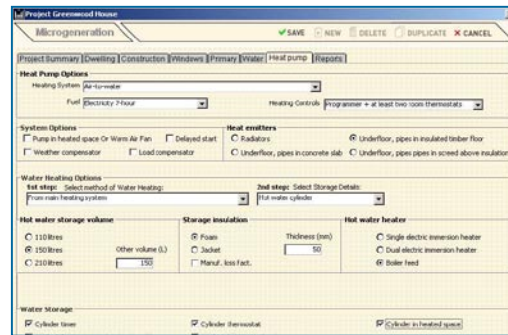
03: For the installer you need to simply edit the project by entering the construction details of the building U values are taken from Appendix S of the specification.



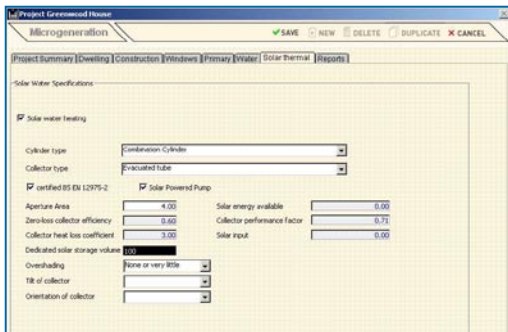
04: The project is automatically includes window details. Simply update the window dimensions and select the window type to generate the U value to be using the calculation.



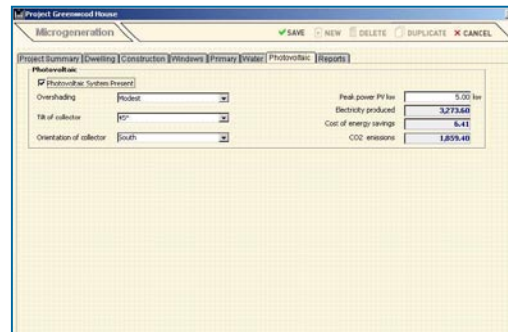
05: The primary heating section is dependent upon the fuel used in the dwelling. Selecting the fuel for the project creates default settings for primary heating. Update the boiler to match the existing primary heating system and select the correct water heating method.



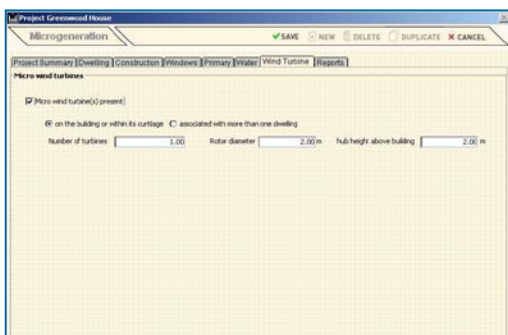
06: Where the installation is a heat pump an additional primary heating section is included for the project. Enter the heat pump system details and these are used in the second calculation which compares the heat pump system with the original primary heating system.



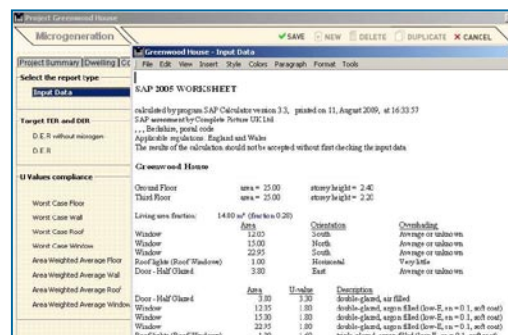
07: For a solar water heating installation primary heating module includes the additional elements for solar water heating. Enter the details for the solar system and this will update water heating calculation within the sap specification.



08: For a solar photovoltaic project an additional page is included for the installer to enter the details of the PV system. The energy saved by PV is deducted from the calculation for the existing building.



09: For micro wind turbine projects enter the details of the turbine and when taken into consideration with the location of Building and its environment the energy saved is deducted from the calculation of the existing building.



10: The reports page generates three reports. An estimate for the energy performance of the existing building. An estimate of the energy performance including the MCS installation and lastly a compliance checklist which includes a comparison of the before and after results of the microgeneration equipment.