

Energyhouse powered by Victron

The Dutch city 'Veldhoven' was recently introduced to a new phenomenon: an energy-neutral house called 'Energyhouse the Mirre'. By applying several sustainable techniques, the house can provide its own energy needs, completely disconnected from grid and gas. The equipment of Victron Energy is a useful addition to this house.

The concept of the Energy House was developed by Cees Collart from Energyhouse B.V.(Netherlands), in addition to the question if it is possible to invent a house that is completely independent of the grid. The current sources of the Dutch grid consist primarily of fossil fuels, which will be more expensive in the future. Moreover, fossil fuels contribute to climate change.

Energy

Through 28 solar panels, mounted on the roof of the Energy House, electricity is generated. This generated electricity is stored in 48 batteries so that electricity is present at all times. At night and in the winter months, when there is little or no sun for the solar panels to generate energy, the stored energy from the batteries will be used. When the batteries are fully charged, the house can be provided with the necessary energy for one month. The batteries have a storage capacity of 300 kWh and the installation produces 4200 kWh per year.

Sustainable and environmentally friendly

To heat the house, a solar water heater with two solar collectors on the roof and a heat pump with closed source are being used. The house is fully insulated, to minimize heat loss. The developers of the house also thought about the lighting: only LED lamps are being used in order to use the available energy more efficiently.

Victron equipment

The Energy House is equipped with three MultiPlus Inverters/Chargers, connected in three phase, which provide 230/400V AC. The MultiPlus is a powerful true sine wave inverter, a battery charger and a high-speed AC transfer switch in a single compact enclosure. Since the house is not connected to the grid, the charger-function of the MultiPlus is not being used. Because the Energy House is still in a test-phase, the builders are not sure yet about whether the house can function fully independent from the grid. Therefore, thanks to the MultiPlus units, it is still possible to connect the house to the grid. The Victron equipment is distributed by the company [Top Systems B.V.](#) in Bodegraven, The Netherlands, and installed by the company Mansveld in Eindhoven, The Netherlands.

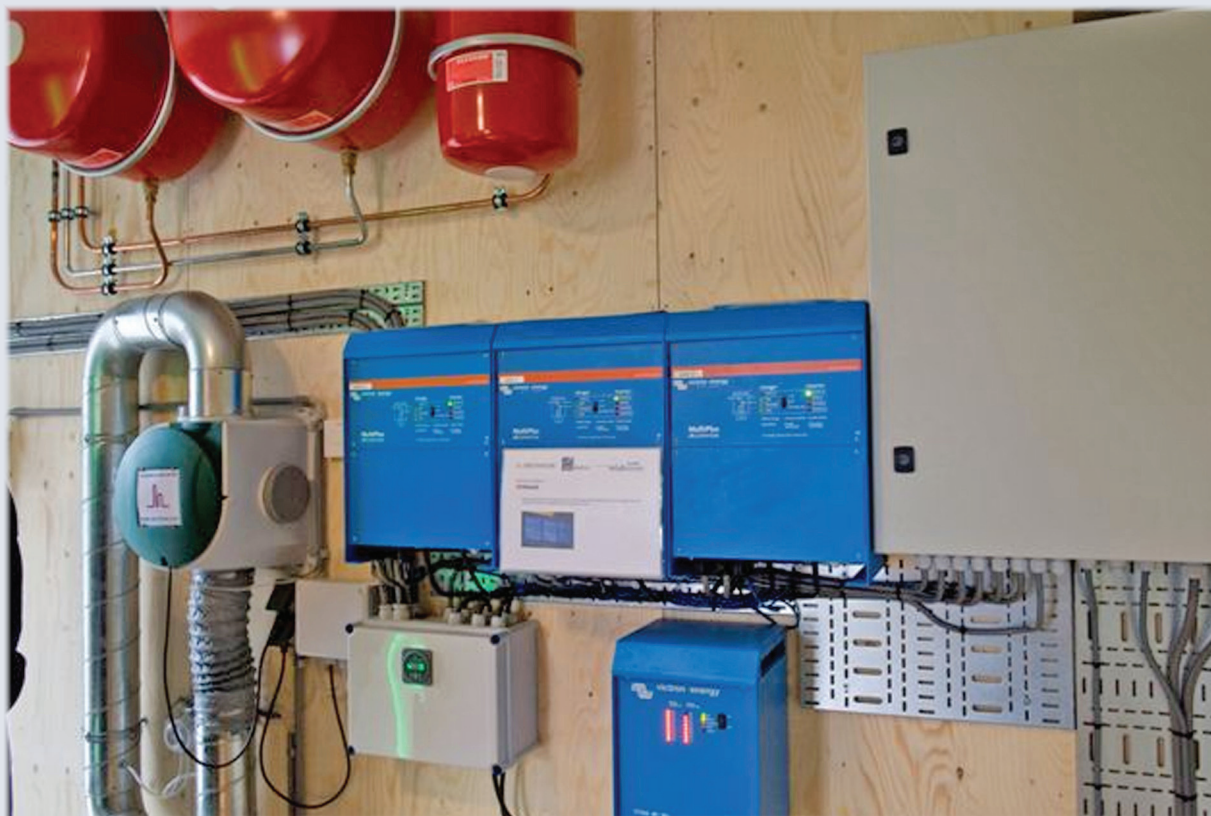
Future

This year the house will be tested in practice to see if the house can really function 365 days without being connected to the grid. In the future, there is a plan to build a cluster of energy neutral homes, coupled to its own mini-grid where the houses generate and share energy.

For more information about 'Energy House the Mirre' in Veldhoven (Dutch website), click [here](#).



Energyhouse powered by Victron



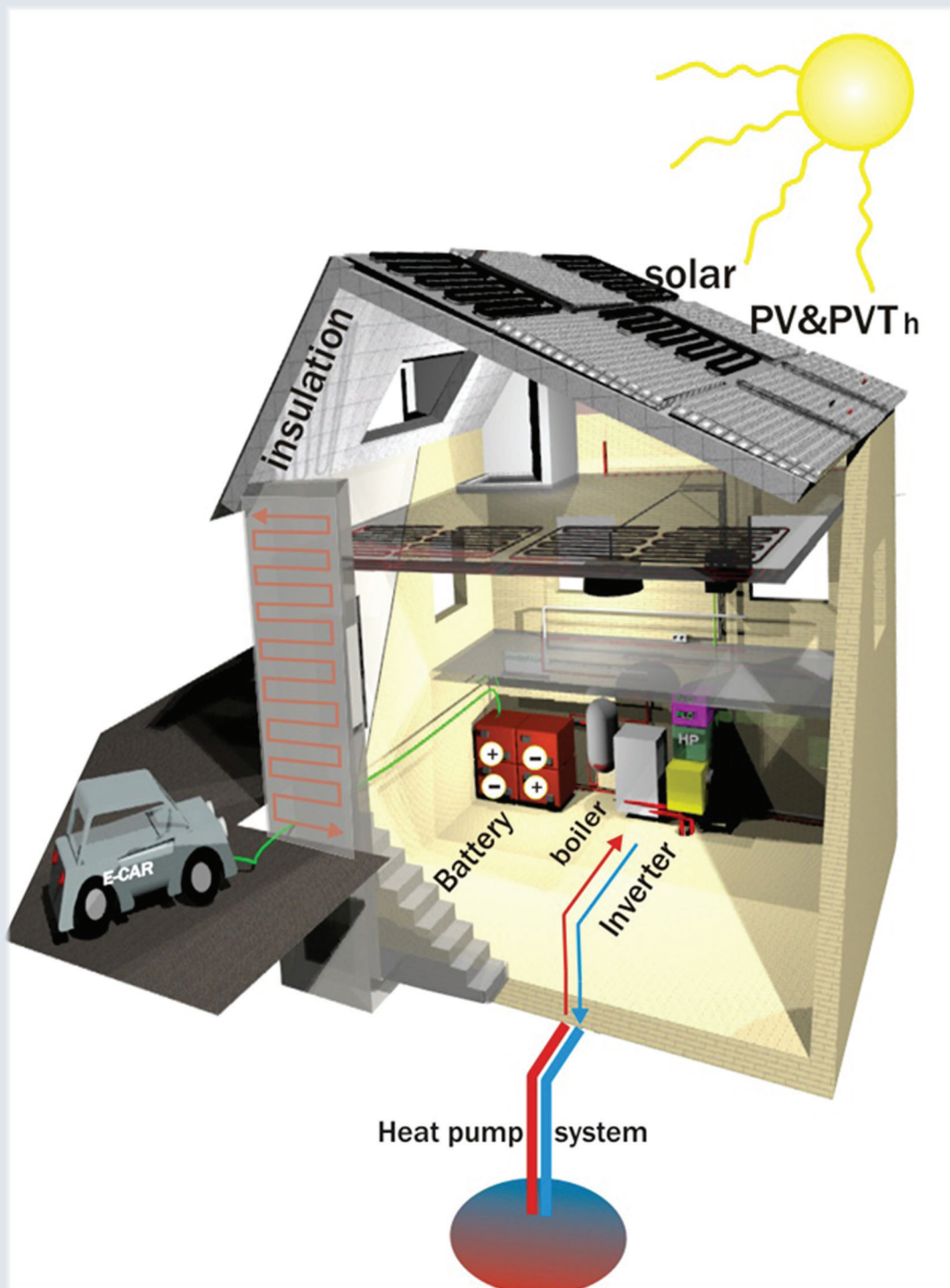
Victron equipment

Three MultiPlus Inverters/ Chargers and a Skyla TG Charger are installed in the Energyhouse in Veldhoven.



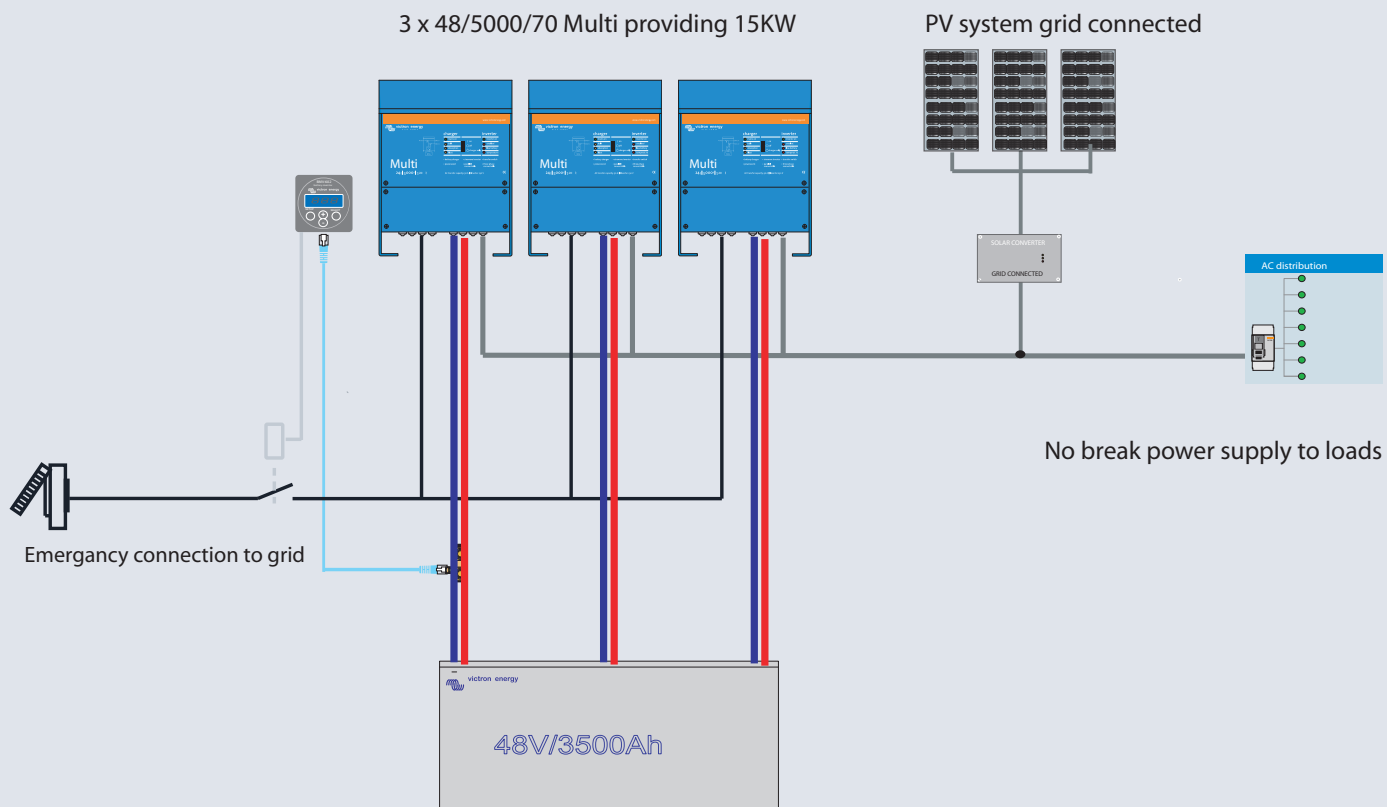
'Energyhouse the Mirre' in Veldhoven

Energyhouse powered by Victron



Graphical representation of the 'Energyhouse'

Energyhouse powered by Victron



Schematic overview of the installation in the 'Energyhouse'