

# Solar Energy for Monte Rosa Hut (Switzerland)



It is a starting point for glacier hikes and for climbers who want to ascent the Dufourspitze, the highest mountain of Switzerland and the second highest in the alps.

**The myclimate climate protection project "Monte Rosa SAC Hut" focuses on solar energy and energy efficiency. As a result, it is possible in part to dispense with a conventional fossil energy supply. The "Climate Audio Trail - Monte Rosa Hut" launched by myclimate in connection with the climate protection project provides hikers and mountain-climbers with information on the influence of climate change in the Swiss Alps.**

Everything is extraordinary at the new Monte Rosa Hut in the Valaisan Alps: the story of its origins, its exterior, innovative architecture and energy-efficient operation. Anyone who ascends to the hut experiences a unique view, striking architecture and an up-to-date energy supply at first hand.

The old Monte Rosa Hut, which has now been torn down, ran on diesel and coal. The new Monte Rosa Hut was built using the latest building technology methods and architecture to ensure that the greatest possible energy independence could be achieved. An impressive 122 m<sup>2</sup> photovoltaic cell installation on the south side of the hut together with a new combined heat and power (CHP) plant provides electricity for waste water treatment, ventilation, lighting and household appliances. In front of the hut 60.5 m<sup>2</sup> of thermal solar collectors have been installed. These cover the thermal requirements for heating and hot water preparation in combination with the CHP plant. Water is used several times in the new Monte Rosa hut. Melt water, which is collected in summer in a cavern, is used for washing and the kitchen. In part it is used a second time as grey water for WC flushing and the washing machine. A microbiological treatment plant purifies the water to the greatest extent and returns it to the environment in virtually drinking water quality. In the new Monte Rosa Hut controlled ventilation ensures that warmth remains in the building, the air is always fresh and even the waste air is used. The heat contained in the latter is reused.

The new Monte Rosa Hut is a forward-looking research and development project of the ETH Zurich (Swiss Federal Institute of Technology Zurich) in cooperation with SAC and various other partners.

## Project type:

Solar , Energy Efficiency

## Project location:

Valais, Switzerland

## Project status:

Completed, no credits available

## Annual CO<sub>2</sub> reduction:

23 t

## Situation without project

Diesel and petroleum energy supply

## Project standard



## Impressions



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Find out what Capricorn has in common with the new Monte Rosa Hut and what swallowtail butterflies have to do with the hut with the audio stories of the "Climate Audio Trail - Monte Rosa Hut".

From this project there are no emission reductions available any more.

This project contributes to 2 SDGs:



The 122m<sup>2</sup> photovoltaic cell installation ensure that the greatest possible energy independence is achieved



Till now, 314 tonnes of CO<sub>2</sub> are saved.



Hut with Matterhorn and Gorner glacier in the background: The new Monte Rosa Hut was built using the latest building technology methods and architecture to ensure that the greatest possible energy independence could be achieved.



Common room: In the new Monte Rosa Hut controlled ventilation ensures that warmth remains in the building, the air is always fresh and even the waste air is used. The heat contained in the latter is reused.