

Information sheet on heating temporary buildings in the winter months (01.10.-30.04.)



Background and principle of utilising existing infrastructure:

Temporary buildings generally require a disproportionate amount of heating energy in winter compared to existing infrastructure. Until recently, temporary buildings in Davos were heated almost exclusively with fossil fuels. This contradicts both the objectives of the Energy City label and the overarching legislation of the federal government and the canton.

From a sustainability perspective, events should utilise existing infrastructure wherever possible. These consume significantly less energy for space heating. No heating energy needs to be used to thaw the snow load or to ensure frost protection at night. However, as various events in Davos would be inconceivable without the construction of temporary structures, the municipality of Davos has opted for a licensing practice that minimises energy consumption and, in particular, the consumption of fossil fuels through the use of temporary structures.

Authorisation practice and requirements for temporary buildings:

Since 2020, temporary structures in the municipality of Davos have been to requirements regarding heating and building envelopes. These requirements were defined in the first version of the "Information sheet on heating temporary buildings", with the aim of gradually improving the building envelopes and increasing the use of renewable energies for heating purposes.

Since the beginning of 2023, all temporary buildings set up between 1 October and 30 April are only approved under the condition that they are heated using renewable energy, unless they meet specific criteria that significantly reduce overall energy consumption, allowing continued use of fossil fuels for heating.

In principle, electric heating is also deemed to be heating with renewable energy if it is operated exclusively with the electricity product "Davoser Strom". (Note: The use of electric heating for temporary structures may be temporarily prohibited by the authorities in the event of electricity shortages during the winter.)

Emergency power generators for the electrical heating of temporary buildings are prohibited.

- **To receive approval for heating temporary structures with fossil fuels during the winter (between October 1 and April 30), the following conditions regarding the building envelope and heating system must all be met:**
- Solid wall elements are used instead of tarpaulins.
- The load-bearing capacity of the roof is sufficient to withstand appropriate snow loads (*note: the normal roof snow load in Davos is approx. 500 kg/m² according to the SIA 216 standard*). The roof must be walkable and able to be cleared of snow. Roofs made of tarpaulins are not permitted.
- The building envelope must be sufficiently tight so that room heat is not lost unintentionally and unused through leaks.
- Heating hoses must be fully insulated.
- Airlocks or windbreaks (two doors in a row) are located at entrances.
- A heating system with a water circuit/circulating air heat exchanger is installed.
- The heat distribution inside is optimised by warm air distribution hoses and/or ceiling fans.
- A temperature control system is installed, including night-time setback programming.

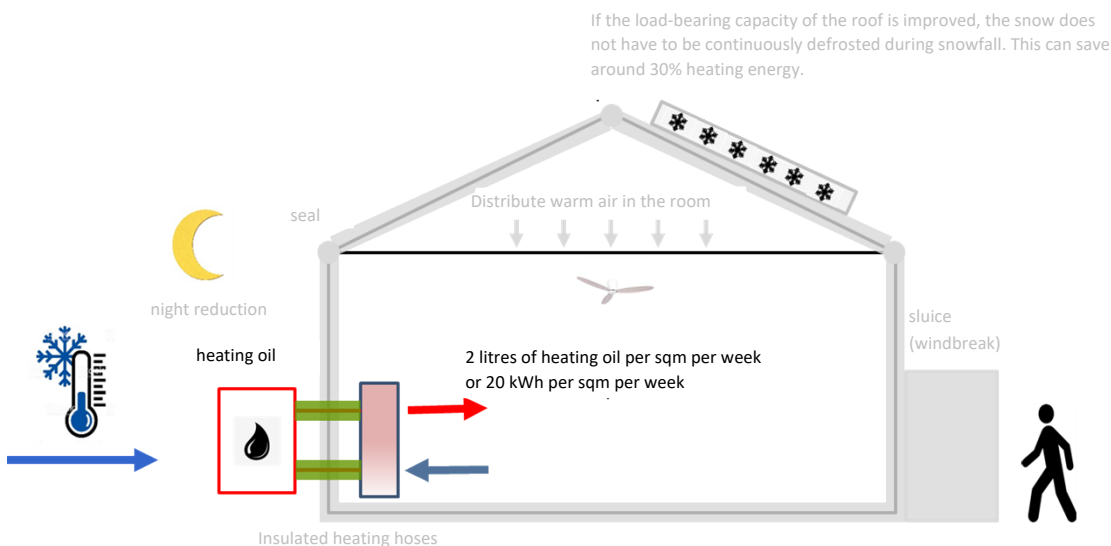


Figure: Schematic representation of the requirements for the building envelope and heating system.

According to Art. 11 Para. 2 of the Energy Act of the Canton of Graubünden (BEG; 820.200), the operation of mobile outdoor heating systems for commercial purposes is only permitted if the resulting CO₂ emissions are compensated. Proof is deemed to have been provided if the operator can demonstrate the use of renewable energies or the acquisition of a certificate for offsetting CO₂ emissions. In order to certify the permissibility of operation, mobile outdoor heating systems must be labelled with one or more vignettes in accordance with Art. 39 Para. 1 of the Energy Ordinance of the Canton of Graubünden (BEV; 820.210).