

Novel Dairy Energy System with HTHP

Eight different energy solutions for a new dairy are compared. The dairy will have heat and cold demands at three and two temperature levels respectively for building, storage and processes. The findings are based on hourly demand for an entire year.



The solutions included direct and indirect cooling and heating with CO₂ and the use of a high temperature heat pump (HTHP), either a propane/butane cascade or a hybrid heat pump.

Today's standard solution, cooling with CO₂ without using the surplus heat, and heating with electricity and district heating formed the foundation for comparison and potential for improvement.

