

Wood Chips Replace Fossil Fuels (Switzerland)



The chimney above the underground wood chip heating plant. The heating plant provides the school building (red building in background) and other buildings with heat from renewable energy.

The wood chips heating plant and its associated heat distribution system provides schools, industrial enterprises, hotels and multiple- and single-family homes in the municipality of Losone in Ticino with heat from renewable energy to heat rooms and for sanitary purposes throughout the year. The wood chips heating plant, which is operated using local biomass, replaces existing heating systems based on fossil fuel and will thus lead to a reduction in CO₂ emissions.

The aim of the project is to construct a wood chips heating plant with a total output of 3,460 kW, consisting of two boilers of 1,110 kW and 2,350 kW respectively. A heating oil boiler with an output of 3,500 kW serves as an emergency reserve. This will be used if a defect occurs in the wood chips boilers or if maintenance work needs to be done on them. The result is that customers can be guaranteed constant heat throughout the year. The project is being carried out in line with the quality guidelines of Holzenergie Schweiz.

The heat distribution system covers part of the municipality of Losone in Ticino. The plan is to connect around 70 properties to the district heating system of almost three kilometres and to deliver 10,300 MWh of heat to customers annually.

To produce the heat, around 18,000 m³ of wood chips per year will be purchased from a consortium consisting of various wood suppliers from the canton of Ticino. In comparison to the Swiss Plateau, the production of wood chips in Ticino is more expensive – due to the steep slopes and the inaccessibility of forest areas. This means that only a small portion of renewable wood is used economically. The use of wood chips from the region will support forestry in the canton of Ticino and therefore contribute to caring for forests.

Project type:

Biomass

Project location:

Losone, Switzerland

Project status:

In operation, credits available

Annual CO₂ reduction:

2,000 t

Situation without project

Heat from fossil fuel

Project standard

FOEN/SFOE

Impressions



The space above the underground heating plant is used as public space...



... for example, as a market square.

The project is being realised by Energie Rinnovabili Losone SA (ERL), which is represented by the political municipality of Losone, the Losone citizens' community and the energy provider Società Elettrica Sopracenerina. The support from myclimate enables the project to offer its customers a price for heating that is competitive with the prices for heat from fossil fuel.

This project contributes to 2 SDGs:



CO₂-neutral heat is produced annually from 12,500 m³ of Ticino wood.



2,000 t CO₂ are saved annually.



The newspaper Hochparterre selected the Losone heating plant as one of the 25 most attractive and purposeful plants of 2016.



The underground boiler is inspected by myclimate experts.