

A Group, located at the north of Italy, is a market leader for the production and trade of premium specialty cheeses in Italy and abroad; the competitive advantage of the Company is linked with the high quality of its products, its leading edge technology and certifications combined with a state of the art logistics system.

The Group, which has always been at the forefront of environmental matters, has in operation a PV system on the roof of its production facility, which is generating an average amount of electricity equal to 650,000 KWh per year (enabling a reduction of CO2 emissions by approximately 390,000 kg). In addition, a heat recovery system has been put in place to recycle the heat that is normally lost during production or from process wastewater, obtaining an approximate annual saving of 70,000 m³ of natural gas, equivalent to less 140,000 kg CO₂ emitted into the environment.

Currently, ISO50001 is not yet adopted by the Group.



Steam audit team

Steam system

Steam is produced by 3 boilers, each with a capacity equal to about 3 ton/h, however, usually the three boilers are not operated at the same time. According to daily steam and hot water demands from the producing process, typically two of three boilers are simultaneously in operation during the day.

The boilers use natural gas as fuel. During the production hours of Grana Padano, the steam pressure is equal to 9 bar, while in the remaining daily working time, the pressure is at a range from 4 to 7 bar.

Steam system problems identified

The steam system is in a good overall condition, however, there are still some potential improvement measures identified:

- the insulation on the condensate recovery pipes
- the rate of condensate recovery

Proposed energy saving measure(s), investments, and expected results (in figures)

Three energy saving measures have been proposed at the end of the steam audit:

1. improvement of the insulation on the condensate recovery pipes
2. increment of the rate of condensate recovery (60%)
3. installation of a CHP system (15 hour per day)

The estimated energy savings and the investments needed are given in the table.

n. proposed EE measure	energy saving (kWh/year)	economic saving (€/year)
1	19.100	700
2	317.200	10.490
3	-	234.430

Achieved and/or expected Non Energy Benefits (NEBs) as result of implemented and/or proposed measures and investments involved

NEBs will be achievable through the implementation of the proposed measures:

- CO₂: Emission reduction;
- Reduction of the insulation maintenance cost
- enhanced productivity achieved by reliability improvement linked with reduction of unscheduled down-time;
- employees safety.

Involvement of internal stakeholders

Although in the present conditions the company’s top management gives its priority to quality of the product, the steam audit team was able to convince the company top management to take part in Steam-Up pilot activity.

A Group S.p.A.
<http:// - - ->

25014 Castenedolo
Italy

Dairy products, Food industry

250 employees

Total (estimated) Investment

€ 731,200

Total (Estimated) Savings

> € 245.620/year

> 336.300 kWh/year

Non-Energy Benefits

Reduction of the insulation maintenance cost

Lower CO₂ emission

Employees’ safety

