



The RECP methodology

Resource Efficient and Cleaner Production (RECP) is the integrated and continuous application of preventive environmental strategies to **processes, products, and services** to increase efficiency and reduce risks to humans and the environment. RECP is all about producing with fewer resources while minimizing environmental impacts and increasing overall productivity. For **Small and Medium-Sized Enterprises (SMEs)**, the RECP methodology is an effective means to lower production costs whilst improving the SMEs' competitive advantage and applying environmentally friendly practices. RECP is also an effective tool to introduce and promote Circular Economy principles among SMEs.

"TSIVIS KVELI" LTD - CHESSE PRODUCTION



Company overview

Key products: cheese

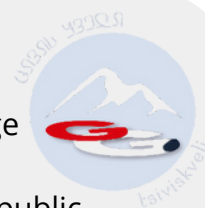
Location: Telavi region, Kuldghelauri village

No. of employees: 25

Main markets: Georgia, Poland, Czech Republic

Founding year: 2008

Certifications: ISO 9001, HACCP



"Tsivis Kvili" is a small-sized cheese company that processes both cow and buffalo milk. Currently, the production is focused on various types of smoked sulguni (cheese made according to old Georgian traditions), as well as Georgian "sulgunela" (mozzarella) made using Italian technology. Among the variety of its products, the company also offers standard types of cheese based on cow or buffalo milk. In the production process, it uses a steam boiler based on natural gas. The existing system used to produce steam consumes excessive energy and has thermal energy losses (via the condensed water), which is directly drained into the sewage system. Motivated to decrease these losses, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise.

BENEFITS FROM IMPLEMENTING RECP OPTIONS

1

Implementation of 2 RECP options (focused on energy efficiency)

2

Short payback period for the required investment (around 1 year)

3

Reduction of 8.3 tonnes of total CO₂-eq per year

4

Reduction of annual energy costs

Action implemented by:

The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which the following two were prioritized. The suggested RECP recommendations included medium and low-cost measures:

RECP Option 1. The return (recovery) of condensate to the boiler: Within the pasteurization process, the recovery of the steam generated from the boiler and its return to a closed circuit would lead to an annual decrease in maintenance costs and thermal energy savings of around 10%. At the same time, the lifetime of the boiler would also be extended.

RECP Option 2. Water heating via a hot serum: The measure suggests absorbing the thermal energy from the hot serum used in production, and using it to preheat the water needed for sanitary processes, before extraction (resulting also in decreased electricity consumption).

SAVING ACHIEVEMENTS

RECP measures

OPTION 1

The return (recovery) of condensate to the boiler

OPTION 2

Water heating via a hot serum

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	650	530	1.2
Option 2:	560	2,060	0.3

Resource savings

RECP OPTIONS	NG (KWH/YR)	ELECTRICITY (KWH/YR)
Option 1:	18,527	/
Option 2:	/	43,633

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	8.3

“ Our company had problems with its excessive electricity and natural gas consumption, which translated into high energy costs each year. Thanks to the UNIDO RECP Demonstration Project, we learned how to improve our technology and production processes. This aspect is crucial to keep maintaining the high quality of our products and to keep being competitive in the market. As well, we now feel inspired to use the RECP experience as a motivation to continue improving and implementing RECP measures in the near future, said the company director Mr Gocha Gagashvili. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Tsivis Kveli** joined the RECP training and assistance programme to be monitored under EU4Environment. Follow-up visits have also been conducted to check on the implementation of the recommended RECP options. EU4Environment helps the EU's Eastern Partnership countries preserve their natural capital and increase people's environmental well-being by supporting environment-related action, demonstrating and unlocking opportunities for greener growth, and setting mechanisms to better manage environmental risks and impacts. For more details, visit: www.eu4environment.org

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