



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.

"LAGODEKHAVTOGZA" LTD - ASPHALT & CONCRETE PRODUCTION



Company overview

Location: Lagodekhi district, Kabal village

Key products: asphalt, concrete

No. of employees: 22

Main markets: Georgia

Founding year: 2002

Since its establishment in 2002 and its recent renovation in 2019, "**Lagodekhavtogza**" has been producing around 168,000 tonnes of asphalt per year, mainly distributed within the local market. During the production processes, the factory uses about 10 units of electric motors, a 500 kW oil boiler, and a 5kW air compressor. The company's maximum production capacity is about 120 tonnes per hour. Accordingly, the main challenge for the company is to reduce the high energy costs (the costs of natural gas). Motivated to decrease energy costs and improve overall efficiency, 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 3 RECP options (focused on energy efficiency and reducing energy costs)

2

Short payback period (less than a year on average)

3

Reduction of energy consumption per tonne of product

4

Annual energy savings and the reduction of 511 tonnes of CO₂-eq per year

Action implemented by:

The project's approach

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

RECP Option 1. Construction of sand-gravel storage: The measure mainly consists of organizing the storage space for raw materials by covering and insulating it. The measure significantly eliminated excessive energy consumption during the heating of raw materials.

RECP Option 2. Partial substitution of natural gas with biomass: This measure entails the substitution of natural gas with an alternative fuel such as biomass. This would result in a reduction of costs, as well as a significant decrease in CO₂-eq emissions as it significantly eliminates the excessive energy consumption during cold and wet weather (when more energy is needed to heat the wet and inert raw materials).

RECP Option 3. The thermal insulation of the bitumen tank: Thermal insulation of the bitumen tank will help reduce energy consumption in the preheating of the bitumen.

SAVING ACHIEVEMENTS

RECP measures

OPTION 1	Construction of a sand-gravel storage
OPTION 2	Partial substitution of natural gas with biomass
OPTION 3	Thermal insulation of the bitumen tank

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	1,000	18,920	0.1
Option 2:	27,000	36,206	0.7
Option 3:	438	369	1.2

Resource savings

RECP OPTIONS	NG (KWH/YR)
Option 1:	712,411
Option 2:	3,607,184
Option 3:	13,789

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	511

“ The company was facing excessive natural gas consumption and high annual energy costs. Thanks to the RECP Demonstration Project, the company learned to systematically upgrade its technology and invest in awareness raising among staff members. This is particularly important in order to maintain the good quality of our products and to be competitive in the market. As we plan to improve production quality and increase capacity, the RECP project has inspired us with new ideas and approaches regarding the implementation of RECP measures in future, said the company director Mr Givi Tsikarishvili. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Lagodekhavtogza** 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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