



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.

"KASPI ELECTRO APARAT" LLC - STEEL PRODUCTION



Company overview

Location: Metekhi, Shida Qartli

Key products: steel items

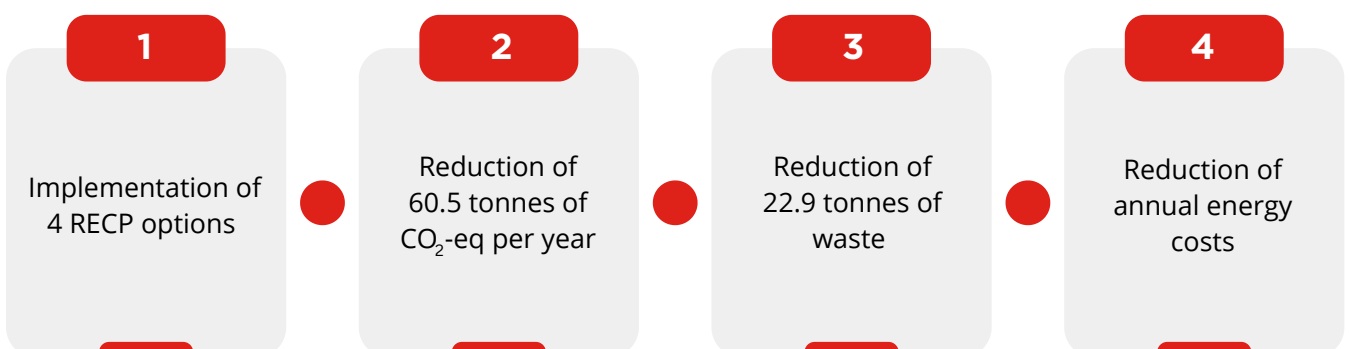
No. of employees: 18

Main markets: Georgia

Founding year: 2007

"Kaspi Electro Aparat" is a steel manufacturer from Metekhi. Its staff was actively involved in the activities related to the RECP Clubs, including the training course on business environmental profile, energy efficiency, water efficiency and wastewater minimization, materials efficiency and waste minimization, the responsible use of chemicals, hazardous waste, and means to reduce emissions. The course resulted in the development of the RECP Action Plan which included four RECP options. Due to the pandemic, it was challenging for the enterprise to allocate internal financial resources and find investments or appropriate loans to implement the RECP measures. Motivated to improve resource efficiency and reduce energy consumption, the company participated in the RECP Clubs programme under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise.

BENEFITS FROM IMPLEMENTING RECP OPTIONS



The project's approach

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

RECP Option 1. The installation of a photovoltaic (PV) system: the installation of PV system with a capacity of 100 kW would help fulfil the electricity needs and reduce the CO₂-eq emissions.

RECP Option 2. Replacing the old, inefficient motors with modern ones: this would help reduce energy loss.

RECP Option 3. The installation of a solar-based water heater: a solar heating system would save the energy required for heating water and reduce the amount of CO₂-eq emissions significantly.

RECP Option 4. Using a plasma-cutting machine to reduce metal scrap: a plasma-cutting machine would provide more accurate metal-cutting works, leading to a reduced quantity of metal scrap and leftovers, savings in terms of the needed raw materials, and a reduced generation of solid waste.

SAVING ACHIEVEMENTS

RECP measures

OPTION 1	The installation of a photovoltaic system
OPTION 2	Replacing the old, inefficient motors with modern ones
OPTION 3	The installation of a solar-based water heater
OPTION 4	Using a plasma-cutting machine to reduce metal scrap

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	90,000	14,025	6.4
Option 2:	20,000	10,727	1.9
Option 3:	3,000	1,362.2	2.2
Option 4:	50,000	22,448.5	2.2

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)	MATERIALS (TONNES/YR)
Option 1:	130,000	/
Option 2:	130,020	/
Option 3:	53,932	/
Option 4:	78,011.7	22.9

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)	WASTE (TONNES/YR)
Option 1:	23.8	/
Option 2:	18.2	/
Option 3:	7.6	/
Option 4:	10.9	22.9

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