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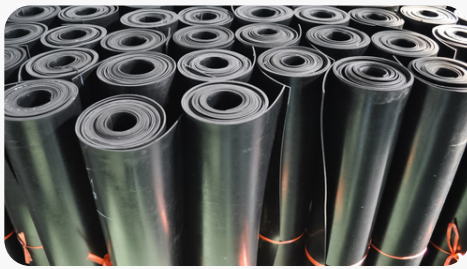


Advancing resource efficient and cleaner production in Azerbaijan

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.

ELASTIK LLC - RUBBER PRODUCTION



Company Overview

Location: Mingachevir

Key products: rubber and rubber-based products

No. of employees: 15

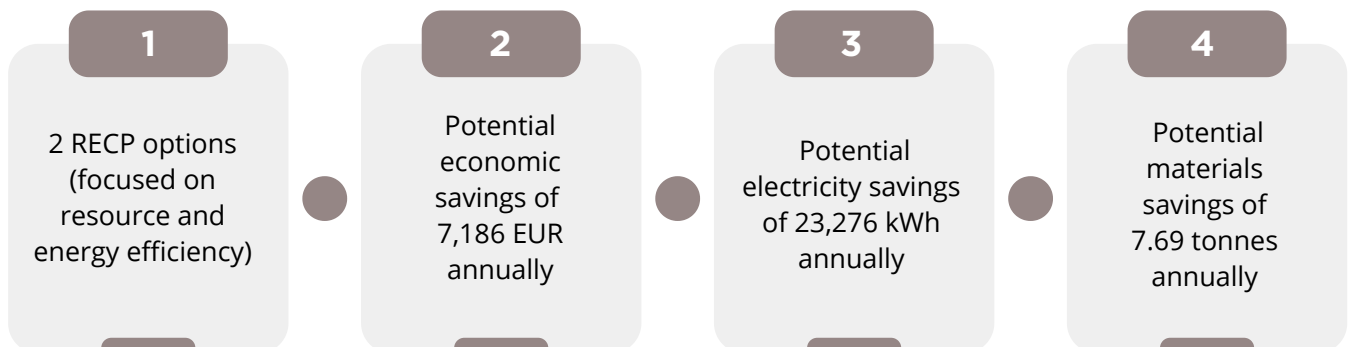
Main markets: Azerbaijan

Founding year: 2004

Certifications: GOST R52605-2006

“Elastik” LLC is engaged in rubber production, a process heavily reliant on raw materials supplied by the chemical and petrochemical industries. However, the high cost of these raw materials poses a significant challenge, especially since the added value generated by the rubber industry is less than 10%. To better control the consumption of raw materials and implement waste prevention techniques and technologies, the company joined the RECP Demonstration Project under EU4Environment (2019-2024). This publication details the company’s experience reported after the assessment exercise conducted in 2024.

BENEFITS



Action implemented by:



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



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The project approach

The RECP team evaluated the production site and identified several options, out of which two were prioritized by the company. The RECP assessment included an inventory of material flows related to the consumption of rubber compounds, rubbers, and ingredients for a specific production programme. It was discovered that waste was generated during the preparation of the rubber compound (at the vulcanization stage), and during the finishing of the final products. Despite several operations being done manually, the specific power consumption was 1,182.7 kWh per tonne of raw rubber, which was three times the generally accepted benchmark. Consequently, the process of mixing and plasticizing raw rubber was identified as energy-inefficient and one of the largest areas that could be improved:

RECP Option 1. Investing in a Banbury rubber mixer: The current process of mixing ingredients is time-consuming and inefficient. A proposed measure that aimed to speed up raw rubber production was to invest into a rubber mixer that would reduce the electricity consumed by the mixing rollers.

RECP Option 2. Investing in a pyrolysis plant: The company consumes approximately 7 tonnes of carbon black annually, with the main challenge being the reliance on foreign suppliers for this raw material. Establishing a pyrolysis plant to locally produce carbon black would make the company independent of external suppliers. Additionally, this project would address the environmental issue of rubber tire waste in the region by enabling recycling.

SAVING ACHIEVEMENTS

RECP measures

OPTION 1

Investing in a Banbury rubber mixer

OPTION 2

Investing in a pyrolysis plant

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Total:	59,200	7,186	9.75

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)
Total:	23,276

Total pollution reduction

RECP OPTIONS	MATERIALS (T/YR)	CO ₂ -EQ (T/YR)
Total:	7.695	5.06

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **NORM OJSC** joined the RECP Demonstration Project 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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