



Funded by  
the European Union



## -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 instrument to lower production costs and improve the SMEs' competitive advantage by applying environmentally friendly practices. RECP is also an effective tool to introduce and promote Circular Economy principles among SMEs.

## “GLORIN ENGINEERING” - LLC - WASTEWATER TREATMENT FACILITY -

### Company overview

**Address:** Bălți

**Key products:** wastewater collection and treatment plant

**No. of employees:** 135

**Main markets:** Moldova

**Founding year:** 2013



Based on a concession agreement made in 2013, “Glorin Engineering” has been responsible for the functioning of the entire drainage system and wastewater treatment station of the municipality of Bălți. The company owns the sewage network of Bălți and its suburbs (152.4 km in length), as well as its six pumping stations. Additionally, the company also owns the wastewater treatment plant in Strada Aerodromului 149 that has a daily productivity of 60,000 m<sup>3</sup>. The construction of the sewage treatment plant in Bălți started in 1964 and was completed in two stages. In 1970, the mechanical treatment block was enabled, followed by the biological wastewater treatment block in 1977. At the time of the assessment, the company operated at 40% to 45% of the nominal productivity. Motivated to achieve a more energy and resource-efficient production, the company joined the EaP GREEN programme (2013-2017). This publication shows the company’s experience reported during the EU4Environment programme, seven years after the programme ended.

### Benefits

- Recommendation of 4 RECP options (focused on energy efficiency)
- Reduction of electricity consumption of: 12%
- Energy savings that generated a reduction of 668 tonnes of CO<sub>2</sub>-eq/year

Action implemented by:



# The project's approach

As part of the technical assistance provided under EaP GREEN, the RECP assessment examined the production site and identified four options to improve the efficiency of the plant:

**RECP option 1. Control of the aeration supply scheme in accordance with load variations**

**RECP option 2. Sub-metering of electricity consumption, by individual users, to adjust equipment operations**

**RECP option 3. Use of frequency converters for the sludge recirculation pump of 110 kW**

**RECP option 4. Awareness raising campaign for sewage users**

## Saving achievements

### MAIN IMPLEMENTED ACTIONS

**Option 1:** Control of the aeration supply scheme in accordance with load variations

**Option 2:** Sub-metering of electricity consumption, by individual users, to adjust equipment operations

**Option 3:** Use of frequency converters for the sludge recirculation pump of 110 kW

**Option 4:** Awareness raising campaign for sewage users



### ECONOMIC KEY FIGURES

	Investment (Euro)	Saving (Euro/year)	PBP (years)
Option 1:	20,256	35,818	0.6
Option 2:	1,000	2,836	0.4
Option 3:	6,500	17,870	0.4
Option 4:	1,000	1,720	0.6
<b>Total:</b>	<b>28,756</b>	<b>58,244</b>	



### RESOURCE SAVINGS

	Electricity (kWh/year)	Materials (tonnes/year)
Option 1:	438,000	-
Option 2:	30,000	-
Option 3:	192,720	-
Option 4:	15,000	0.057
<b>Total:</b>	<b>675,720</b>	<b>0.057</b>

### TOTAL POLLUTION REDUCTION

CO<sub>2</sub>-eq  
(t/year)  
**Total: 668**



## Company insight

The management team is well aware of the limits of natural resources and the prudent attitude required to limit the inputs of energy/chemicals into the plant's operation, especially as this can simultaneously lead to important savings for the enterprise.

The wastewater treatment plant is active in seeking new opportunities to improve, and it actively engages on issues related to water and environmental risks and challenges.

Having set clear benchmarks for resource use has enhanced our performance for the forthcoming years. Additionally, our company will invest in new means to increase process control, reduce electricity and chemical over-consumption (which will also reduce operational costs), and gradually evolve in compliance with national and international standards.

The introduction of RECP has been part of the EU-funded programmes: **EaP GREEN** (2013-2017) and **EU4Environment Action** (2019-2024) executed by UNIDO. In this context, **Glorin Engineering** joined the RECP training and assistance programme under EaP GREEN, and was monitored under EU4Environment. Follow-up visits have also been conducted under EU4Environment, to check on the implemented RECP options after the EaP GREEN Programme ended. EU4Environment helps the 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](http://www.eu4environment.org)

This publication has been produced with the assistance of the European Union. Its contents are the sole responsibility of UNIDO and do not necessarily reflect the views of the European Union.

© – 2023 – UNIDO. All rights reserved. Licensed to the European Union under conditions.



**United Nations Industrial Development Organization**

Ms. Tatiana Chernyavskaya  
EU4Environment Project Manager

Tel: +43 1 26 0 26 5520

E-mail: [t.chernyavskaya@unido.org](mailto:t.chernyavskaya@unido.org)



**Organization for Entrepreneurship Development**

Bulevardul Ștefan cel Mare și Sfânt 134

Chișinău, Republica Moldova

Tel: +373 22 295 741

E-mail: [info@oda.md](mailto:info@oda.md)