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## Advancing resource efficient and cleaner production in Armenia

### -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 can effectively 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.

### "Arminashogh" LLC - Food production -

#### Company overview

**Address:** 40 Shahumyan, 28/4 building, Ararat City, 0602

**Key products:** cakes, pastries, and varieties of bread

**No. employees:** 126 (out of which 81 are women)

**Main markets:** Armenia

**Founding year:** 2009

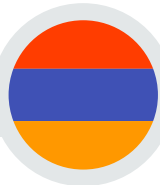


Since 2009, **"Arminashogh" LLC** has been providing its customers with a diverse selection of over 60 cakes, pastries, and breads. The extensive range of products is freshly delivered to grocery shops and supermarkets nationwide. Additionally, the company specialises in crafting individual cakes for special occasions like weddings or birthdays. Its mission is to maintain the highest quality standards by employing natural ingredients that guarantee an exceptional taste. The company sets itself apart through its unwavering commitment to high quality, authentic flavours, and maximum product safety. Through diligent and persistent efforts, it has risen to prominence among Armenian pastries and cake producers over several years, establishing a distinctive presence in shops and supermarkets across nearly all regions in Armenia. Motivated by a commitment to achieving a more resource and energy efficient production, the company actively participated in the RECP Demonstration Project under EaP GREEN (2013-2017). This publication presents the company's experience reported after the monitoring exercise conducted in 2021, four years after the programme ended.

#### Benefits

- **Implementation of 8 RECP options (2 partly implemented)**
- **Potential for reducing electricity consumption by 66,400 kWh/year (2.6%)**
- **Reduction of natural gas consumption by 3.8%**
- **Reduction of consumption of materials by 17.4 tonnes/year**
- **Potential reduction of 6.9 tonnes of CO<sub>2</sub>-eq per year**
- **Emphasis on improving resource and energy efficiency**

Action implemented by:



# The project's approach

The RECP assessment examined the production site and identified the following RECP options:

**RECP option 1. The collection of unsold cakes and pastries to further process their rusk and produce forage.** The company already purchased equipment worth 4,000 EUR and signed contracts with meat producers to distribute two tonnes of rusk per year. The expected economic benefits are estimated at 3,800 EUR per year.

**RECP option 2. Building entrance halls in shops.** This measure contributed to energy savings (heating and cooling) by up to 8-12%.

**RECP option 3. Replacing the old, inefficient, CFL bulbs and incandescent lamps with efficient LED ones.**

**RECP option 4. Installing a wall-mounted boiler that uses natural gas and includes a water circulation system (in the stores and factory) to ensure heating and the provision of hot tap water.**

**RECP option 5. Installing a system with 20 vacuum tubes and a 1,000 litres tank to supply hot water for the domestic and production needs.** This measure yields savings in natural gas of 350 cubic metres per year.

**RECP option 6. Installing a photovoltaic (PV) solar system of 2 kWp in the factory (with a reversible electricity meter).**

Partly implemented measures:

**RECP option 7. Installing protecting and thermal insulating films around the windows and entrances.**

**RECP option 8. Modernising the ventilation system in the company's largest production site (where bread and confectionary are made), and installing a recovery unit for the ventilation system.**

## Saving achievements

### MAIN IMPLEMENTED ACTIONS

Out of 8 proposed RECP options, the last two were partly implemented, whilst the first six were fully implemented by the company staff at the end of the monitoring report.

### ECONOMIC KEY FIGURES

	Investment (Euro)	Saving (Euro/year)	Overall payback period (years)
6 RECP options:	48,900	18,700	3.6

### RESOURCE SAVINGS

	Energy (kWh/year)	Materials (t/year)	CO <sub>2</sub> (t/year)
6 RECP options:	25,400	17.4	6.9



## Other opportunities

After consistently applying RECP measures, the company has made significant strides in product quality, occupational health and safety, as well as its overall environmental performance. The company is also interested to continue implementing the remaining two RECP measures.

By maintaining an adequate internal environment, upgrading energy consumption systems, and implementing the proposed resource efficiency measures, the company aims to expand its market presence and achieve new benefits both for its business, as well as in terms of social and environmental impacts. The benefits obtained through the application of RECP measures include the optimisation of production processes, the installation of new equipment for resource recycling, a reduction in energy use, the maximum use of renewable energy sources, improvements in working practices, and a decrease in the company's carbon footprint.

The introduction of RECP has been part of the EU-funded programmes: **EaP GREEN** (2013-2017) and **EU4Environment Action** (2019 - 2024) and executed by UNIDO. In this context, "Arminashogh" LLC 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 the implemented RECP options after the EaP GREEN Programme ended. EU4Environment helps the six EaP partner 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)

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