

Preparation of Keila Wastewater Treatment Plant Extension

Keila Vesi Ltd.

BSAP-2022-137

15.6.2026

Executive summary of the project

The project “Preparation of Keila Wastewater Treatment Plant Extension” was implemented by Keila Vesi Ltd. with support from the Baltic Sea Action Plan (BSAP) Fund administered by the Nordic Environment Finance Corporation (NEFCO).

The purpose of the project was to prepare the technical, environmental and financial basis for the future reconstruction and extension of the Keila Wastewater Treatment Plant (WWTP). The project addressed increasing wastewater flows, ageing treatment infrastructure, growing environmental requirements and the need to improve energy efficiency within wastewater treatment operations.

During project implementation, the regulatory and financing environment evolved significantly. The introduction of a national support programme for improving energy efficiency in wastewater treatment plants created new requirements for obtaining investment financing. Consequently, an Energy Audit became a mandatory prerequisite for applying for national investment support. In agreement with NEFCO, project activities were adjusted accordingly through an approved amendment process.

The final outputs of the project included:

- Preparation of a preliminary design for the reconstruction and extension of the Keila WWTP;
- Hydraulic and pollution load analyses;
- Preparation of a comprehensive Energy Audit;
- Preparation and submission of a national investment application;
- Securing a positive financing decision for implementation of the investment project;
- Project management and coordination activities.

The most important result of the project was the successful transition from a conceptual investment need to a technically mature and financially approved investment project.

As a direct outcome of the preparatory work financed through the BSAP Fund, the Estonian Environmental Investment Centre (EIC/KIK) approved the follow-up project “Improving the Energy Efficiency of the Keila Wastewater Treatment Plant” with:

- Total eligible project cost: EUR 2,143,547.70;
- Grant amount: EUR 1,071,773.85.

The approved investment project includes quantified environmental and energy targets:

- Annual electricity savings of 205 MWh;
- Reduction of specific electricity consumption by 0.78 kWh/kg BOD7 removed;

- Reduction of greenhouse gas emissions by 145.73 tCO₂e per year.

The project therefore achieved its principal objective by creating a technically justified, energy audited and externally financed investment package capable of delivering substantial environmental benefits to the Keila River catchment and ultimately the Baltic Sea.

The project also demonstrates a significant leverage effect of BSAP funding. A preparatory project with a total budget of EUR 91,550 enabled a technically mature investment project with eligible costs exceeding EUR 2.14 million. The BSAP Fund therefore played a critical role in transforming an identified environmental need into a financeable and implementable investment project.