

Salaspils is 11th biggest city in Latvia with over 18 000 residents and is located 18 km from Riga- capital city of Latvia. Salaspils city is famous for its Botanic Garden that is largest in Baltic states, hydropower plant and large size solar collector field for district heating. The city is steadily evolving and becoming more modernized.

District heating service in Salaspils city launched in 1970 when first boiler house was started to build. The amount of heat produced with boiler house was not enough to cover heat energy demand and till 1995 Salaspils was dependent of heat supply from Riga. At the same time number of connected users continuously grew and in 1995 was decided that city needs its own independent heat supplier. In 1996 “Salaspils Siltums” were established and took over district heating service.

The Heating Supply Company “Salaspils Siltums” supplies hot water and district heating to citizens, municipality institutions, local entrepreneurs, etc. But the majority of Companies consumers are citizens- 85% of all users. Annual heat demand is about 60 GWh and “Salaspils Siltums” is producing all of it by its own.

In 2010 “Salaspils Siltums” started extensive reconstruction, first step was reconstruction of heat pipes and introduction electronic data reading system, the main benefit of these actions was reduced relative heat losses from 16,62% in 2010 to 13,37% in 2014. Simultaneously in 2012 Company built 7 MW wood chip boiler house that later, in 2015, was supplemented with 1.68 MW flue gas condenser, till then all produced heat energy was made from fossil energy resources.

From 2010 till 2014 natural gas boiler house was modernized- boiler were replaced with new ones, with higher efficiency from almost 90% to 97%. Natural gas boiler house was re-enhanced in 2017 when another natural gas boiler was installed. Now they work as a balancing instrument and “plan B”, when other heat sources have been stopped for maintenance time or other reasons.

Use of solar energy “Salaspils Siltums” begun in 2017 when 87 solar panels were installed on the top of Companies roof and now, they are producing 23,5 MWh of electricity every year, which fully safeguards the needs of the administration.

In 2016 “Salaspils Siltums” decided to certify its energy management system in accordance with the requirements of LVS EN ISO 50001:2012 to ensure continuous improvement of its energy management system.

In 2019 “Salaspils Siltums” have implemented solar field, heat storage tank and 3 MW wood chip boiler house construction. Total area of solar collector field is 21 595 m<sup>2</sup> and produce ~ 11 000 MWh annually. Producing heat energy from solar energy is not possible without heat storage because demand and heat production times do not overlap. Stored energy is transferred to the heat pipe network when demand increases. Third major project component was 3MW wood chip boiler house, that is equipped with flue gas condenser and electrical filter. New boiler wood chip boiler house is very effective – 99% (with flue gas condenser). This project was supported by European Union Cohesion Fund (35% from all project costs).

To promote sustainable development and reduce dependency on fossil fuels, Salaspils Siltums has implemented a significant energy efficiency project by connecting 11 apartment buildings to the city's centralized district heating system. These buildings previously relied on individual gas boilers with an average efficiency of only 60%, resulting in higher energy consumption, increased emissions, and higher maintenance costs for residents.

By switching to Salaspils Siltums' modern system—operating with over 90% overall efficiency—the buildings now receive heat more reliably, efficiently, and sustainably. The total annual heat demand of the connected buildings is 2430.08 MWh, which is now supplied mostly from renewable sources.

This project was fully financed by Salaspils Siltums, including the construction of 1 km of new district heating pipeline, demonstrating the company's strong commitment to long-term investments in climate-friendly urban infrastructure.

Thanks to the transition, residents now benefit from a district heating system powered by 95% renewable energy, mainly solar thermal and biomass. Compared to outdated local gas boilers, the centralized solution offers significantly higher efficiency, lower emissions, and greater energy security.

This initiative marks another important step in Salaspils' journey toward a climate-neutral and modern urban environment. It serves as a model for other municipalities in Latvia and across Europe looking to achieve a sustainable, scalable energy transition.