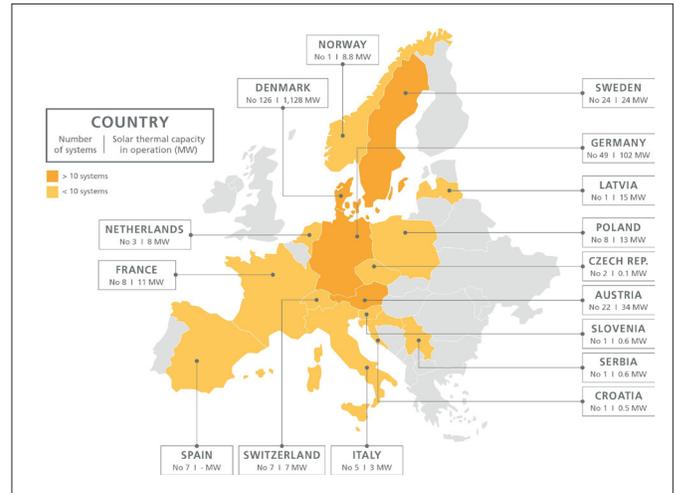


Task 68

Solar District Heating Info Package for Cities and Towns

Among the 6,000 cities and towns in Europe with district heating, 266 already feed solar heat into their grid. For municipalities that plan to expand and develop new district heating systems to reduce their dependency on fossil fuels, IEA SHC Task 68: Efficient Solar District Heating (SDH) Systems has developed a solar district heating info package. The 45-page presentation answers the key questions that city officers will have when considering solar heat as part of their energy infrastructure planning. Together with Euroheat & Power and the Covenant of Mayors, SHC Task 68 experts organized three webinars, which shed light on SDH from different angles.

“The Signatories of the Covenant of Mayors learned from the SHC Task 68 info package how some cities have successfully implemented solar district heating projects and received tips and tricks for the planning and the tendering process,” said Julien Joubert, Project Manager from the Covenant of Mayors Office. They also heard about the hands-on project development experiences of utility companies and municipalities.



Showcase Project

The Latvian utility company Salaspils Siltums has undergone a modernization process over the last 10 years to become almost completely independent from natural gas. The Managing Director, Ina Berzina-Veita, shared her experiences during webinars one and two as noted.

Latvian utility company is cutting down on fossil fuel use



INA BERZINA-VEITA
Managing Director at
Salaspils Siltums

“We’ve been working on this project since we visited Denmark in 2016 to attend a conference on district heating. The aim is to reduce our carbon footprint and become less reliant on fossil fuels.”



Photo: Salaspils Siltums

One showcase project is the 15 MW solar district heating plant with 1,720 collectors near Riga in Latvia. “We had a very old infrastructure from the former Soviet times back in 2011, and we were fully dependent on fossil fuels,” describing the starting point. “We first increased the efficiency of the system – so you have to check everything from the client to the heat production,” notes Berzina-Veita. The next steps were the purchase of a 7 MW wood chip boiler in 2012, followed by a flue gas condenser in 2015, and a 15 MW solar district heating plant in 2019 with a total active collector area of 21,762 m².

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You need a lot of courage to follow this path, confirmed Berzina-Veita. What convinced her was the fact that Latvia, despite its northern location, has better solar radiation than many sites in Denmark, where more than 120 cities and municipalities are using solar district heating.

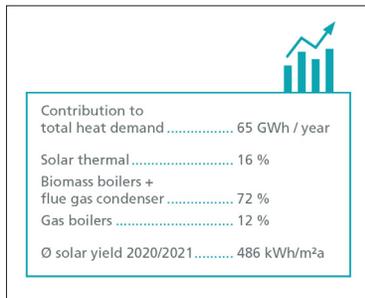
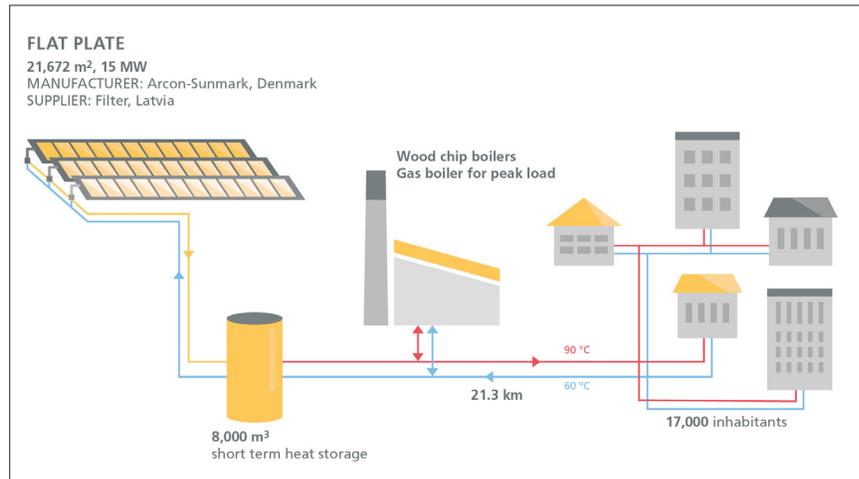
The solar heat plant in Salaspils contributed 16% in the first years after commissioning. Since the sun covers 20% of the annual heat demand in the local district heating grid. The reason for the improvement lies in the optimized usage of the multi-day storage volume of 8,000 m³. If the weather forecast is good and sunny days are expected, the storage is emptied and reserved for the solar energy to come. If rainy weather is forecasted, the storage is charged using the biomass boiler, allowing a longer boiler run without interruption.

The good news for the customers – clients of Salaspils Siltums profit from lower heat costs compared to many other district heating utilities in Latvia, so more and more clients want to connect, says Berzina-Veita. As President of the Latvian District Heating Association, she has been campaigning for the spread of solar heating in her country for eight years, and this work is slowly paying off, with a few small SDH pilot plants now up and running.

The Solar District Heating Info Package plus the recordings of the three webinars are available online:

1. [The Rise of Solar District Heating](#) – webinar organized by Euroheat & Power on March 28, 2023:
2. [Solar heating: how can cities decarbonize their district heating?](#) – Session #1 organized by Covenant of Mayors on May 17, 2023 – report and recording
3. [Solar heating: how can cities decarbonize their district heating?](#) – Session #2 organized by Covenant of Mayors on June 5, 2023-z

If you have questions about the SHC Task 68 work, you can email the Task Manager, Viktor Unterberger, viktor.unterberger@best-research.eu.



▲ Schematic and key figures for the district heating plant in Salaspils, Latvia. (Source: IEA SHC Task 68)