

Heating and cooling in Europe How Poland plans to modernize the sector by 2050 and fulfil the Paris Agreement?

The inevitable modernization of the heating and cooling sector will have a major impact on achieving the Paris' targets. Poland is determined to fulfil its obligations under the Paris Agreement, but also to substantially improve its air quality caused by many households burning low quality coal and some of them even waste in furnaces. Currently, district heating is supplying 50% of Poland's consumer heat. Three quarters of this heat is supplied by coal-fired CHP and heat plants. Furthermore, the impact of the EU ETS reform, but also the implementation of BAT conclusions may increase energy poverty.

Therefore, Poland plans to switch heat supply in its district heating networks to a mix of

- low temperature heat for base load making use of (i) large-scale solar thermal, (ii) power-to-heat technologies converting non-dispatchable RES power into heat, (iii) heat pumps using waste heat,
- large-scale heat storage,
- biomass or gas fired CHP for peak load, covering both heat supply and decentralized power distribution.

With this technology mix switching high-temperature heat networks to low-temperature heat networks is inevitable. Furthermore, Poland recognizes the competitiveness of solar technologies and heat pumps for power and heat supply with individual households in suburbs and smaller municipalities. Parallel thermal modernization of the existing buildings and further implementation of energy management systems, modernization of heat networks and heat supply devices are also provided. Energy clusters in municipalities are an appropriate solution to coordinate this transition.

The National Fund for Environmental Protection and Water Management is determined to financially support above described transition. The Union of Entrepreneurs and Enterprises ZPP is determined to initiate and accompany necessary legal changes to make this transition feasible for the benefit of both, individuals and industrial heat consumers. Last but not least, Poland's innovative manufacturing and IT industry is well positioned to make this transition happen for the benefit of Poland and Europe.

