



The heating plant



Conveyor for transport of wood chips



Gazprom, a gas and oil giant, required a facility for switching to clean energy

# AN ENTIRE RUSSIAN CITY REMOTELY HEATED BY UNICONFORT BOILERS

**THE RUSSIAN GIANT OF FOSSIL FUELS** Gazprom is a Russian semi-state company that controls the rich oil and gas fields of Siberia. Fossil fuels are also used by the company to heat entire cities using a district heating network. This system was very popular in the former Soviet Union. But despite the wide availability of deposits, these fuels do not reach all corners of the vast country. It may be uneconomical to build the network because of large distances and extreme climatic conditions.

**A CITY TO BE HEATED** Located to the north of St. Petersburg, Severoonezhsk is not served by a pipeline and for several months of the year it is completely cut off from freight transport networks. For decades, all public buildings have been connected to district heating network; until recently, it was fueled by a very old boiler burning BTZ, a highly polluting fuel.

**THE INTERVENTION OF UNICONFORT** Uniconfort managed to fulfill the heating requirements of the city and successfully dealt with the problems in supply of fossil fuels - by making **biomass available on-site at no additional cost**. Indeed, the city is surrounded by thousands of acres of woods, and timber industry is flourishing in the area. The numerous active mills discharge their processing wastes at a distance of no more than 10 kilometers in radius from the city. Such waste has produced hundreds of mounds - up to 500 meters high, over the years.

**THE HEATING PLANT** In 18 months, Uniconfort has designed and built a plant consisting of four 6 MWt boilers with a thermal yield of 5 million kcal/h at any moment.

**CUSTOMIZED SOLUTION** The boilers are supplied with waste from sawmill, and **wood chips with over 100%** moisture- such wood chips must literally be unfrozen before passing into combustion chambers. These boilers work at very low temperatures. Regarding maintenance, the Paduan company has trained technicians on site for ordinary interventions, while providing assistance teams of Italian experts for serious interventions.

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**CASEHISTORY** City of Severoonezhsk - Russia