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## **HEAT RECOVERY FROM MUNICIPAL WASTEWATER: EVALUATION AND PROPOSALS**

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### **Abstract**

Municipal wastewater, characterized by temperatures of 14-22°C in the inflow of Wastewater Treatment Plants and above 35-40°C in domestic outflows, represents a relevant thermal energy source. A feasibility study of the implementation of heat recovery from a specific sewer system should take into account several aspects: potential heat capacity (depending on wastewater temperature and flow rate in the considered area and climate conditions, and on the sewer characteristics), users that could be connected (particularly their distance from the heat source), and construction, operation, maintenance, distribution, heat use. Also, the costs related with environmental aspects should be considered. This work concerns a general evaluation of heat recovery from wastewater: technical, economic and environmental issues are discussed, on the grounds of the existing applications of this technical solution. The literature data allow affirming that this technology can be considered a rather consolidated possibility, and a strategy for its implementation is suggested, as well.

*Key words:* heat recovery, sewer, thermal energy, wastewater

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