

Best-Practice-projects for bioenergy utilization in urban environments



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Project name: Biomass District Heating Kočevje
Location: Kočevje, Slovenia
Bioenergy technology concerned: Wood biomass energy

Executive summary (1-2 sentences):

The local community Kočevje, in accordance with the energy plan of the town Kočevje, installed new biomass boilers and extended the existing district heating network. The project was financially supported by a subsidy from the government, a capital stake of GEF project and a soft loan from Eco-Funds.

Case description

Background:

The energy concept of the town Kočevje includes extended district heating network and fuel switching from fuel oil to wood biomass, by installing new wood boilers in place of old oil fuel boilers. The fuel switching to wood will decrease the CO₂ emission for 3.350 ton CO₂/year.

Description:

The communal company of Kočevje is responsible for the district heating system. The fuel oil boilers are old and need to be renewed. The energy plan (concept) of Kočevje proposed installation of new wood biomass boilers and extending the heating grid. The new wood biomass boilers and the grid extension were installed and in operation in October 2005. The consumers of heat are households, public buildings (schools, kindergartens, health centre, markets, and a hostel for students...) and industrial companies. The old fuel oil boilers are used for covering peak load and reserves.

Technical data (capacity, output, etc.):

The capacity of wood biomass boiler is 4,5 MW and the total capacity of the existing fuel oil boilers is 8 MW. The total length of the district heating grid is about 15 km from which the extended (new) grid is 3,6 km. Heat production is between 12 and 13 GWh/a and the consumption of wood biomass (wood chips, sawdust, bark, wood residues from wood manufacture industry and others) is estimated at 74000 m³ (13-14 GWh/a). The expected consumption of fuel oil is 400.000 litres/a on average.

Financial data (investment, subsidies, etc.):

Total investment in the wood boiler and extended grid is 2,6 million Euros. The founder's share of the local community Kočevje was 928 thousand Euros (own fund) and a credit from Eco Fund (soft loan) in the amount of 625 thousand Euros. The government supported the

project by a subsidy in the amount of 523 thousand Euros and a capital stake (by the Global Environment Facility – GEF) of 523 thousand Euros.

Which main problems had to be overcome?

Legal factors:

Socio-economic factors:

Economic: The economic problem is mainly in the heat price for consumers, because changing the heat price needs some time to be accepted by the local community. To avoid this problem it is good to start the changing of price on time.

Others:

Information flow (which information needed, sources, difficulties, etc.)

Good information about the available technologies, heat needs/consumption and the types of availability of wood biomass fuels on the location are needed for a successful project.

Lessons learned:

Good energy plan of a local community with clear conclusions is a good base for successful building and operation of biomass district heating systems.

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