NATUR VÅRDS VERKET

PELLET PLANT PROVIDED DALSJÖFORS WITH HEAT

With grants from the Local Investment Programme (LIP), the Borås municipal energy company built a pellet-fired local heating plant in Dalsjöfors. As a result, the small community gained access to district heating. This measure replaced 428 m³ of oil annually.

The Municipality of Borås energy company Borås energi och miljö installed a biomass-fired local heating plant in Dalsjöfors, around 15 kilometres east of Borås. A local district heating network was built up from the plant. The municipality was consequently able to replace oil-based heating to households, industrial firms and public buildings with biomass-based heating.

The project received grants from the Local Investment Programme (LIP). The first district heating was supplied in August 2001.

POSITIVE ENVIRONMENTAL AND ECONOMIC IMPACTS

- Carbon dioxide emissions decreased by 1 160 tonnes/year.
- Renewable energy replaced 428 m³ oil/year.
- Emissions of nitrogen oxides decreased by 799 kg/year.
- Emissions of sulphur decreased by 203 kg/year.

Photograph: Ulf Nilsson, MIM Bild AB

INFORMATION FACTS

UNDER INFORMATION FACTS THE SWEDISH EPA PRESENTS FACTS ABOUT DIFFERENT ISSUES

INFORMATION FACTS
BBEST PRACTICE EXAMPLES
ENERGY SWITCH
LIP – LOCAL INVESTMENT PROGRAMMES
MAY 2011
ISBN: 978-91-620-8588-9

IMPLEMENTATION

The measure consisted in building a facility that consists of two pellet-fired boilers of 540 kW and two oil-fired boilers of 400 kW that would be held in reserve and used during cold weather in the winter. A district heating network was also built in Dalsjöfors.

Because a local industrial firm chose not to join, part of the customer base was lost. A decision was therefore taken to build a smaller plant than originally planned.

Since the plant entered service, it has received around 50 study visits from Sweden, Denmark and Norway, some of which were by other heating producers.

As pellets caused greater particulate emissions than oil, dust emissions in Dalsjöfors increased by 1 296 kg/year. The district heating network in Dalsjöfors has now been connected to the Borås district heating network. The pellets come from various places in Sweden.

POTENTIAL AND FUTURE BENEFIT

When biomass fuels replace fossil fuels there are substantial positive climatic effects. Local heating systems can reduce air pollution locally and make it possible to use biomass fuels efficiently. The increased urbanisation globally is creating better conditions for expanding district heating and local heating.

WHY BEST PRACTICE

The boilers can be operated efficiently at low load. The plant is therefore able to use pellets almost throughout the year and rarely needs to use oil. Emissions of nitric oxide are unusually low. The plant has been a source of inspiration for other Swedish heating producers, who have studied both the boilers and the transport solutions around the plant. If the local heating plant had not existed, the residents would probably have chosen less advantageous heating alternatives when they converted from oil.

FOR FURTHER INFORMATION

Contact
Göran Carlsson, Borås energi och miljö
Telephone: +46 (0)33-35 82 10,
+46 (0)708-52 70 31
E-mail: goran.carlsson@borasenergimiljo.se

Contractors/providers
The boilers were supplied by the Austrian company KÖB Holzheizsysteme GmbH.
Borås energi och miljö was the project organiser and dealt with the project planning of district heating.

The project on the Internet:
www.borasenergimiljo.se.

Further information on Best Practice
www.swedishepa.se/bestpractice
www.naturvardsverket.se/mir

LIP Borås 1999
Action 4
Environmental investment: SEK 6.0m
Grant: SEK 1.5m

Swedish EPA SE-106 48 Stockholm. Visiting address: Stockholm - Valhallavägen 195, Östersund - Forskarens väg 5 hus Ub, Kiruna - Kaserngatan 14. Tel: +46 8-698 10 00, fax: +46 8-20 29 25, e-mail: registrator@naturvardsverket.se Internet: www.swedishepa.se **Orders** Ordertel: +46 8-505 933 40, orderfax: +46 8-505 933 99, e-mail: natur@cm.se Address: CM Gruppen, Box 110 93, SE-161 11 Bromma. Internet: www.swedishepa.se