

## DISTRICT HEATING BECAME BIG IN BORGHOLM

**To eliminate its dependence on oil, Borgholm installed two new woodchip-fired boilers and built a district heating network over the period 2000–2003. The LIP grant made it possible to build a district heating network in a municipality as small as Borgholm, which today consumes virtually no oil for its heating.**

To replace heating by domestic heating oil, the municipal energy company Borgholm Energi (BEAB) built a district heating network in Borgholm based on two woodchip-fired boilers at the healthcare centre. The company also built a woodchip-fired boiler in the northern part of the municipality. The project removed many older oil-fired boilers with poor combustion and efficiency.

The project was partially funded by grants from the Local Investment Programme (LIP). The grant was made in 2000 and the project was completed in 2003.

### POSITIVE ENVIRONMENTAL AND ECONOMIC IMPACTS

- Use of domestic heating oil decreased by 1 370 m<sup>3</sup>/år, to virtually zero
- Carbon dioxide emissions decreased by 3 700 tonnes/year.
- Renewable energy replaced 1 000 MWh/year of electricity.
- The customers today have cheaper heating than previously.
- New jobs both in district heating in Borgholm and in woodchip handling.
- Cleaner air.

Photograph: Niclas Beermann



## IMPLEMENTATION

BEAB took over a boiler that belonged to the healthcare centre from the county council. The LIP grant enabled the company to install another boiler in the existing boiler plant.

BEAB also built a district heating network, which today covers almost the entire urban area of Borgholm. The company owns the heat exchangers at a number of customers, which makes operation simple for the customers.

A new boiler was also installed in Löttorp which supplied district heating to a number of properties in Löttorp. Since the project, district heating has been expanded into a proper network in Löttorp, and a new woodchip-fired boiler has been installed in the old dairy in Borgholm itself.

Because there are boilers of differing size, it is also possible to use biomass fuel during the summer when the load is low. The municipality therefore only needs to fire with oil during service stoppages, which means that oil consumption is close to zero. The woodchips come from Öland and Småland. The ash is dealt with by Econova.

## POTENTIAL AND FUTURE BENEFIT

Biomass fuels replacing fossil fuels results in substantial positive climatic effects. District heating systems reduce air pollution locally, make it possible to utilise waste heat from other activities and produce combined heat and power. As urbanisation increases globally, the conditions for expanding district heating are becoming better.

## WHY BEST PRACTICE

This action marked the start of the district heating network in Borgholm. The action showed that it is possible to build district heating in a municipality as small as Borgholm, which is otherwise unusual. There are good prospects of the results of the project being disseminated to other small municipalities. The network today has a substantially greater number of connections than at the start, making the environmental effect significantly better than anticipated. The action was coordinated with other renewal of infrastructure, such as pipes for water, wastewater and electricity and street surfacing.

## FOR FURTHER INFORMATION

Contact  
Niclas Beermann, Head of Energy and Electricity Networks  
Borgholm Energi AB, +46 (0)485-883 20,  
niclas.beermann@borgholm.se.

Contractors/providers  
Järnforsen Energi System AB supplied the boilers.  
Svensk Rökgasenergi (SRE) installed the flue-gas condenser.

The project on the Internet:  
[www.borgholmenergi.se](http://www.borgholmenergi.se)

Further information on Best Practice  
[www.swedishepa.se/bestpractice](http://www.swedishepa.se/bestpractice)  
[www.naturvardsverket.se/mir](http://www.naturvardsverket.se/mir)

FACTS  
LIP Borgholm 2000  
Action 04  
Environmental investment: SEK 54.9m  
Grant: SEK 10.1m

