

Ljungsbro gets environmentally friendly heating by pipeline

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Tekniska Verken in Linköping has built a transit pipeline for district heating between Linköping's district heating system and the district heating network in Ljungsbro with grants from the Local Investment Programme (LIP). Ljungsbro was consequently able to replace the locally produced oil-fired heating with district heating from environmentally friendly biomass fuel and waste. Around 400 detached houses and other buildings have been able to connect to the long pipeline.

POSITIVE ENVIRONMENTAL AND ECONOMIC IMPACTS

- Emissions of nitrogen oxides decreased by 20.7 tonnes/year.
- Emissions of sulphur dioxide decreased by 13.3 tonnes/year.
- Carbon dioxide emissions decreased by 5 402 tonnes/year.
- Renewable energy replaced 3 000 MWh/year of electricity.
- Renewable energy replaced 2 000 m³/year of domestic heating oil.

The environmental effects have been calculated on the basis of the reduced use of oil in Ljungsbro.

Photograph: Göran Billesten



IMPLEMENTATION

Tekniska Verken had a 12 km long transit pipeline built for district heating between Tornby in Linköping and Cloettavallen in Ljungsbro. A pumping station for the district heating network was also built in Tornby.

As a result of early contacts and information to the landowners, the work proceeded smoothly. Many property owners have also been able to connect to the pipeline.

The action has been followed up through a computerised monitoring and statistics programme that continuously registered measured values for transferred energy to Ljungsbro.

New properties are being connected the whole time, with the result that the transfer of district heating from Linköping is increasing. The capacity of the pipeline is 40–45 GWh per year.

POTENTIAL AND FUTURE BENEFIT

Replacing fossil fuels with the use of biomass fuels is both financially advantageous and increases environmental benefit. District heating systems reduce air pollution locally and make it possible to utilise waste heat from other activities and to produce combined heat and power. Global urbanisation is improving the prospects for expanding district heating.

WHY BEST PRACTICE

The measure is a good example of there being great environmental gains in replacing local district heating produced by oil with more environmentally friendly biomass-based or waste-based district heating, even if it is transported through a transit pipeline. This results in more efficient electricity production, with both financial and environmental benefits. The project was one of the first in which such a long transit pipeline has been built.

FOR FURTHER INFORMATION

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Contractors/providers:
Tekniska Verken i Linköping AB together
with standard contractors.

The project on the Internet:
www.hultsfred.se

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

FACTS
LIP Linköping 1999
Action 13
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