NATUR VÅRDS VERKET
SWEDISH ENVIRONMENTAL PROTECTION AGENCY

INFORMATION FACTS
BEST PRACTICE EXAMPLES
ENERGY EFFICIENCY
LIP – LOCAL INVESTMENT PROGRAMMES
JANUARY 2011

Energy chase in Hallsberg homes

By taking various ventilation measures and installing heat pumps and control and regulating equipment, the Hallsberg public housing company Hallbo has reduced its energy costs by 30 per cent.

Halbo's energy efficiency improvement is a good example of how a municipality can save both energy and money by installing modern equipment for ventilation and heat recovery.

In 2000 Hallbo took several measures to lower its energy costs with support from the Local Investment Programme (LIP). Among other things, the ventilation systems were checked with regard to flows and heat recovery from exhaust air, the dimensional design and adjustment of the heating systems was dealt with and data monitoring and control of the buildings' technical systems were installed. The various measures have lowered energy costs by 30 per cent, significantly more than originally estimated.

POSITIVE ENVIRONMENTAL AND ECONOMIC IMPACTS

- Energy saving of 3 580 MWh/year.
- Reduced emissions of carbon dioxide (289 tonnes/year).
- Reduced emissions of nitrogen oxides (1 070 kg/year) and sulphur dioxide (678 kg/year).
- Lower operating costs.
- 25 hectares of buffer zones have been established.

Photograph: Hallbo

INFORMATION FACTS

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IMPLEMENTATION

Hallbo cooperated with Siemens in a Performance Contracting (PFC) concept, which means that the energy saving finances the actions taken. Ground-source heat pumps, larger radiators that can work with a lower district heating temperature, temperature-controlled exhaust-air fans and kitchen ventilation that contributes to heat recovery were installed under the project.

Follow-up and evaluation of the actions taken has been complicated by the fact that the housing stock has decreased. Central control of heating can create anxiety among the tenants, and it is therefore important to inform people how the system works.

POTENTIAL AND FUTURE BENEFIT

In most industrialised countries homes and buildings account for around 40 per cent of the consumption of energy, water (excluding agriculture) and other resources. They consequently also account for an equivalent proportion of the environmental problems associated with use. Measures that lower both energy costs and energy use are of global interest to private and public property owners.

WHY BEST PRACTICE

The project has led to both positive environmental effects with major energy savings and improved operating economics. The company is continuing to operate the system after the end of the LIP project and is continuously following up various measured values. An approach based on energy and the environment pervades the activity, and optimisation of operation is aimed for.

Information on the project is provided in the journal for property managers Fastighetsförvaltaren (No 3, 2004). Information about the PFC concept can be found on the Siemens website (www.siemens.se/pfc).

FOR FURTHER INFORMATION

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The project on the Internet:
www.siemens.se/sbt/BuildingAutomation_HVAC/tjn/tjn_pfc.asp

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

FACTS

LIP Hallsberg 2000
Action No 1
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