

Improving Energy Efficiency of HVAC Systems - Helsinki, Finland

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| Keywords | Energy Efficiency, HVAC Systems, Schools | |
| Pictures |  <p data-bbox="341 658 842 674">Photo copyright City of Helsinki Image bank/Anneli Hongisto</p> |  |
| Objectives | To improve energy performance of ventilation systems | |
| Description | <p data-bbox="341 748 1465 927">In Konala Comprehensive School, the gymnasium was considered a high energy consumer. Capable of holding 400 people, the heating, ventilation and air conditioning (HVAC) system was designed to cope with this number. There was no way of controlling the system, should there be fewer occupants in the gym. We ordered a company (ABB) to investigate energy use at the school and to come up with a solution to improve both efficiency and the school environment (pilot project).</p> <p data-bbox="341 943 1465 1059">The solution was using HVAC drives and motors in upgrading the total energy efficiency of the school's HVAC systems and improving indoor air quality. CO₂ and moisture level sensors were installed to feedback data to the drives and control their speed depending on the level of these readings.</p> | |
| Results / Achievements | <p data-bbox="341 1084 1465 1238">A 14% reduction in the total annual electricity consumption and a 16% fall in the total annual heating consumption. Following the installation of drives for HVAC, the electricity consumption for the first 10 months of 2007 for the entire school was 116,450 kWh compared to 133,989 kWh in 2006. The energy used for heating fell from 361,110 kWh in 2006 to 303,721 kWh in 2007.</p> | |
| Friendly advice for replication | Easy to replicate. | |
| Online information | - | |
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