

Hotel halved CO₂ emissions and cut energy use by 38 percent

Historic Stockholm hotel on path to climate neutrality



Energy Saving Performance Contract guarantees annual savings that fund technical equipment upgrades.

■ Maximize Efficiency! without compromising comfort

The Elite Hotel Stockholm Plaza is a tribute to its owners' commitment to conservation. Not only did Elite Hotels of Sweden save the historic 1884 building from demolition, the company is also saving energy and protecting the climate by maximizing the hotel's efficiency. In 2003, Elite Hotels turned to Siemens and its proven Energy Savings Performance Contracting to fund modernization of building technology equipment and automation in order to reduce energy use and carbon emissions at the Hotel Stockholm Plaza. Siemens guaranteed annual energy savings over the 10-year contract period that would fund the investment of 304,281 euros in new equipment and technology.

Since 2003, the hotel has cut its CO₂ emissions in half and reduced its total energy consumption by 38

percent. The hotel also paid off the investment in less than four years instead of 10. Importantly, all of the efficiency improvements have been done without compromising comfort. "As a four-star hotel, our guests' comfort is the most important thing to us. That's non-negotiable," explained Fredrik Hagelfors, the Hotel Stockholm Plaza's operations manager.

With Energy Savings Performance Contracting, Siemens helps customers bridge the gap between continuously rising energy costs and limited system engineering budgets. In more than 1,300 projects around the world, Siemens has helped customers save 15.9 TWh energy and reduce 9.1 million tons of CO₂ emissions each year. Maximize Efficiency! minimizes capital and operating expenditures and resource use while ensuring that buildings consistently perform at optimal levels.

"We have saved energy through a number of different measures, such as turning down the heating in the conference rooms when they are not used and turning off a cooling unit in the nightclub which used to be on for 24 hours a day," says Fredrik Hagelfors. "We are also more careful with the air conditioning and we make sure that it is only on when necessary."



38%
energy saving
per year

50% CO₂
reduction per year

Siemens sustainability expertise helps Elite Hotel Stockholm Plaza achieve environmental goals and maximize efficiency

■ Minimize capital and operating expenditures

Elite Hotels extensively restored and expanded the historic building, opening the new Elite Hotel Stockholm Plaza in 1984. In 2003, Siemens conducted an energy inventory and analyzed potential savings opportunities to develop an action plan that would meet Elite's efficiency and sustainability goals. The plan was designed to achieve fast results as well as continuous reductions in energy consumption and guaranteed annual energy savings over the 10-year contract period. Siemens continuously monitors the property from its energy center in Huddinge. Elite Hotels were very pleased with the results achieved at the Elite Hotel Stockholm Plaza and have extended the partnership with Siemens.

A new computerized and integrated control system makes it easy for hotel operations manager Hagelfors to monitor and optimize operations without compromising comfort. Elite also invested in new frequency controlled pumps, direct-driven fan units and demand-controlled ventila-

tion, which has reduced both electricity and heating consumption. An important improvement measure was adjusting the heating system to use less heat and distribute it more evenly.

Siemens also optimized the formerly erratic hot water supply to radiators, which had caused much of the energy loss. Demand-controlled ventilation also reduces energy consumption when rooms are not in use. "We have saved energy by turning down heating in the conference rooms when they are not used and turning off the nightclub's cooling unit, which used to be on for 24 hours a day," said Hagelfors.

After only four years into its efficiency program, Elite saved enough energy to pay for its 304,000-euro investment in efficiency improvements. In addition, we were able to reduce the energy consumption from 3,100 MWh to 1,200 MWh. Thanks to a close partnership, Siemens identified further improvement potential and implemented a second project, where the MWh were even reduced

to 500. In the fourth year, the project started to provide returns that for 2007 and 2008 totaled 101,777 euros. Thanks to the energy project, the hotel has also halved its CO₂ emissions.

Highlights

- Customized 304,281 euro modernization of building technology equipment and automation technology without the need to invest capital
- Reduction of 38 percent in total consumption of heating, cooling, electricity and water
- Energy Services with monitoring and controlling to ensure the guaranteed energy savings
- Contribution to climate protection through reduction of 336 tons of polluting CO₂ emissions, or 50 percent
- Shortened 10-year amortization period by six years

The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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