

Energy-Saving Partnership saves Berlin 5.3m euro annually

CO₂ emissions reduced by 25 percent each year



Energy-Saving Performance Contracts guarantee annual savings that fund technical equipment upgrades.

■ **Maximize Efficiency!**
without compromising comfort

In 1995, the state of Berlin enacted a new energy concept to reduce the carbon emissions and energy costs of its public buildings. The concept was based on transferring energy management of state-owned properties to a partner, who taps private capital to self-finance the modernization of building infrastructure necessary to cut energy use and CO₂ emissions. In return, the partner guarantees annual energy cost savings for the state. The success of the “Energy-Saving Partnership Berlin” has made it a model for other communities.

Berlin teamed up with Siemens as one of its partners. Since 1996, Siemens has modernized 164 public buildings. Over the 12-year contract period, Siemens guaranteed annual energy savings that would fund payback of the initial 28.5 million euro investment in new equipment and technology needed to improve the energy efficiency of these buildings.

Prior to the Siemens projects, energy costs for the 164 facilities were 17.2 million euro each year. After Siemens implemented facility improvement measures, costs were down to 11.9 million euro each year, a savings of 5.3 million euro annually. Not only is Berlin saving energy and protecting the climate by maximizing the efficiency of these buildings, it is also making them more comfortable for their occupants.

Siemens Energy Saving Performance Contracting helps customers bridge the gap between continuously rising energy costs and limited budgets. In projects around the world, Siemens has helped customers save 16.2 TWh energy and reduce 9.2 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.



31%
energy saving
per year

25% CO₂
reduction per year



Energy-Saving Partnership Berlin lowered CO₂ emissions and energy costs at 164 public buildings

■ **Minimize capital and operating expenditures**

The state of Berlin wanted to achieve important environmental and financial goals by maximizing the efficiency of 164 state-owned buildings. Berlin partnered with Siemens in 1996 to modernize the infrastructure of these buildings through the new "Energy-Saving Partnership Berlin." Under an Energy Savings Performance Contract, Siemens planned and installed new technology that optimized building systems at all of the facilities, minimizing their environmental impact. The 164 buildings included:

- Schools, kindergartens
- Day-care centers
- Sports facilities: gyms, indoor swimming pools
- JVA Tegel correctional facility
- Universities: Technical University of Berlin, Berlin University of the Arts

Facility improvement measures implemented by Siemens included:

- New energy management systems
- Regulation of heat generation/distribution

- Upgraded air conditioning and ventilation technology
- Replacement of lighting systems
- New water technology
- New control, monitoring and maintenance technology

The initial 28.5 million euro investment in new technology was funded by Siemens, to be paid back in installments by Berlin from the guaranteed energy savings of 5.3 million euro per year. No additional outlay was necessary from the state authority. But the savings had an immediate positive impact on Berlin's budget – 1.14 million euro was released for other projects.

Carbon emissions were also reduced significantly and immediately. This project helped Berlin reduce CO₂ emissions by 25 percent a year. This translated into 29,000 tons annually, about 348,000 tons over the contract period.

As with the Berlin project, Siemens helps customers achieve ambitious objectives for climate protection and energy cost reduction under a tight budget.

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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Highlights

- Customized 28.5 million euro modernization of building technology equipment and automation technology without the need to invest capital
- Annual energy cost savings of 5.3 million euro or 31 percent
- Energy Services with monitoring and controlling to ensure the guaranteed energy savings
- Contribution to climate protection through reduction of 348,000 tons of polluting CO₂ emissions, or 25 percent
- Total 63.6 million euro savings over 12-year contract