

World's First Net Zero Energy City Hotel

Hotels the world over are faced with a balancing act between their business goals – such as enhanced brand equity or profitability improvements – the increasing expectations of their target customers and changing environmental policies. As a result, the timeframe of technology investments is often weighted against these criteria. With its sustainability initiatives, backed by systems from Siemens, Boutiquehotel Stadthalle is achieving all of these goals. By becoming the world's first net zero energy city hotel, it also demonstrates the vital role that sustainability now plays in the hospitality sector, and the importance given to the topic by cities themselves as they compete to attract investors, corporate visitors and tourists.

Boutique hotel Stadthalle is a three star (3 star+) eco hotel located in the 15th district of Vienna (between Westbahnhof and Stadthalle). Originally offering 42 rooms in a thoughtfully renovated period town house, an extension to the hotel with the construction of a brand new building saw the addition of a further 38 rooms in 2009.

Net zero energy in 12 months

Ecology was already a prime focus before the extension work, illustrated by a number of initiatives, including the use of rainwater from large cisterns located in the basement to tend the gardens and flush the WC's, alongside signage that generates its own electricity. But the addition of the new building took this sustainability focus to a new level, with the hotel becoming the world's first Net Zero Energy city hotel within 12 months of implementing new eco-friendly initiatives. The hotel now generates as much energy as it uses for its operation, through the use of renewable energy sources which include solar thermal and photovoltaic panels and ground water heat pumps. Three proposed wind turbines are also awaiting planning permission.

The Stadthalle boutique hotel was also the first in Vienna to receive the EU Ecolabel for tourism businesses who meet the strictest criteria by limiting their impact on the environment. Almost 20

percent of all EU Ecolabel licenses granted belong to the Tourist Accommodation Services category (1 of 26 categories), a clear sign that recognition for environmental initiatives is increasingly key to generating sustainable business in the Hospitality industry.

Michael Hartmann, Senior Vice President, Head Market Development Board Hospitality for Siemens, said –“Guest expectations are changing and energy is supposed to represent the single fastest-growing operating cost in the hospitality industry. So this is certainly one hotel that has recognized the opportunities to be more profitable in the long-run using energy efficient technology while also, in parallel, meeting the needs of more environmentally sensitive customers without compromising on guest comfort.”

Produce energy sustainably, then manage it intelligently

Heating and cooling are significant contributors to a hotel's energy load. At the Stadthalle boutique hotel, an in-house well supplies cooling energy and provides the heat pump system with groundwater. The power is generated by 94 square meters of photovoltaic panels and 130 square meters of solar thermal panels. This is used to heat the water for the hotel's general areas and its 80 rooms, as well as pre-heating fresh air through a ventilation system which achieves over 90 percent heat recovery.

Central to the operation is a Desigo building automation system from Siemens, which offers intelligent energy management. Through integration of all the system components and processes, Desigo ensures constant guest comfort and very efficient use of the hotel's energy. It features programmable automation controllers along the needed workflow patterns as well as flexible key performance indicators related to measurement and control technology that enable the monitoring and regulation of heating and ventilation based on actual demand or pre-defined schedules. The system also controls and monitors the concrete core activation, water heating, the solar panel system, buffer management and the geothermal heat pump. Desigo's web-based operation enables energy data and reports to be accessed at all times, increasing energy monitoring capability, as well as consumption transparency and usage efficiency.

Sustainable cities need sustainable hotels

For its environmental efforts, the Boutiquehotel Stadthalle was presented with the Environmental Award from the City of Vienna, which is part of Vienna's EcoBusinessPlan. The Plan, launched in 1998 by the Vienna City Administration, Municipal Department for Environmental Protection, aims to help businesses generate "green and clean" profits through ecological management practices that benefit both the environment and the enterprises. Amongst other goals, the EcoBusinessPlan aims to improve the competitive position of Viennese businesses through more efficient use of

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resources and to contribute to the sustainable development of the City of Vienna, thereby highlighting the emphasis put by cities worldwide on sustainability as an economic competitive advantage.

Michaela Reitterer is the hotel's director and owner. She recognises that green based guest engagement initiatives are also an important factor in achieving her hotel's impressive 83 percent annual occupancy rate. Ms. Reitterer comments –“Guests arriving by bicycle or by train receive 10 percent discount on the accommodation rate.” Future plans also include the addition of two charging points to enable guests to plug in and recharge their electric cars at no cost – using energy generated by the hotel of course.

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