

THE VANCOUVER, WA HILTON HOTEL:

PIONEERING THE ELEGANT SIDE OF EFFICIENCY

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The Hilton hotel and convention center in Vancouver, Washington has been making national headlines with its innovative sustainable design and operation since its completion in 2005. But as the first hotel in the world with both LEED® and Green Seal certification, many people question if the “green” angle is simply additional media publicity or whether Hilton hotels worldwide are turning over a new leaf.

The City of Vancouver, who owns the building site, and Hilton Hotels & Resorts viewed the idea for a green hotel as a way to both stimulate the local economy and send a message to the country. “This hotel has set a new standard for helping to minimize environmental impact while providing the very best in service and amenities to guests,” says Jeff Diskin, senior vice president of brand management for Hilton.

Buildings cannot pursue LEED certification after the construction is completed; the goal of sustainability needs to be the driving force from the very beginning of the project. The architect Fletcher Farr Ayotte partnered with a team from Glumac, an engineering company that focuses on green buildings that work, to create a hotel that is the new standard in energy efficient luxury. Both firms are have office locations in the surrounding Pacific Northwest area, and are dedicated to producing structures that function sustainably long after the media publicity fades away.

The Vancouver Hilton is one of those sustainable structures: efficient energy systems that deliver ideal comfort and air quality, masked by the sleek and elegant exterior of the building’s architecture. The site has 226 guest rooms, a 30,000 square foot conference center and a parking garage for guests. Hotels are faced with the difficult task of being a “home away from home” for countless travelers, which is probably why none had previously pursued LEED certification. Imagine how much water is used to wash 226 sets of sheets, or how much lighting and air conditioning is required for the conference rooms and hallways. Yet the Vancouver Hilton manages to exceed Washington state 2005 energy codes by 30%, due largely to its design team intent on reducing building waste, energy and water use and encouraging green living wherever possible.

Even during the building process, the hotel was exceptional. The Hilton is constructed using recycled steel and brick that can be broken down and reused, and the majority of building materials were purchased from local vendors within a radius of 500 miles. 75% of the total material waste generated during the construction phase was recycled.

Glumac provided the lighting for the Vancouver Hilton. The hotel ballroom features compact chandeliers made from recycled acrylic panels, and the entire building’s fluorescent lighting utilizes fixtures with reduced mercury content. All systems are equipped with occupant sensors that turn off the lighting when the room is empty, which saves considerable electricity. The Hilton focuses on minimizing the use of incandescent lighting, which are gradually being phased out of the market worldwide in favor of more efficient fixtures. While the US has promised to completely eradicate the use of incandescent lights by the year 2018, Brazil and Venezuela (and the Vancouver Hilton) began phasing them out as early as 2005.

HVAC systems represent approximately 80% of energy use in guest rooms in most large hotels because occupant comfort is the prime objective. Each Hilton guest room is outfitted with HVAC occupancy sensors and operable windows for superb air quality and circulation. The energy efficient heating and cooling systems uses variable air volume (VAV) systems, rather than constant air volume, to customize the fan speeds that distribute air depending on a room’s occupancy and distinct HVAC needs. The conference rooms have CO2 sensors that are interfaced with an outside air supply, counterbalancing the varying amount of CO2 circulating in the space produced by its occupants. The parking garage is similarly equipped with sensors to counteract the exhaust from cars.


The average hotel uses between 100 and 200 gallons of fresh water per day per occupied guest room, so dramatic reduction of water use is essential to creating an energy efficient lodging. The Vancouver Hilton’s landscaping features plants that are native to the Southwest Washington climate, thereby reducing the amount of water needed for irrigation by 50%. Rainwater is also collected for non-potable uses, and any excess water is directed into underground dry wells that naturally filter out any contaminants. The bathrooms also utilize low flow fixtures to further reduce the hotel’s water consumption.

People have become wary of the media “green washing” buildings that claim to be exceptionally energy efficient. Upon announcing its LEED certification in early 2007, the Vancouver Hilton received approximately \$30 million worth of press and public relations coverage as the first hotel in the United States to become certified. Many feared that LEED was the end result because it deals primarily with the

building and construction process rather than the functioning of the completed hotel. “Because the hotel had a head start with LEED certification, adopting the Green Seal policies seemed like the next logical step,” says hotel general manager Gerry Link, “We realized we had to then walk the talk and operate in a green manner.” Although many sustainable building features were already in place thanks to LEED, the Vancouver Hilton spent over a year collaborating with a Green Seal representative before receiving approval in 2008, making it the first hotel anywhere to be certified by two of the top credible independent organizations for environmentally friendly third party validation.

The most important part of movement towards building sustainability is the capacity to recognize that our actions affect not just ourselves, but a web that extends outwards to our family, friends and community. The hotel encourages pedestrian traffic, and is located downtown near the waterfront within walking distance of countless attractions. The building is set back on its foundation above the third floor, reducing the amount of shade the structure casts on Esther Short Park across the street. The parking garage has limited space for cars to promote employees to use other forms of transportation; there is even a charging station for electric cars! A composting program diverts over 200,000 pounds of natural material from landfills per year, and turns guests’ leftovers into valuable nutrients for the soil.

One of the major deterrents from creating new green buildings is that the energy efficient systems and equipment add a considerable extra cost to the initial building price. However, if the primary cost can be fronted by investors, the result will be an overall less expensive sustainable structure that saves money *and* energy. In fact, the Vancouver Hilton earned back the price of its green equipment in approximately two to three years, while simultaneously generating additional interest. “There’s a universe of potential business out there from people looking to patronize a greener facility,” says Hilton’s regional president Brad Hutton, “When the notion of going for that [goal] in Vancouver came up, it was up to Hilton to decide if we could draw more business to that hotel. The answer was absolutely ‘yes.’”

The Vancouver Hilton hotel and convention center is certainly a prime example of a green building that works. It proves that despite the large amounts of water, energy and non-renewable resources that traditionally have gone into constructing functioning hotels, a little bit of careful planning combined with the common goal of creating an efficient facility can produce wonderful things for the local economy, community and the environment. Gerry Link says, “Sustainability is the way of the future. All hotels need to be adjusting to that.” They certainly have a lot to live up to. 

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