

# **Sustainable Hotels, How the Industry is Moving Beyond Green**

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## **Abstract**

While many hotels and resorts are beginning to embrace the idea of sustainability by making themselves more eco-friendly, these measures are not drastic enough. New forms of sustainable hotels that promote greening efforts, but also demonstrate a commitment to the community and support social equality, need to be developed. This report outlines the history of the sustainable hotel movement in the United States, and provides a general overview of what defines these properties. The Lenox Hotel in Boston, and Bardessono in Napa Valley are used as illustrations of properties that have embraced these values. A critical analysis proves that the sustainable hotel movement is gaining momentum, and has the ability to influence a large number of individuals, as well as act as an example for sustainable development in general.

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**Introduction**

Defining sustainable is challenging. Historically, the term has been used to refer to operations that do not harm the environment. In more recent years, the concept has expanded to include practices that promote social, economic and environmental equality. For the purpose of my study, the term is used to refer to properties that conserve resources, limit waste, preserve the natural environment, protect local populations, and promote equality. Greening strategies alone do not identify what is sustainable. Rather, sustainability is a complex, multi-faceted effort to address social, economic and environmental concerns.

Almost every industry today is being challenged to transform itself. The new model that emphasizes limiting waste, recycling resources, and protecting local communities is gaining momentum as the need to reduce our dependence on foreign oil and strengthen local economies has become more apparent. For the purpose of my study, I decided to look at how the hotel industry, which occupies more than 5 billion square feet of space in the U.S. alone<sup>1</sup>, is taking steps to become more sustainable. I could have looked at a number of different sectors that are similarly

altering business models and agendas. However, I choose the hospitality industry for a variety of reasons.

### **Why the Hotel Industry?**

In terms of addressing environmental concerns, the hotel industry is a huge player in the creation of adverse environmental impacts. The EPA states that the hospitality industry is the nation's fifth-largest contributor to CO<sub>2</sub> emissions.<sup>2</sup> From the first stages of construction, and throughout daily operations, hotels are significantly affecting climate change and the industry continues to fuel the growth of landfills. In the average hotel room, one kilogram of waste per guest per night is produced.<sup>3</sup> Aside from physical waste, hotels also generate extensive energy and water use. The hotel sector spends \$3.7 billion a year on energy, according to the American Hotel & Lodging Association. The average guest uses between 170 and 440 liters of water per night during his or her stay. Typically, owners justify these facts through the claim that hotels are designed to be excessive. At a hotel, guests expect to be pampered, and it is a common misconception that luxury must include excess. In an industry this large, there are roughly 54,000 facilities in the U.S. alone<sup>4</sup>, small changes in resource use can have significant benefits. Recently, a number of hotels have started implementing strategies that limit waste without sacrificing the guest experience.

Another element that makes the hotel industry an important area to study when looking at sustainability is employees. Hotels are one of the largest employers in the country with some ten percent of the population working in the industry. When looking at the social and economic aspects of sustainability, the rights and treatment of workers are key elements to be considered. Due to the substantial amount of hotel employees, the industry is a prime area to focus on when considering the implications of employee treatment, sustainable education and fair wages. The hotel industry is ripe for change.

Besides being an area in desperate need of reform, the hotel model also is beneficial because it is a small, isolated case that can be used as a model for sustainability in larger communities. Also, a number of people are involved directly and indirectly with the industry. By educating guests, employees, and the community about hotel sustainability initiatives, the general cause will gain greater momentum.

There is no one size fits all approach to creating a sustainable hotel, but there are specific strategies that have had widespread success. These measures can be implemented to put the industry on a more sustainable path. Although the hospitality industry is beginning to incorporate green building strategies and conservation techniques, it is difficult to create rapid change without industry specific legislation. Furthermore, a plentitude of green certification agencies challenge a

unified approach to incorporating sustainability practices in the industry.

Large hotel chains, boutique properties, and economical lodging properties have started to employ a wide range of sustainable practices. Other hotels learn from the tactics successfully employed elsewhere. However, each property is unique; the strategies that work at one hotel are not necessarily going to be as beneficial at another property. Some generalizations about the most cost-effective strategies appear to be universal. For example, changing traditional lights to compact fluorescent versions has a relatively low upfront cost and can provide quick economic and environmental benefits. While this strategy works in almost any environment, other methods are place-specific. For hotels to adapt to a more sustainable model they must assess the property from an extremely technical level. An initial assessment of the property is the best way to determine a specific plan for a hotel based on the property's geography, consumption patterns and current operations.

### **The Triple Line of Sustainability**

In order for a hotel to be truly sustainable, it must not only be environmentally conscious, but it must also demonstrate a commitment to the local community. The triple line of sustainability is a term used to refer to a business as having an equal balance in addressing the environment, the economy and society. In terms of applying this

concept to the hotel industry, a property must implement strategies to reduce environmental impacts, strengthen the local community, and provide fair employment opportunities. In following this model, a hotel will have less operating expenses, be better for the environment, and strengthen the local community. For example, incorporating local sourcing into hotel protocol can enable local businesses to prosper while simultaneously reducing environmental costs associated with the transportation of goods involved in hotel operations. Thus far, many properties have started to embrace the environmental aspect of this approach, but many have failed to incorporate the equality element. The bottom line for the industry is to be profitable, and by incorporating all elements of sustainability into operating practices, a hotel will be economically, environmentally, and socially successful in the long run.

**Personal Involvement with Topic:**

Personally, I became engaged with the topic of sustainable lodging properties several years ago when I studied an eco-resort in Costa Rica. A few years later I had a similar experience when I traveled throughout Ecuador. For a number of years now, I have had the dream of creating my own self-sustainable resort. Throughout the process of my research, I have encountered many stories of hotels trying to limit their impact on the environment. I evaluated the mechanisms employed at various types of lodging properties to determine the environmental, economic and

social benefits of such innovations. In addition, I conducted a private study of 70 individuals to see how the general public viewed sustainable properties. Furthermore, the study illustrated what features define a sustainable property according to the average individual. While the majority of respondents agreed that low flow appliances (88.6%), energy efficient light bulbs (95.7%), and alternative energy sources (90%) define sustainable properties, only 18.6% of respondents thought that being located in an urban area is a feature of sustainable properties<sup>5</sup>. Contrary to this opinion, urban hotels are inherently more sustainable than self-sufficient properties in remote locations, as they have the capacity to be close to public transit and attractions, attract more guests and employ more workers. It seems that my dream of a carbon neutral, completely self-sufficient hotel may be less sustainable than I originally dreamed. However, many of the same strategies can be employed at both types of properties.

### **Background of the Sustainable Hotel Movement**

Traditionally, the concept of sustainability revolved around environmental practices: conserving limited resources, reducing pollution, and preserving natural ecosystems. In 1987, the Brundtland Commission of the United Nations declared in a report that, “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”<sup>6</sup>



This definition has prevailed, and is often cited to justify conservation actions. The Brundtland definition is quite popular and a number of different industries offer diverse interpretations of the Brundtland definition. When applying the term sustainability to the hotel industry, the definition is altered slightly. According to a hotel representative, for the industry, sustainability is about meeting guests' current desires without sacrificing the desires of future generations.<sup>7</sup> In my opinion, this definition needs to be altered slightly; sustainable hotels are about meeting guests', employees', and the local communities' needs without impairing the ability of future generations to do the same.

While measures to preserve the environment are unquestionably necessary, the term sustainability needs to also encompass the ideas of social and economic justice. Sustainable development should not involve negative repercussions on the environment, society, or the economy. Instead, sustainable developments should strengthen the local economy and owners should demonstrate a commitment to addressing the community's concerns.

Furthermore, the execution of such a business should explicitly state not to harm the local population. This goal was noted in the original United Nations report on sustainable development where it states, "High levels of productive activity and widespread poverty can coexist, and can endanger the environment. Hence sustainable development requires that societies meet human needs both by

increasing productive potential and by ensuring equitable opportunities for all.”<sup>8</sup> Even though in this preliminary UN report, the social and economic justice elements of sustainability are highlighted, this vital element has yet to become mainstream in sustainability practices. The environmental aspects of sustainability cannot effectively be accomplished without incorporating the economic and social justice aspects. These elements are intricately linked, and therefore, must be addressed equally.

Applying the term sustainability to the hospitality industry is somewhat challenging. Traditionally, the term implies sacrifice. Hotels are about indulgence. Washing linens and towels daily, offering toiletries in small packaging bottles, using disposable tableware in dining facilities, and a variety of other typical elements of the hotel experience are incredibly wasteful actions. In order for sustainable elements to enter the tourism industry, an emphasis must be placed on how incorporating guest comfort and attention can be a part of the sustainability agenda. After all, this is the primary desire of a hotel guest, and if these needs are met they are unlikely to feel as though anything is being sacrificed by staying in a green hotel.

In the past, sustainable hotels or ecotourism was generally associated with lodging properties located in environmentally sensitive regions. In the 1980s, the idea of such tourism gained momentum in Africa. Kenya was one of the first locations to popularize ecotourism.

When the country implemented policies that banned hunting in order to preserve wild life, the country capitalized on ecotourism.<sup>9</sup> These properties have become quite popular among nature lovers in recent years, spreading across the globe. As knowledge increased about the importance of preserving natural resources, sustainable hotels became more prevalent in a range of settings.

Sustainable practices utilized in the hotel industry are diverse in the extent to which they impact society and the environment. The most basic example of such actions is the implementation of the card system that suggests guests re-use their towels. The Lenox in Boston introduced this in 1989 and by 1993, such programs began to be adopted by the industry. Today, it has widespread appeal. This simple strategy allows guests to flip a card and inform housekeepers that they do not want their towels or linens washed. Increasingly, hotels are expanding their greening efforts. A number of hotel chains have started installing low-flow showers; energy efficient appliances are also becoming quite popular in the industry. In contrast, the social justice aspect of sustainability in the hospitality industry is a relatively new idea. A few hotels have incorporated this concept by either working to enhance the community where the hotel is located, or by devoting funds to preservation areas far from the site. However, few hotels have thought about becoming more sustainable through empowering employees. Embracing the idea of

social justice in the hotel industry is imperative to creating an industry that sustains all.

The trend towards greater sustainability is not likely to change anytime soon as consumers are recognizing the benefits of such a system, and policies geared toward sustainability are expanded and implemented. One survey found that 95% of respondents believe the industry should be undertaking sustainability initiatives, and 40% of business travelers are willing to pay a premium for such practices.<sup>10</sup> Furthermore, it is economically beneficial for developers to build in this manner, and industry leaders recognize this fact. The consumer drive coupled with developer motives has spurred a variety of environmental initiatives within the industry.

These practices can be seen in a wide range of hotels and are executed in a number of ways. Although the diversity in scale and strategy of these operations is extensive, a few common goals unite hotels making the transformation towards sustainable. In order to reduce the carbon footprint, many hotels share these intermediate goals: to limit energy use and promote the use of alternative energy, to monitor water consumption by guests and that are used for grounds keeping, to provide guests with alternative transportation methods and to inform guests about available public transportation.

Although these initiatives are some of the most popular examples of methods used by the industry to conserve resources and protect the

environment, these are not the only viable options. Being sustainable can be accomplished in many ways, and as technological advancements occur, these innovations can be applied to the hotel industry. The emphasis is on the general goals, but the methods used to reach these goals are not fixed.

### **Diverse Drivers in the Hotel Industry**

In the past decade, a number of hotels recognized the importance of becoming an environmentally responsible property. Some hotels felt pressured by guests to implement energy saving technology; however, this was not the main motivator in the industry's transformation. Rather, consulting firms that educate owners about financial incentives for conserving energy have influenced hotel operations. In short, the main drivers that are pushing sustainable hotels into the mainstream are costs, consumers, competition and climate. Many of these factors work together. For example, a number of businesses have recognized that using non-renewable resources such as oil has negative effects on the environment, and by changing practices companies also benefit from lower costs. Similarly, since the majority of consumers are familiar with the subject of climate change, a growing number of people are seeking environmentally responsible companies. In an independent study I conducted of 70 individuals, 95.7% of respondents said they would choose to stay at a sustainable or green hotel over a traditional hotel if

the two options were relatively the same price. In addition, 90% of respondents think hotels should demonstrate a commitment to the environment and the community<sup>11</sup>.

Aside from consumer demands, increased state legislation aimed at mitigating climate change is becoming increasingly popular. Businesses that recognize this fact at the beginning stages of development are able to incorporate energy saving techniques that will be necessary in the future. These four forces have worked simultaneously to drive hotels to change operations or force new developers to rethink the way to create a successful property.

## **Techniques Utilized in the Industry to Minimize Environmental Impacts**

### **Energy Conservation**

A number of hotels have been able to limit their energy use by replacing inefficient systems. Installing more efficient light bulbs is a common tactic because they are a low-cost solution and are easy to install. Philadelphia's Sheraton Rittenhouse Square replaced incandescent light fixtures with compact fluorescents, which saved the hotel 78% in energy costs, with a payback period of just two years.<sup>12</sup> In addition, insulation can have extremely beneficial results conserving heat in the winter and keeping buildings cool in the summer. Reflective window films can be used similarly to deflect heat in the summer

months. Both of these strategies result in decreased use of heating and cooling systems that can use require a particularly high amount of energy.

Reducing water temperature by five to ten degrees in guest rooms and in hotel pools significantly reduces energy costs without hampering the guest experience. In Aventura, Florida, the Turnberry Isle Resort and Club installed energy efficient equipment and is now reaping the benefits. The resort saves about \$65,000 annually and received \$20,000 in utility company rebates. Similar stories are widespread in the industry. When the Park Sheraton Hotel and Towers in Madras, India replaced in room refrigerators with newer more energy efficient models and upgraded its air conditioning plant they saw savings of \$152,000 in only a few years.<sup>13</sup>

Developing new green buildings is often easier than retrofitting existing buildings. A number of built hotels struggle to gain recognition from certification agencies because the initiatives these agencies require are difficult to implement in existing buildings. Further, energy conservation strategies are easier to facilitate in existing properties than the implementation of alternative energy capturing devices. In hotels designed to be sustainable, solar panels are more likely to be present. Nevertheless, they are not extremely popular primarily due to the fact that hotels will not see immediate benefits in the implementation of such technologies. Rather, the pay-offs of solar panels for example are more

long-term in comparison to the immediate effects of low-cost technology such as LED lights. Nevertheless, solar technology, similar to other emerging technologies, is likely to drop in price and increase in efficiency quite rapidly. As this occurs, solar panels in hotels will most likely be more prevalent, since the payback period will be much shorter.

On the other hand, hundreds of utility companies in every region of the United States offer customers the option to receive electricity from renewable sources.<sup>14</sup> Hotels can purchase utilities from companies that offer wind or hydro energy as an alternative way to run operations. Unfortunately, these methods for using alternative energy are less prevalent in the market and unlikely to be seen in the industry. In spite of this, one hotel chain in the United States, Sofitel, has agreed to use wind power as its energy source in all U.S. hotel operations. Switching to wind power has significant environmental benefits, its estimated that using wind power will offset “two million pounds of carbon dioxide a year”<sup>15</sup>.

### **Conserving Water**

Another way the hotel industry is beginning to identify environmental change is through actions geared at conserving and re-using water. Towel re-use programs are the most prominent example of hotel efforts to minimize water consumption. In my survey, 79.7% of respondents noticed cards in the room that allowed one to opt out of



daily towel and/or linen changing during his or her last hotel stay. The majority of hotel chains in the United States that embraced the towel and linen reuse programs, noted not only lower costs because of less water use, but also lower costs due to less time devoted to washing these items by employees. While this is one of the most basic approaches to conserving water in the industry, its popularity represents the possibility for a wide-range of conservation techniques to become mainstream.

The amount of water used in the landscaping of hotel grounds is another concern. The amount of water used in these operations is considerable, and can often be minimized through the use of grey water capturing devices and irrigation systems. Recycled water can be used in a variety of hotel operations, and the use of grey water in landscaping is relatively easy to facilitate. Some hotels also choose to plant native species on property grounds. Drought tolerant plants can flourish in areas with little rainfall. These methods prove to be highly effective strategies for minimizing water use in hotel landscaping.

The mass use of towels and linens implies a large amount of water used for washing these items. Recycled water can be filtered and used in laundry operations as well. In India, The Park Sheraton Hotel & Towers started recycling wastewater and “saves 95 liters/day and \$35,000 annually”.<sup>16</sup> Combined, large watering systems and commercial washers consume an extremely large amount of water. Thus, these operations

contribute heavily to the carbon footprint of a hotel. Small changes in this area can lead to large environmental benefits.

One of the most common methods for reducing water use in hotels is installing low-flow appliances. A survey of hotels with more than 75 rooms conducted in Seattle Washington, found, “Ninety percent of the hotels had installed faucet aerators or restrictors and low-flow showerheads.”<sup>17</sup> This tactic is becoming customary in the hotel industry especially since many chains have embraced this strategy. Installing water efficient fixtures can lower hotels’ water bills by 25-30%.<sup>18</sup> The Marriott has taken a variety of steps to become more environmentally friendly in the past few years. Among these, the installation of low-flow showers and sinks has been particularly economical for the chain. At the Marriott Marquis in New York, 1,800 toilets were replaced with low-consumption models and it now, “saves 20 million gallons of water and \$70,000 in sewage and water costs each year”.<sup>19</sup>

Conserving water is a common method utilized in the industry to lower operational costs and minimize the negative effects on the environment. At this point, most hotels have not considered the idea of collecting rainwater for use in facilities. However, water cisterns could be an effective way to capture water that could then be used in other hotel operations. In areas with high rainfall, cisterns would be most effective. In spite of this, water-cisterns also function in warmer regions with less annual precipitation.

## **Minimizing Waste**

Physical waste is plentiful in an industry based on excessiveness. However, operations do not have to rely on purchasing new goods and discarding those items that show any sign of use in order to meet guests' expectations. During traditional hotel construction, many developers source wood from unsustainable sources. First, trying to use salvaged wood found on-site, and also through a careful sourcing selection process, developers can mitigate these practices. A number of hotels have decided to use Forest Stewardship Council grade lumber when constructing sustainable hotels.

Daily operations can be slightly altered in order to minimize solid waste created onsite. Limiting this type of waste will also be economically appealing to companies who pay for waste disposal services. Refillable amenity dispensers should be used in place of disposable versions. Recycling programs should be implemented both in front and back house operations. Packaging is also a significant contributor to solid waste. Using re-useable products rather than disposable versions, requiring vendors to limit packaging and purchasing in bulk can all help reduce hotel waste.

Food waste created in hotel dining operations can similarly be reused instead of ending up in landfills. In California, 112,000 tons of food waste comes from the hotel and lodging industry each year.<sup>20</sup>This

food waste can be composted and/or donated to charities. Establishing a compost system on site can have multiple benefits. Composting repurposes food waste generated on site and creates fertile soil for landscaping purposes.

### **Transportation**

Sustainable tourism is a somewhat ironic term because travel consumes such a large amount of energy. Air travel is particularly counter-productive with respect to environmental impacts. For these reasons, many hotels have begun implementing programs in which carbon offsets are included in the price of the stay. Recently, The Marriott began offering guests the option to offset the carbon generated during their stay for as little as ten dollars per day. The funds do not directly offset the travel costs of guests but the money generated from the purchase of these offsets goes towards Brazilian rainforest preservation.

<sup>21</sup> While these efforts are noteworthy, carbon offsets are somewhat controversial due to a number of reasons. In a way, carbon offsets are an easy way for hotels to gain environmental recognition without directly working to address the hotel's environmental impact.

Once a guest has arrived at the destination, the need for transportation rarely diminishes. In order to discourage guests from driving, many hotels offer bike share programs. Other hotels lead the

way by informing guests about public transportation systems. Some hotels give priority parking to hybrid and electric vehicles while others offer shuttle services in alternative vehicles or even rent out hybrid and electrical vehicles for guests to use during their stay. The Houstonian promotes guest carpooling through their rideshare program which offers free valet parking for hotel business clients who carpool with three or more people.<sup>22</sup>

### **Social Justice**

As noted previously, the environmental elements of sustainability cannot be separated from the idea of social equity. In this way, it is important that developers consider the impact a hotel will have on native communities. A model that benefits and empowers local communities by providing them with employment opportunities is more likely to have long-term success. Some developers have also looked for the assistance of local communities when gathering materials for construction. E’Terra, a luxury bed and breakfast in Ontario gathered most of the recycled lumber used during construction from local suppliers, “to support the local economy and reduce the environmental impacts associated with transportation”.<sup>23</sup> This example illustrates how the ideas of social justice and environmental protection go hand in hand.

## **Employee Treatment**

Retaining employees is easier to accomplish for hotels that demonstrate environmental responsibility. One of the main links between the environmental and social justice sides of the sustainability argument is found in the use of harsh chemicals in hotel cleaning operations. Chemical use in hotels speeds up many processes and makes workers spend less time on such tasks. Harsh chemical use is evident in laundry services, carpet cleaning, grounds keeping and many other areas. However, the use of these cleaning supplies can negatively impact the environment, the health of workers, and the guest experience. In recent years, many hotels expressing an interest in environmental responsibility have begun to replace these chemicals with less harsh cleaners. Workers are unlikely to spend more time cleaning rooms; however, their productivity increases as the health of employees is improved greatly. At the Orchard Garden Hotel in San Francisco, bleach was replaced with natural cleaning products, and staff reported that the natural version were not only just as effective as the harsher chemicals, but also staff experienced reduced dry skin and respiratory difficulties commonly associated with chemical based cleaning products.<sup>24</sup>

Increased worker productivity is also a result of enhanced employee treatment. When hotels permit an adequate amount of time off to their employees, employees are happier and well rested. The effects of these benefits are apparent in their work. Giving workers fair wages

allows employees to live comfortably and stimulate the local economy with their profits. Further, the employee has a vital role in the sustainable efforts of a hotel. If employees are not educated about these efforts, the implementation of such strategies will not be nearly as effective. Additionally, the input of employees should be considered when making decisions regarding hotel practices. Workers are on the ground floor of hotel operations. They see how energy consumption occurs and where waste is prevalent. From this insider perspective, they can offer remarkable insight that management can use to determine areas that need to be addressed.

### **Managing Effects on Local Populations**

In the past, the development of hotels has had adverse effects on local populations. When creating sustainable hotels, the environment, equality, and the economy should be given the same amount of consideration. On the international scene, this idea is more widely accepted than in the U.S. One company, Scandic, has truly embraced this concept in their operations. The Scandinavian chain pledged to reduce carbon emissions by fifty percent by 2011, and to become completely carbon neutral by 2011. Scandic is not only focused on the environment, they also educate the community in the strategies used in hotel operations and support the local economy. In discussing the benefits of such an approach, a former employee explained how buying

ingredients locally gives, “guests the best possible delicious fresh food, saving air miles and allowing the local community to prosper. Financial rewards go hand in hand with environmental ones.”<sup>25</sup>

Unfortunately, in the United States, this understanding has not been fully realized. Developers often reconcile the societal concerns when trying to achieve the later goal of making these enterprises profitable. At best, the environmental initiatives are achieved only because of their economic implications. From a corporate perspective, social equality is not a priority. In the United States, properties demonstrating social responsibility rarely exist, and those that do exist are a result of “the person at the helm of individual properties.”<sup>26</sup> Opportunities for community involvement vary by site location, and this makes it difficult for large hotel chains to standardize social justice initiatives.

Without considering the local population, hotels can have extremely adverse effects on local economies. Often, residents are displaced in the physical development of hotels, or as an after effect when property rates become excessively high as a result of the newly created tourist destination. Higher prices are reflected in other goods, and locals are pushed out of their community. In more secluded locations, maintaining the local culture is another obstacle for developers. This is particularly important in regions like the Amazon or in areas with indigenous populations. In order to mitigate these



situations, it is important that hotels consider these effects when developing new properties.

Involving the community at the beginning stages of development encourages hotel owners to recognize community needs and respect the local population. Often, this can be accomplished through open forums; this creates a space for community members and developers to openly discuss the details of a proposed hotel. Through this process, both parties are able to benefit; corporations backed by local support are able to receive public funding for the creation of properties and the public can demand provisions that protect the local economy and provide jobs to residents. Prioritizing jobs for locals strengthens the local economy and plays a role in environmental efforts because workers use less energy to travel to and from work. Implementing local policies geared at keeping housing prices low, and regulating the price of other consumer goods are other effective methods used to ensure that the local population is not displaced through the hotel development.

Policies aimed at protecting local populations are relatively effective if implemented properly. In addition, some developers have chosen to form long-term links with the community through partnerships. These community partnerships can be successful in addressing a wide variety of community concerns. Some hotels form partnerships with local environmental groups; others have developed methods to address issues of poverty through connections with local charities or shelters. In Texas,

the Houstonian is transforming their image by implementing a variety of greening strategies. The hotel also demonstrates a commitment to the community by donating food to the local End Hunger Network and sending partially used toiletries to a local women's shelter.<sup>27</sup> While these tactics are representative of a step in the right direction, the use of small toiletries in general is contradictory to the environmental protection efforts at the Houstonian.

### **Education**

Educating locals, employees, and guests about such practices helps bring attention to the larger sustainability movement. However, hotels demonstrate a wide range of outreach efforts. Some argue that they are not yet accomplishing enough to publicize their initiatives. Others are advertising the hotel's sustainability agenda as a way to increase revenues without actually demonstrating a commitment to the environment.

Regardless, informing the public about sustainability practices helps to bring attention to the concept. In this way, guests may be inclined to leave the hotel and implement strategies in their own home based on the knowledge they gained while on vacation. For example, many hotels use a card system to encourage guests to reuse towels and sheets. These cards often inform guests about the amount of water required in hotel operations, and the negative environmental effects

caused by such operations. Once guests are presented with this idea they are more likely to re-evaluate the cleanliness of towels at home before washing them. At the Red Carnation Hotel, guests are updated about money saved from reduced consumption of electricity. A considerable amount of these savings are given to local charities, and guests are happy to know these savings are being dispersed throughout the community. The Lancaster London found an innovative way to educate guests by involving them in a Green Week fair where guests were educated about the property and allowed to try out bikes provided on site<sup>28</sup>. Other properties give guided tours of the property, where guests are informed of all of the green aspects of the property. Hotels should aim to inform anyone in contact with the property about their strategies through any means appropriate.

The evolution of greening strategies in the hotel industry has occurred relatively quickly. Increasingly, companies in the United States are recognizing the importance of protecting the environment. This recognition is not necessarily morally based; moreover, these changes are generally economically justifiable. However, in recent years, the influence of consumers has provoked businesses to adapt their general operating practices. While greening practices are becoming omnipresent in the industry, few hotels demonstrate social responsibility. Environmental efforts cannot be separated from social justice initiatives; hotels must implement policies to promote fair treatment of employees

and respect for local communities. Furthermore, educating the general public about these policies is crucial, as it will help propel the larger sustainability movement.

Educating all employees about the hotel's sustainability agenda is vital in creating the most efficient properties. Some properties have decided to create green teams in order to encourage workers to engage in the greening process. Regardless, of the method, is it important that all workers involved with the property are aware of the strategies being used, so that they can do their best to incorporate them into their daily work routine. Employees often see areas ripe for change that higher-level managers would never notice. Having an intrinsic team of workers will help the sustainability initiatives to be fully realized.

### **Certification Agencies and Standards**

#### **LEED**

In the past few decades, a few major certification agencies have entered the market in order to validate a business's sustainability practices. The most popular, LEED, is a certification process administered by the U.S. Green Building Council. LEED gained momentum at the beginning of the new millennium, and helped to bring green building into the mainstream<sup>29</sup>. In offering a strict set of requirements for buildings to pursue LEED platinum, gold, or silver certification, the agency standardized green building requirements.

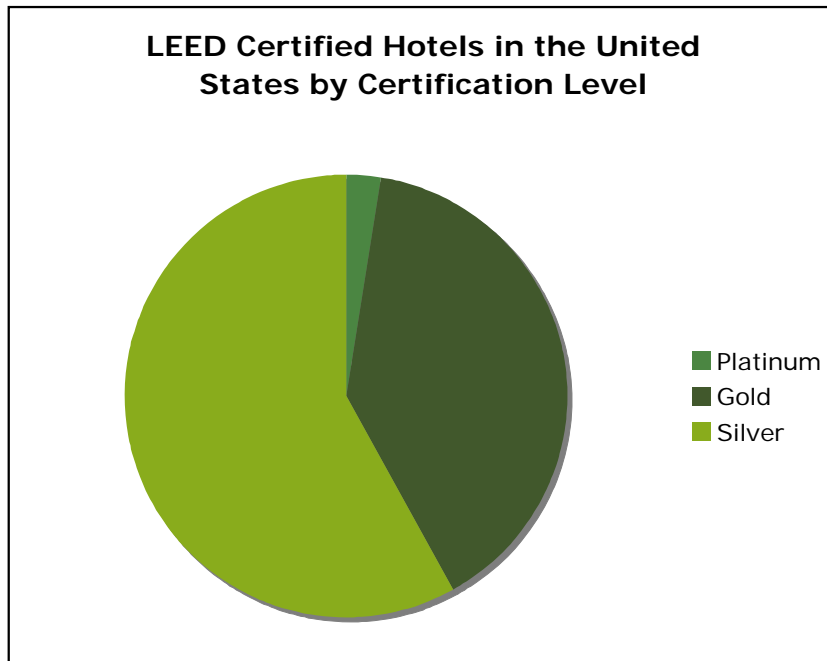
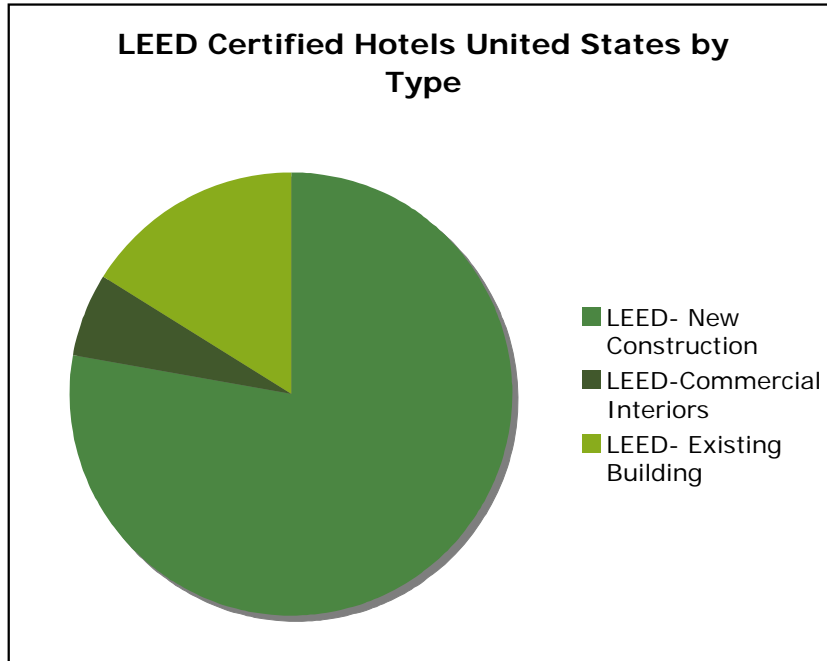
LEED became so popular and well known it is hard to even discuss green building without mentioning LEED.

While the program brought many benefits to the field, it also limits opportunities for existing buildings to become recognized as sustainable. LEED certification is not easily attainable for most companies. It is often expensive, challenging, and requires a knowledgeable team to implement such innovations. It's a common misconception in the industry that LEED certified buildings cost more to create, but early planning can ensure that these buildings cost as little as 0-5% more than traditional buildings.<sup>30</sup> Regardless, many barriers to LEED certification often discourage any kind of sustainable innovations. Even with the popularity of the LEED program, there are relatively few LEED certified properties. This may be due to LEED not having a specific set of regulations for the lodging industry.

LEED is simply a certification agency, but the public often views LEED as the leader in green building. The LEED certification system analyzes sustainability based on the property's achievements in five sectors. LEED awards points to properties according to their success in creating sustainable sites, increasing water efficiency, minimizing energy use, using sustainable materials and resources, and improving indoor environmental quality<sup>31</sup>. Improvements to the certification system have resulted in LEED certification for existing structures in comparison with

original certification system that primarily functioned when rating the efficiency of new constructions.

In the past few years, the number of lodging properties certified by LEED has increased substantially. As of early this year, 89 properties across the globe have received the prestigious recognition, and more than one thousand properties have registered with LEED, expressing an interest in becoming certified. The majority of these hotels are seeking LEED certification for new developments. Of the 81 LEED certified hotels in the United States, only 13 of those certifications were for existing buildings<sup>32</sup>. Becoming LEED certified may be easier to facilitate in new developments. New methods for certifying existing buildings need to be considered by the agency.



Regardless, the rise in popularity of the LEED certification system is evident when looking at the number of certified properties in recent years. In 2008, there were only eight LEED certified hotels; by 2010 there were more than five times as many certified properties.<sup>33</sup> While

these figures demonstrate the growing popularity of LEED in the industry, a number of hotels have expressed interest in the program and failed to go through the entire certification process. Many hotels struggle to become LEED certified because the process is not inherently designed for hotels. Furthermore, it is much easier to build a new hotel to LEED certification standards than to retrofit a hotel in accordance with the organization's standards for existing buildings. Still, other hotels struggle to get the entire team on board with many of the environmental initiatives, and some simply feel that the actual certification process consumes far too much time.

### **Green Seal**

A plentitude of other certification agencies exist to validate hotels as environmentally responsible. Green Seal is an agency that has certified more than one hundred lodging properties in the United States. In 1989, Green Seal arose as the first environmental certification agency in the United States. The group, which rates a variety of products and services, first developed standards for lodging properties in 1999. The Green Seal standard, GS-33, emphasizes water and waste reduction, energy conservation, responsible purchasing, and pollution prevention. In addition to certifying hotels, the agency also certifies commercial goods, and was originally established in order to differentiate those goods and services that are actually environmentally responsible rather than



those that simply claim to be “green” without actually altering production processes.

### **ENERGY STAR Program**

The ENERGY STAR program was introduced by the Environmental Protection Agency in 1992 as a market based approach to promote energy efficient products and practices. The program is a multifaceted approach, which involves using the ENERGY STAR label to clearly identify environmentally responsible products, coupled with providing energy performance assessment tools to the commercial and residential sectors. Some argue that the ENERGY STAR label is the national symbol for energy efficiency; 56 percent of Americans recognize the label<sup>34</sup>. In 1999, ENERGY STAR expanded its program to offer new standards for measuring the energy performance of an entire building.

The United States EPA promotes the ENERGY STAR for Hospitality Program as a method for lodging properties to assess environmental performance. The program recognizes that by reducing energy use by 10 percent across the industry one would see savings of \$745 million per year in energy costs.<sup>35</sup> In order to achieve this goal, the program assists hotel in determining current energy consumption and then setting benchmarks for reducing energy consumption. Properties that acquire ENERGY STAR certification use about 35 percent less energy than traditional buildings<sup>36</sup>, and the program encourages hotels to prepare an

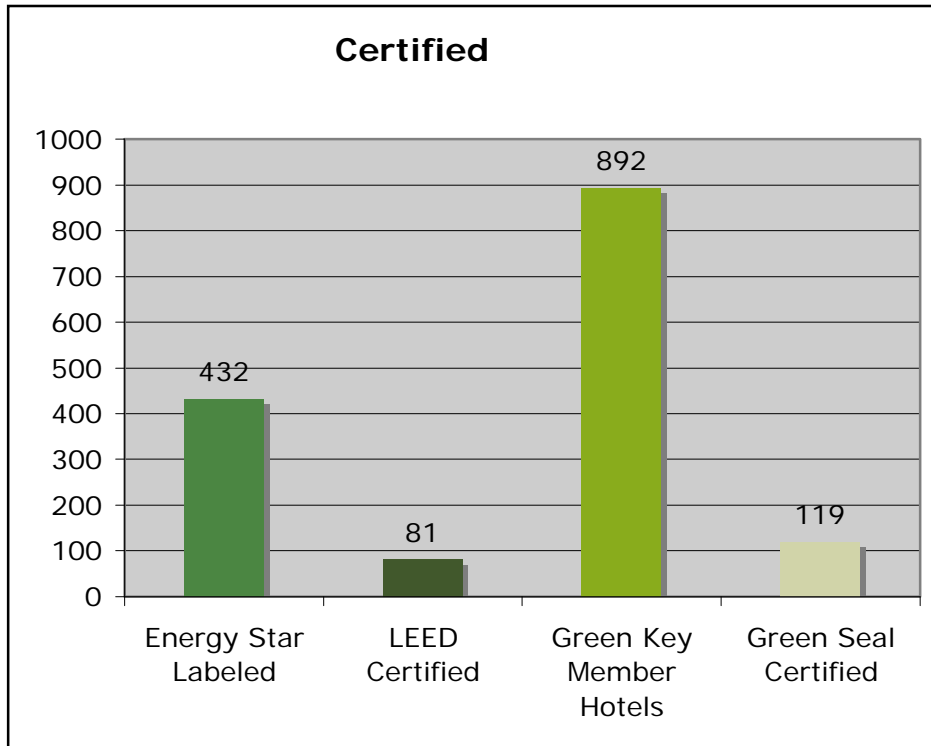
energy strategy for the future by noting the cost benefits as well as increased guest satisfaction. Besides requiring assessments, the ENERGY STAR Program mandates that companies educate their guests and the public about their environmental initiatives. A number of different groups and organizations have committed to the ENERGY STAR challenge. In the hospitality industry, a variety of large hotel chains such as Marriott and Best Western, boutique properties, and hotel associations partnered with the ENERGY STAR Program<sup>37</sup>. The program also awards distinguished properties with the partner of the year recognition, The Lenox Hotel received this honor in 2005 by installing ENERGY STAR office equipment and televisions, compact fluorescent lights, high performance windows and efficient boilers. According to the hotels general manger, Ted Saunders, "ENERGY STAR is one of our best partners in helping us saving money and reducing our environmental impact." He applauds their web site for offering a wide variety of ideas and products. Similarly, he finds ENERGY STAR's Building Portfolio Manager to be an incredibly useful tool that encourages the hotel to set goals and allows the hotel to generate reports of comparative energy and water usage.<sup>38</sup>

### **Green Key**

One of the leading developers of green standards for hotels in Canada, The Green Key Eco-Rating system was developed in 1997<sup>39</sup>. The

system has been used to rate more than 1,200 member hotels in Canada, and the program entered the U.S. hotel market in September of 2009. 892 hotels are currently participating in the U.S. Green Key program.<sup>40</sup> The program ranks, certifies, and inspects hotel based on their commitment to environmental responsibility. Hotels perform a self-audit based on hotel operations and practices; than, these answers are used to rate the property on a scale of 1-5 keys. Green Key performs routine, random audits of properties to validate the answers provided in the self-audit, and offers recommendations to property mangers<sup>41</sup>.

However, the Green Key program is an entirely voluntary, self-administered program for hotels to determine their own carbon footprint. The organization verifies that responses to the self-administered assessment test are correct occasionally through spot audits, but they do not ensure that policy recommendations are taken into account by the property. The program lacks accountability, which is problematic, but Green Key is auditing more frequently in the United States. Furthermore, the program is not very strict. On the other hand, the Green Key program is notable due to its popularity around the globe. Green Key has programs in over twenty countries, and the assessment could be modified to create a strong universal green standards program.



## **CERES**

The Coalition for Environmentally Responsible Economies is a network of investors, non-profits, corporations, and organizations devoted to solving sustainability challenges. CERES developed the Green Hotel Initiative to aid groups and individuals in selecting environmentally responsible lodging properties.<sup>42</sup> CERES provides tools to score hotel's environmental initiatives and increase the demand for such services. The Best Practice Survey helps hotels to access their own achievements, while the Guest request Cards allow visitors to judge the property.<sup>43</sup> Furthermore, the annual CERES' conference allows successful hotels to

demonstrate green practices to interested corporations and organizations.

### **State Hotel and Lodging Associations' Green Certifications**

Most states have a hotel and lodging or tourism association. These groups have many member properties, and many have started offering green certification program to these properties. While these programs do not necessarily enforce the most stringent standards, they do bring attention to the green movement. For example, the Arizona Hotel and Lodging Association has a certification program which involves a self-audit and third party validation. Hoteliers who undergo the certification process are then able to boast the certification and receive formal advertisements as green by the state association.

### **Methods for Choosing Case Studies**

In order to assess the effectiveness of these social and environmental initiatives, I chose two distinct properties and analyzed their efforts. Bardessono, a newly developed property in Napa valley, utilized advanced technology in the creation of the LEED certified Platinum property. Conversely, The Lenox in Boston, Massachusetts was built in the early 1900s, and has strived to reduce its impact on the environment since the late 1980s. Juxtaposed, these two examples illustrate how a variety of strategies can be used to ultimately reach the

same goal. Furthermore, the similar techniques exemplified in the two cases, shows how certain strategies are universally applicable.

Bardessono	The Lenox
62 rooms	214 rooms
Opened in February 2009	Opened in 1900
LEED Certified Platinum	
94 solar panels, 82 geothermal wells	Purchase of renewable, wind energy to offset 100% of the Global Warming impact of the hotel's electricity use
Housecleaning staff use only organic products	Environmentally friendly, healthy cleaning products
Electric and bio diesel vehicles are used by the hotel to minimize air pollution, bikes available to rent	Hybrid car service for hotel guests
LED, halogen or fluorescent bulbs are used in light fixtures throughout the property	Over 4,800 super efficient lights installed
Informal education outreach, hotel employees explain in room technologies to guests upon arrival, "Our Philosophy" pamphlets in room explain importance of re-useable amenity bottles etc.	Eco brochures in every guest rooms, Dedicated Eco Channel, Ecoplaques in every guest room share eco facts on electricity efficiency, water conservation and recycling
	ENERGY STAR office equipment
All glues, adhesives, finishes, paints, carpets and fabrics used at Bardessono are required to meet low volatile organic compounds (VOC)	No-VOC (Volatile Organic Compounds) paints
200 sq feet of low E glass	610 Double paned low E windows
	State of the art insulation
Bathroom fixtures with low water flow, along with dual flush toilets and waterless urinals	Waterless urinals annually save 180,000 gallons of water
	In room recycling
Native and drought tolerant plants used in landscaping, grey water recaptured for landscaping	
<a href="http://www.bardessono.com/overview/envir_omental_initiatives">http://www.bardessono.com/overview/envir_omental_initiatives</a>	<a href="http://www.lenoxhotel.com/envir_oment.html">http://www.lenoxhotel.com/envir_oment.html</a>

## **The Lenox**

The Lenox hotel in Boston is the Saunders Hotel group's flagship property. The Lenox is the most environmentally friendly of the seven Saunder's properties and is used as a model for the other hotels. The hotels share information, ideas, and experience in regards to environmental innovations with one another on a regular basis through monthly cyber meetings. Unfortunately, some of the other hotels are part of larger chains, which inhibits the properties from implementing environmental initiatives that would conflict with the chain's image.

Back Bay, Boston where the Lenox is located, exemplifies conscious urban planning. The area is of extreme historical importance, and is known for its architecturally significant buildings and well planned streets. It is important to note that this area is extremely pedestrian friendly, with sidewalks and tree lined streets.<sup>44</sup> In addition, it is monumental due to the historical preservation of the area. Combined these features bolster the argument that the Lenox is a sustainable property.

The hotel first opened in 1900 and the mere fact that it still exists today makes the property a prime example of a sustainable development. Furthermore the Lenox's location in Back Bay encourages guests to walk to the plentitude of nearby attractions. Hotel guests are unlikely to travel to such sites in car when there are eight museums located within a mile of the property, and the hotel is located within walking distance

from Beacon Hill, the South End, as well as Boston's China town and Little Italy to name a few<sup>45</sup>. In the LEED rating system, the walk ability of a property, and its position in relation to areas of attraction is weighted significantly. Thus, the Lenox receives a great deal of its sustainable reputation from its mere location and longevity.



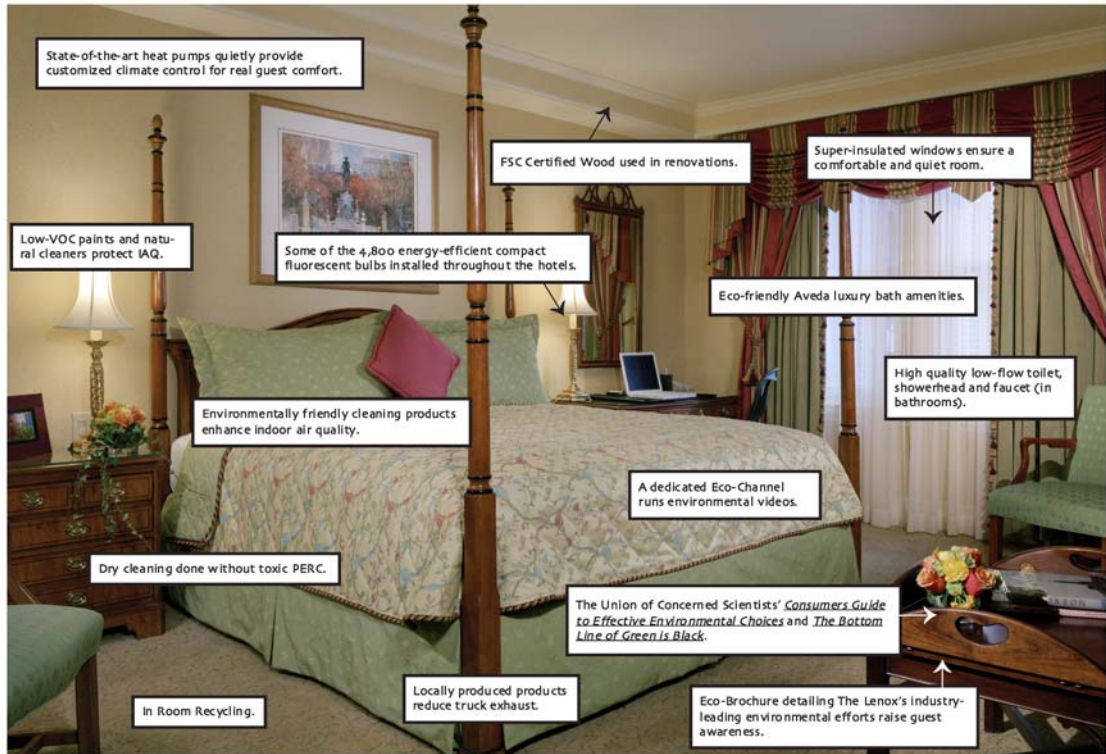
#### Complimentary Lexus Hybrid Car Service For Hotel Guests<sup>46</sup>

The primary driver behind the Lenox's commitment to sustainability is Ted Saunders, the general manager at the Lenox. From this position, Saunders exerts a large amount of control over hotel practices. Saunders began as the owner of an environmental consulting group, Ecological Solutions, and when he decided to start working with the family business he brought with him his environmental insight. Ted is also on the Coalition for Environmentally Responsible Economies



board, and helped the organization develop the CERES hospitality initiative.<sup>47</sup>

The Lenox is often regarded as one of the earliest examples of ecotourism. In 1989, the hotel was the first property in the U.S. to offer guests a towel reuse program. The Lenox also was the first property to install amenity dispensers in guest rooms, and the first property to offset 100% of carbon emissions.<sup>48</sup> Since this first initiative, the hotel has pioneered the field of sustainable hotels and set an example for many other properties. More than ninety-five initiatives define the Lenox as a sustainable property. A wide variety of initiatives address issues related to environmental education, energy and water use minimization, reduction of toxic chemical use, and the improvement of indoor air quality. Among such initiatives, the Lenox uses environmentally friendly cleaning products, offers hybrid car services to guests, uses no-VOC paints, offers low E windows and state of the art installation to reduce energy consumption. In addition, the Lenox purchases renewable wind energy to offset the remaining green house gas emissions caused by electricity usage.<sup>49</sup>



**THE LENOX**  
BACK BAY BOSTON  
A member of The Saunders Hotel Group



In the last year, the Lenox updated its HVAC system by installing new boilers and cooling systems. Since last year, this small change has resulted in 35% less gas being used on property.<sup>50</sup> While many aspects of the hotel have radically changed since the 1900s, some areas are difficult to alter. A large chandelier in the central lobby is a beautiful and iconic addition to the hotel. When the Lenox tried changing the chandelier bulbs to a more efficient version, the effect was less dramatic. The more sustainable bulbs simply did not create the desired lighting effect. The hotel is still searching for a better alternative to solve this problem.

Housekeepers at the Lenox generally feel proud about their jobs. Workers use chemicals that are not toxic, and in return are generally in better health than housekeepers that use toxic chemicals. The housekeepers are also unionized which ensures that they are represented and treated fairly. The Lenox will also perform routine eco-checks of maid's baskets to verify that housekeepers are working in accordance with the hotel's green philosophy, and items are being properly recycled. Exceptional housekeepers are awarded the hotel's EarthKeeper Award. Department and individual employees are also recognized for their distinguished achievement by the Saunders Hotel Initiative to Nurture the Environment Award. Furthermore, the Lenox's eco-board, which identifies hotel innovations and results as well as tips that workers can use at home, also educates employees. Furthermore, all employees go through an initial team orientation, which includes environmental education elements.

In an effort to minimize the hotel's environmental impact, the Lenox carefully sources its products. It is somewhat difficult at times however due to a lack of consistency in purchasing between different departments. The property does make an effort to mitigate this dilemma through monthly Green Team meetings where employees are brought together to discuss a variety of issues, among these new purchases. The Lenox is working to create standards to ease the purchasing process in all departments.

Guests at the Lenox are not necessarily drawn to the property due to its commitment to sustainability. Many of the techniques utilized are barely noticeable to a guest who is not scrutinizing the property. That being said, the Lenox makes a strong effort to inform guests about the Lenox's environmental commitment through in room brochures of environmental initiatives, a dedicated eco television channel, and in room environmental books. Similarly, the hotel website explicitly advertises the property's commitment to the environment, and its position as a leader in such innovations.

The Lenox also plays an important role in the Boston community. Through a partnership with the Kingsley Montessori School, the Lenox Green Team educates children about the environment. In collaboration with the school, the hotel has developed a yearlong earth science curriculum and also invites classes to visit the property to directly involve students with projects such as rooftop planting. In the future, the Lenox hopes to develop links with local charities as well.

Although the Lenox has won numerous awards and received substantial recognition for the property's environmental initiatives, the U.S. Green Building Council does not formerly certify the property as sustainable. One of the biggest obstacles for the hotel was meeting the fresh air intake requirements under LEED. Due to the Boston climate, it is difficult to meet this requirement in the colder months when guests are highly unlikely to open their windows. Furthermore, replacing

windows and ventilation systems in the historic building what be extremely difficult and costly for the hotel.

Although many view LEED certified hotels as the best example of sustainable properties, the Lenox is a prime example of a hotel with a commitment to the environment, employees, and the community. As an urban property, the hotel is inherently more sustainable than more remote properties. In addition, due to the historical preservation of the hotel, the property further embodies long lasting, durable properties that will enhance the community while still being economically successful.

### **Bardessono**

As one of only three LEED certified Platinum hotels, Bardessono prides itself on its commitment to the environment and the hotel's dedication to an exceptional guest experience. The property stands out among other hotels in the area because of its outstanding promise to protect the environment as evident by the unprecedented environmental initiatives employed by Bardessono. Among such features, the hotel boasts an underground geothermal heating system, an extensive solar array, minimal carpet or cloth of any kind, and a variety of other technologies designed to minimize waste.

It is important to recognize the hotel slogan, "sustainable by design", as it is an integral part of the development of such a property. Phil Sherburne, the developer and partial owner of Bardessono was quite

ambitious in his goals to protect not only the environment, but also the local economy in the creation of the hotel. During construction, Sherburne developed a distinct message, “Intelligent design is creating beautiful places and extraordinary experiences while not harming our planet’s future.”<sup>51</sup> The local Yountville community handpicked Sherburne due to this philosophy and the community’s fear of a large commercial development hampering the small town atmosphere.

From a physical design perspective, the property is ecologically responsible in nearly every way. The property was built to minimize energy and water use, and the most obvious evidence of this is the vast array of solar photovoltaic on every rooftop. Nearly 100 panels minimize the hotels reliance on external energy use. A geothermal system recaptures air conditioning waste heat and also reduces energy used for heating water. According to the US Green Building Council, these two mechanisms alone account for energy savings of forty percent.<sup>52</sup> Recycled timbers used in construction minimize waste and the associated transportation costs incurred when procuring traditional building materials.



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Implementing sustainable design into the property was integral to the creation of Bardessono. However, the property is maintained in an environmentally conscious manner. Non-toxic chemicals are used to clean rooms and common areas. One unique method used is simply oxidized water that cleans better than any other traditional cleaning chemicals.<sup>54</sup> In addition, organic beddings, low VOC paint and locally sourced goods are omnipresent at the property.

Yountville is known as a food capital. Bardessono supports this local community by purchasing the majority of food locally, and organically Food wastes generated by the hotel restaurant are recycled in the form of an onsite compost pile that provides hearty soil for hotel

gardens. Lucy's Garden is located on site, and Bardessono also has formed a partnership with Hill Family Farms, which is located about a half mile from the property. Bardessono tries to source as much produce as possible from these two sources. In addition, the hotel encourages guests and the community to participate in gardening through a series of classes aimed at teaching attendants how to create a culinary garden. An on site well feeds the gardens and is also used to collect water for guest rooms. Tap water is filtered on-site to provide guests with "bottled water" in rooms, without supporting the waste of traditional bottled water, or the associated costs of transporting water long distances.

Transportation by car is not discouraged at Bardessono because there are no parking fees. The hotel does provide guests with access to Lexus hybrid vehicles for transport as well as the option to rent bikes free of charge. Unfortunately, the property lacks any kind of shuttle service to pickup and drop-off guests at the airport. However, the property is located in the heart of town so guests can easily walk to local attractions.

Although guests do not necessarily visit Bardessono because of its commitment to the environment, it is hard for one to stay at the hotel without recognizing the hotel as a LEED platinum certified property. Hotel employees are informed of this achievement during initiation and are eager to inform guests about the unique features installed that allowed Bardessono to achieve this recognition. Employees take pride in



this fact, and often are attracted to this hotel or rather choose Bardessono as a place of employment when compared to other hotels without this recognition.

Directly, Bardessono does not make any concrete efforts to inform the public about their environmental initiatives. Rather, individuals in the community hear about the practices implemented on site and are quite inquisitive. For hotel employees, answering frequent questions about hotel operations is a part of daily job routines. The community views Bardessono as an environmental expert and often comes to management with questions regarding best environmental practices in dealing with a variety of problems such as snail removal or erosion.<sup>55</sup> Bardessono has also recently started reaching out to the community by donating fresh produce to the needy through a partnership with the Napa Valley food collection service, The Table.<sup>56</sup>

Community, guest, and employee education could be more cohesive at Bardessono. In other hotels, monthly eco-team meetings reinforce company ideals. This process also empowers workers who are given the opportunity to share personal greening strategies with other workers and management. Furthermore, guest education has the possibility to encourage visitors to rethink the way they act when outside of the hotel. Educating guests can also be advantageous in the promotion of the hotel, and as a way to encourage return visits. Educating the community in formal ways could help to better connect the property with

local values. Simply offering a monthly tour of the property to locals could be an opportunity to illustrate the Bardessono innovations that could be utilized in other places throughout the town.

The largest challenge for Bardessono was managing the economic costs of creating such a hotel. While initial capital costs were about 3-4 million more to create a sustainable model, operating costs are relatively similar to that of a traditional luxury hotel. The hotel has a million dollar key price.<sup>57</sup> Savings from creating an environmentally responsible property have not been significant at this point due to the 62 million dollars in up front costs for the development.

### **New Urban Developments: The W**

An urban hotel may have the capacity to be more sustainable and affect more people than a property located in a remote condition. The W Hotel in Hollywood was proposed as a mixed-use, transit oriented development. The property, developed by Gatehouse capital, was designed to benefit the community, and a 2004 Community Benefits Agreement for the Hollywood-Vine neighborhood ensured decent paying jobs for community members. While this property illustrates many innovative techniques, there are some lessons that can be learned through evaluating the property.

The W is literally built on top of Metro-owned property, thereby providing direct access to non-car centric modes of transportation.<sup>58</sup>

Although Gatehouse Capital advertises this as a mixed-use development, and the W itself has some publicity materials describing the close proximity to the transit station, many are concerned that the luxury-aspect of the development irreconcilably overshadows the sustainable transit feature: some argue that the multi-million dollar homes in the W do not attract a clientele that would ride the subway.<sup>59</sup> Additionally, staff from the Metro noted that there was not adequate promotion of subway transit in this development.

The transit-oriented nature of this development is further obfuscated through many choices made by the W, primarily through its emphasis on cars. Each guest room in the hotel is allotted 2 parking spaces, and the guests of the residences can only access their private lobby through a drive-up cul de sac.<sup>60</sup> The development also boasts of an on-site valet service, available 24 hours for permanent residents. Although there is signage and information available about the alternative transit options located directly below the hotel, criticisms about the lack of transit-focus in this development indicate a need for more active promotion in this and future transit oriented developments. Ultimately, however, Frank Camino is correct in his observation that “despite the current lack of promotion, this new Transit Oriented Development will invariably get more people to notice L.A.’s burgeoning transit system and that can only be a good thing.”<sup>61</sup>

While the transit-oriented facet of the W could be better publicized, there are some impressive environmental and social achievements in this project. Validating the assertion that the W exemplifies a sustainable building model, The W is the first development in Los Angeles to receive a LEED silver rating for its innovative building design.<sup>62</sup> Additionally, the W has received the Millennium Award for Green Building and Environmental Leadership.

Among the most sustainable features of The W, warranting the numerous industry accolades is its water-saving technology: The W has developed an efficient water recycling system, which captures 90% of rainfall.<sup>63</sup> The intentional selection of plants, which do not require frequent watering, and installation of special irrigation systems reduces total water consumption of the hotel by 40%.<sup>64</sup> In addition to innovative water systems, The W is notable for its use of alternative energy to power the building. 35% of the building's energy is generated from renewable sources, including solar panels and photovoltaic cells.<sup>65</sup> The rooftop pool is also heated through solar generated energy.<sup>66</sup>

Although the aforementioned sustainable systems are significantly better than those in place at conventional hotels, it seems that the developers were not necessarily practical in the implementation thereof. The water system, for example, may be highly efficient at capturing rain; unfortunately, rainfall is relatively limited in Los Angeles County. Nevertheless, hotels in different climates could certainly benefit from this

water-saving strategy, by combining rain-capturing system with low-maintenance plants. The renewable energy strategy is promising, though again, it fails to capitalize on the abundance of sunlight in Los Angeles by only producing 35% of the Hotel's energy needs.

By design, the W is a mixed-use facility; The W has 305 luxury guest rooms, in addition to expansive meeting and banquet facilities. The W features 143 permanent residences, which enjoy priority access to the on-site amenities and services.<sup>67</sup> The residences are deemed more sustainable through the use of energy efficient appliances, such as Kupperbusch, which can be found in all permanent W homes. In terms of mixed-use amenities, the W offers a nightclub, Drai's of Hollywood, in addition to luxury retail stores and a gourmet French restaurant, Delphine. The W also features SWEAT, a high-end gym facility, and the Bliss Hollywood Spa.<sup>68</sup> Combined, these features create the largest mixed-use sustainable building in California.

However, from analyzing the types of 'mixed-use' amenities available at the W, it does not seem reasonable to argue that these facilities are designed more for locals and residents than visitors. Expensive nightclubs such as Drai's and gourmet restaurants such as Delphine hardly provide the necessary services one would expect to find in a residential mixed-use development. Stephen Wheeler states that "much-needed community resources such as parks, child care centers, shops, cafes, restaurants, schools, and walkable public spaces" are all

crucial components of successful developments.<sup>69</sup> Although the W boasts high-end restaurants and boutiques, these are not the types of amenities which fill the everyday needs of the community. Rather, the tenants currently occupying the mixed-use spaces cater to the indulgence of the wealthy, rather than providing essential services for the residents and locals.

At its core, the W attempts to both portray a progressive eco-chic lifestyle and maintain the image of old Hollywood glamour. Because cars have historically been a part of the Hollywood image, desire to maintain this image could partially explain the reluctance of the W to further emphasize the availability of metro transit. The overall effect of development considering Hollywood's history and the environmental future has been the integration of sustainable elements in the W, however, in a very high-end capacity. For example, while eco-designed furniture is utilized to furnish the guest suites, this furniture is still extremely expensive and aesthetically appealing, being produced by well-known eco-chic designers.<sup>70</sup> This allows the W to integrate sustainable components into the development without drawing attention away from the physical beauty of the hotel. Architecture critic Christopher Hawthorne argues that the W "symbolizes almost perfectly a city that is groping toward a denser, more vertical and more public future while still reluctant to abandon its love affair with the car and the glossier, more exclusive corners of celebrity culture."<sup>71</sup> While this indicates some

necessary future steps to further implement sustainable practices, it also gives due credit to the achievements of the W.

Although the eco-chic luxury of the W cannot necessarily be replicated in most communities, it is, at the very least, an important step in identifying solutions for high-end developments to institutionalize sustainability in building and design practices.

One of the most important aspects of the W hotel project was the Community Benefit Agreement it worked out with various advocate groups. A Community Benefit Agreement aims to embed the best interests of the community into a contract a developer must follow to gain initial support for a building project. A local nonprofit, LAANE played a crucial role in helping to draft the CBA, which ultimately ensured a local hiring policy and a fair wage agreement among other requirements. Providing a living wage for locally sourced workers was one of the most important elements of this contract. The provisions are likely to help socially and economically revitalize this area. The CBA is essential in protecting local communities from gentrification during any new development project. The key aspects of this CBA act as a guideline for future developments. Strengthening these agreements with stricter regulations, and community approved polices in regards to the development of necessity-based retail will result in more sustainable developments.

## **Making Sustainable Hotels a Reality**

### **Initial Assessments**

Any hotel that wants to reduce its impact on the environment needs to begin by determining what the properties current consumption patterns look like. Utility bills can offer a glimpse at how much energy and water a property is using, but they can't point out where waste exists. Many of the certification agencies noted previously have developed best practice surveys to assist hotels in determining which areas need to be addressed. In addition, a best practices guideline for creating environmentally and socially responsible hotels is included in the appendix. Hotels can use this document to assess the property and find inspiration for new policies.

### **Audits**

Hotels should perform consistent reviews of energy and water use and the amount of waste produced onsite. The best way to minimize a hotel's effect on its environment is to understand its current role. Using base assessments will allow operators to set goals for reduction and allow owners to conceptualize the economic benefits of being a responsible company. Comparing these initial assessments with audits will allow hotel operators to clearly see the economic and environmental benefits of environmental initiatives. Managers should also look at the



business practices of suppliers. Most hotels purchase more products in one week than 100 families do in a year. Is it important that the majority of these purchases are of sustainable products, and it is also important to look for local suppliers.<sup>72</sup> Information obtained from audits should be recorded often to illustrate the significance of small changes over time through benchmarking. An on-site green team can compile this information and ensure employees have an input in the discussion by hosting monthly employee meetings. The Lenox routinely performs such audits, and the hotel's electricity, gas, and water usage analyses provide an example of the type of documentation all hotels should provide.

**Analysis: Best practices to Promote Social, Environmental, and Economic Longevity**

In the United States, there are very few state or federal incentives for developers to implement sustainable efforts. Sometimes, the drive to promote policies of this sort is consumer driven, but generally, it arises from hotel owners and operators. When a hotel owner is personally motivated to be environmentally and socially responsible, these beliefs show in the company practices. A strong general manager however, is the one responsible for enforcing these policies and usually has the greatest impact in the effects of such actions. Many building owners believe that voluntary measures are more efficient than government

mandates.<sup>73</sup> While there are many initiatives occurring without government mandates, and many properties are altering policies in accordance with guest demands, government policies enforcing corporate environmental and social responsibility would be advantageous if they were politically viable.

Without strict government regulations, certification agencies and state associations are vital in the sustainable hotel market. It is unfortunate that many properties are seeing the rewards of their environmental initiatives without formally possessing a certification. This practice, known as green washing, occurs when properties falsely advertise their environmental commitment. This is somewhat problematic, because providing misleading claims encourages eco-tourists to stay at a property that may be less environmentally responsible than he or she thinks.

Third party certification agencies are a necessity in the industry. Not only can they offer help and guidance to hotel operators seeking to change their operations, but they also offer guests a secure way of knowing how many green attributes a property really exhibits.

While a number of certification agencies rate hotels based on their commitment to the environment, there are no certification agencies in the hotel industry that determine a property's commitment to social responsibility. A truly sustainable certification system would evaluate properties on their commitment to the environment, the local

community, and also include how they treat hotel workers. Of the sustainable hotels studied, very few have actually made a solid commitment to social responsibility. Being a sustainable property is much more than simply installing low-flow toilets and solar panels. The triple line of sustainability is essential in creating innovative hotels. Energy saving appliances may make hotel operations more economical; however, if employees are not properly educated in their use, it is unlikely that they will not produce as significant results.

Similarly, employees who are given adequate benefits, including healthcare and fair wages will be more productive employees. If hotel workers are cleaning rooms with less toxic chemicals, they will be in better health, and in return will be able to perform better. Every element of hotel operations is inherently woven together. The interconnected nature of hotel operations makes the triple line of sustainability vital in developing responsible properties.

From the beginning stages of development, community concerns should be addressed to create a hotel that will benefit the community as a whole. It is often beneficial to develop a community benefit agreement between developers and local organizations. This strategy can be useful in holding developers accountable for providing jobs to locals or sponsoring training programs to employ members of the community. Meeting with the local community prior to development can also ensure

that developers do not build on historic sites or destroy ecosystems in the creation of properties.

In order to construct more efficient hotels, building codes and zoning regulations need to be adapted to facilitate the use of green technologies. Green technology is a significant element in the creation of sustainable hotels, but new technology does not inherently make a building more sustainable. In reality, the most sustainable hotel is one that is situated in a high density, urban area. For these reasons, strategies such as in-fill can be used in hotel rehab projects to create efficient properties. These types of projects are more sustainable than new developments for a variety of reasons: a large portion of construction materials can be found on site, hotels can have more rooms and employ more workers, the site will be in an already developed location, it is more likely that there will public transit nearby, and very simply, increased density means lower carbon emissions.

## **Conclusion**

The hotel industry creates more waste than necessary. Large amounts of electricity and water are required to run hotel operations. In return, lodging properties waste large amounts of goods and resources. Small changes made within these operations aid significantly in terms of minimizing adverse effects on people, the environment, or the local economy. An urban hotel may have the capacity to employ more workers

and host more guests. In this sense, its benefits are likely to be more profound than those found in a rural location. However, remote properties can also employ many of these same strategies. Forty-three million tourists consider themselves to be ecotourists<sup>74</sup> and travelers are unlikely to change their demand for hotels in remote locations, partly because of their natural beauty. Furthermore, it is even more important for hotels located on these sites to operate responsibly so that such locations can be preserved. The goal is to have zero impact. Any progress in this direction will be advantageous.

**Appendix:**

**Sample Audits: The Lenox Hotel**

ELECTRICITY USAGE ANALYSIS						
<b>Payment period comparisons</b>						
<b>A/</b>	October 21, 2009 to November 20, 2009			30 days		
<b>B/</b>	October 21, 2010 to November 21, 2010			31 days		
USAGE CATEGORIES	A.	YTD	B.	YTD	MONTH	YTD
		TOTAL		TOTAL	DIFF	DIFF
# of Occupied Rooms:	5,948	52,664	6,139	59,036	3.21%	12.10%
Dollar Amount Billed:	\$20,586	\$322,871	\$17,350	\$227,087	-15.72%	-29.67%
Demand	248	3,495	274	3,428	10.48%	-1.93%
Total KWH:	136,958	1,781,510	113,406	1,364,261	-17.20%	-23.42%
Heating Degree Days	434	5,141	511	4,342	17.74%	-15.54%
Cooling Degree Days	0	620	7	1,119	-	80.48%
KWH per Occupied Room:	23.03	33.83	18.47	23.11	-19.77%	-31.69%
Cost per Occupied Room:	\$3.46	\$6.13	\$2.83	\$3.85	-18.34%	-37.26%

**NOTES:**

- \* T-Mobile Electricity pulled out of cost and usage for each month.
- \* Briar Group usage pulled out of cost and usage for each month  
(BG usage does not get pulled out of Energy Star)

**GAS USAGE - BOILER**

**Payment period comparisons**

**A/** October 14, 2009 to November 12, 2009 29 days  
**B/** October 8, 2010 to November 5, 2010 28 days

	<b>A.</b>	<b>YTD</b>	<b>B.</b>	<b>YTD</b>	<b>MONTH</b>	<b>YTD</b>
<b>USAGE CATEGORIES</b>		<b>TOTAL</b>		<b>TOTAL</b>	<b>DIFF</b>	<b>DIFF</b>
# of Occupied Rooms:	5,887	51,942	5,720	57,079	-2.84%	9.89%
Dollar Amount Billed:	\$6,344	\$104,049	\$5,038	\$71,043	-20.59%	-31.72%
Therms Used:	4,886	74,481	3,765	53,529	-22.94%	-28.13%
Therms per Day:	168.48	221.67	134.46	164.20	-20.19%	-25.93%
Heating Degree Days	465	5166	342	4325	-26.45%	-16.28%
Cooling Degree Days	0	619	7	1099	-	77.54%
Therms per Occupied Room:	0.83	1.43	0.66	0.94	-20.69%	-34.60%
Cost per Occupied Room:	\$1.08	\$2.00	\$0.88	\$1.24	-18.27%	-37.87%

**WATER AND SEWER USAGE ANALYSIS**

**Payment period comparisons**

**A/** October 21, 2009 to November 19, 2009 29 days  
**B/** October 20, 2010 to November 21, 2010 32 days

	<b>A.</b>	<b>YTD</b>	<b>B.</b>	<b>YTD</b>	<b>MONTH</b>	<b>YTD</b>
<b>USAGE CATEGORIES</b>		<b>TOTAL</b>		<b>TOTAL</b>	<b>DIFF</b>	<b>DIFF</b>
# of Occupied Rooms:	5,749	52,163	6,352	59,106	10.49%	13.31%
# of Adults:	9,099	83,870	9,926	95,588	9.09%	13.97%
Dollar Amount Billed:	\$8,484	\$92,087	\$9,284	\$105,765	9.44%	14.85%
Gallons of Water:	592,883	6,607,226	638,661	7,249,162	7.72%	9.72%
Gallons per Person:	65	78.78	64	75.84	-1.25%	-3.73%
Cost per Person:	\$0.93	\$1.10	\$0.94	\$1.11	0.32%	0.77%
Gallons per Occupied Room:	103.13	126.66	100.54	122.65	-2.50%	-3.17%
Cost per Occupied Room:	\$1.48	\$1.77	\$1.46	\$1.79	-0.95%	1.36%

**NOTES:**

\*Briar Group's 15% pulled out of usage and cost

## **Guiding Principles for Sustainable Hotel Development**

- Use high quality and long lasting material
- Construct with salvaged/ recycled materials whenever possible
- Install energy efficient technology and utilize alternative energy
- Conserve water and recycle waste water
- Position property according to natural sunlight and wind-patterns
- Support alternative transportation
- Eliminate the use of toxic and harmful chemicals
- Educate staff, guests, and the community about environmental initiatives
- Buy supplies locally whenever possible
- Treat employees fairly
- Incorporate local community in the development process

### Design and Site:

- Develop a relationship with the local community at the beginning stages of hotel development
  - Allow for community say in site location
  - Address community concerns
  - Use local labor sources and building suppliers
  - Secure jobs for community members
- Preserve existing trees onsite, or incorporate those lost as building supplies in construction of hotel
- Orient buildings with sunlight so as to maximize heat in the winter and shade in the summer, also account for winds as to create a natural flow of air
- Maximize efficiency through density

### Energy Conservation:

- Insulation
- Radiant barrier
- Window sealants/Low E windows
- LED lighting
- Energy efficient appliances (ENERGY STAR rated)

### Alternative Energy:

- Buy alternative energy from local energy provider
- Install solar panels
- use geo-thermal technology

### Water Conservation:

- Install low-flow sinks, toilets, showers etc



- Install a drip irrigation system that uses grey water
- Use native plants in landscaping
- Recapture grey water for other uses

#### Limiting Waste:

- Install shampoo and soap dispensers to limit waste associated with single sized amenity bottles
- Place recycling bins in all common areas and guest rooms
- Compost or donate food waste
- Encourage employees to limit paper use
- Discourage bottled water use by supplying guests with re-useable water bottles
- Recycle old linens by using them for cleaning rags

#### Support Local Economy:

- Integrate local sourcing mandates in procurement of all hotel supplies
- Hire employees who live in hotel vicinity
- Pay employees a living wage
- Offer employee benefits for all full time workers
- Form relationships with local non-profits to donate unwanted goods

#### Education:

- Education about energy use and open publication of data on site
- Educate employees about sustainable initiatives
- Educate guests about practices
- Make a green team to assess progress and relay information to other employees
- Hold informal open houses for the public to understand hotel policies

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