

citycenter

The Las Vegas development raises the global bar for sustainable building.

By KATHIE TAYLOR | November/December 2009



Photo: PR

By 2020, the United States has the potential to reduce annual non-transportation energy consumption by about 23 percent, eliminating trillions of dollars in waste and resulting in a significant reduction of greenhouse gas emissions. This equates, annually, to removing every passenger vehicle and light truck from U.S. roads, according to a study released this year by global business strategy-consulting firm McKinsey & Company.

But, making that happen will require billions of dollars in up-front costs, and the biggest challenge might be forging alliances between all involved—utilities, regulators, manufacturers, government agencies, and energy consumers.

As the national debate over energy efficiency rages on in the halls of Congress, MGM MIRAGE is tackling the issue right here in Nevada. The gaming, hospitality, and entertainment company redefines urban lifestyle and [Las Vegas](#) luxury with the opening of CityCenter in December. The

new destination takes on the challenge of bringing something new and exciting to the Strip, while establishing a union between Las Vegas glitz and sustainable living. “From the beginning, we said we didn’t want to do [stereotypical] Vegas,” says Cindy Ortega, MGM MIRAGE senior vice president of energy and environmental [services](#). “We wanted to really stretch with this project, make it fully sustainable, and still hit top-notch luxury.”

Pioneering large-scale green began with studying what environmental responsibility meant in 2005 when they started developing the property, which required cooperation and collaboration from every facet of the operation. “All the stakeholders had different priorities,” Ortega says. “We had to think of what that perspective would be from 2005 to 2010.”

With such goals as water conservation, preserving indoor air quality, energy savings, and alternative transportation at the forefront, the design team drew up what would become one of the world’s largest LEED-certified communities. “LEED certification is a cooperative process between the owner, designer, and contractor,” says Sarah Mojzer, communication committee chair for the Nevada Chapter of the U.S. Green Building Council. “Planning from the beginning helps [those involved] to make the right decisions, and the [buildings are] designed to take the best advantage of the site and materials.”

CityCenter stands on the former site of the Boardwalk Hotel. The previous structure was imploded, and 85 percent of the remains have been put to use for CityCenter’s construction or sent to be used elsewhere. Crushed blocks and mortar were used as concrete and asphalt aggregate and for dust abatement during construction. Even curtains and carpets were repurposed into packing material used to ship recycled whole and broken glass and bathroom fixtures to other countries for reuse. Other sustainable construction measures include:

- Evergreen Recycling, CityCenter’s official construction recycling company, diverted more than 125,000 tons of material from landfills.
- Ventilation systems were sealed prior to installation and start-up to protect them from construction dust, smoke, and harmful particles (smoking is prohibited on the construction site, which will increase indoor air quality upon opening the facility). Guest rooms are sealed to prevent the migration of smoke.
- Wood used in construction was certified by the Forest Stewardship Council and taken from forests with responsible management practices.
- Low volatile organic compound (VOC) paints and sustainable-certified carpets were implemented.

Ortega says MGM MIRAGE is proud of its commitment to LEED certification over a cost-versus-benefit approach. “Everybody starts a project wanting the most green,” she says. “No one says let’s raze and pillage and build low-performance buildings, but as the costs add up, sustainability [often] gets edged out.”



Not so with CityCenter. Ortega says she and her team spent years targeting the highest possible number of [credits](#) for LEED certification. Among the ways CityCenter sets the standard for sustainable construction are:

- An on-site natural gas co-generation power plant provides 10 percent of CityCenter’s electricity. Waste heat from power generation warms all domestic water at the site, including the pools.
- Energy efficient exterior features reduce heat transfer from the sun.
- Custom-designed water-saving fixtures reduce water use by a third.
- Native desert landscaping is watered with a moisture control system.
- A fleet of 26 compressed natural gas stretch limos, the first of their kind.
- Energy efficient signs, marquees, and slot machines.

As each building at CityCenter opens, it undergoes operational greening as well, such as smarter paper use and buying in large quantities to reduce packaging and innovative waste management. “We recycle to a higher percentage than [elsewhere] on the Strip. We make it easy to separate recyclables to send as little as possible to the landfill,” Ortega says. CityCenter employees undergo LEED training to complement CityCenter’s commitment to green initiatives:

- Farm-to-table ingredients are purchased from responsible local growers in many CityCenter restaurants and eateries.
- Organic or wild-crafted paraben-free (chemicals used as preservatives in cosmetics) products and recycled paper products are used in spas.
- Environmentally friendly cleaning practices.
- Environmentally responsible options for incorporating sustainability into meetings, conventions, and events held at CityCenter.

Ortega says the process has been very complex and at times, tedious. “We’ve spent three and a half years working on this, and at some point you realize you’re just not going to get everything done. But every step is a good step; every contribution is a good contribution. We keep raising the bar to do better.” She says once CityCenter set that bar, other MGM MIRAGE properties joined in. “Existing properties started jockeying for better waste management and water conservation and competing with each other in a ripple effect throughout the community.”

Steve Rypka, co-founder of the USGBC Nevada Chapter and owner of Greendreams Enterprises in Las Vegas, says CityCenter is a groundbreaking leader in green building. “Las Vegas is going

from the greed capital to the green capital,” he says. “It’s a persona change—dynamic, inviting, and fun—and a sustainable community.” He says the global community now has a bar of its own to reach for. “If we can create this here, we can create it anywhere.”

IN AND AROUND THE CITYCENTER

The 67-acre CityCenter is comprised of a variety of urban dwellings:

- ARIA: a 61-story luxury gaming resort with 4,004 rooms; three primary pools and one European-style pool; 16 restaurants; a nightclub and numerous other bars and lounges; a spa and full-service salon; a fitness center; and a theater housing Cirque du Soleil’s tribute to Elvis Presley. The hotel tower, convention center, and theater are LEED Gold certified.
- CityCenter’s Fine Art Collection: existing works and pieces specifically commissioned for CityCenter populate public spaces with contemporary masterpieces from 20th- and 21st-century artists, including Maya Lin, Jenny Holzer, and Nancy Rubins.
- Crystals: half a million square feet of luxury retail shops, restaurants, and entertainment. The retail and entertainment district achieved LEED Gold Core & Shell certification in late October.
- The Harmon Hotel: a luxury boutique hotel slated to open in late 2010.
- Mandarin Oriental, Las Vegas: a 47-story non-gaming hotel with 392 rooms and suites and 227 residential condos. Opens December 4 and features Twist, a posh French restaurant.
- Vdara Hotel & Spa at CityCenter: an all-suite non-gaming and non-smoking boutique hotel with a high-energy pool, internationally inspired restaurant, lounge, and wellness spa. The hotel is also LEED Gold certified.
- Veer Towers: private high-rise residential space, including infinity edge pool, hot tub, and sun deck; private recreation and media rooms; a fitness center; and steam rooms.

UPDATE

November 13, 2009 – The Forest Stewardship Council-US has honored CityCenter as the best commercial project of 2009 in the fifth annual Designing & Building with FSC Awards. The awards recognize entities committed to using sustainably harvested wood and creating a marketplace that promotes environmentally appropriate, socially beneficial, and economically viable forest management.