

# Solutions

**INSIDE THIS SECTION:**  
Cover Story  
Financing in Indian Country



## The gaming industry is showing real movement toward eco-friendly building and operational strategies

**Editor's Note:** this is the first of a two-part series. Part two will appear in a later issue and will include key research and surveys on green strategies that are currently being conducted.

For Cindy Ortega, the ultimate goal is for the division she works for to not exist. As vice president of energy and environmental services for gaming giant MGM Mirage, it has been her job to oversee the company's building and operational practices to ensure they are both cost effective and, more importantly, as eco-friendly as possible.

"What we hope will happen is that [green, eco-friendly practices] will become the standard way of living," she said.

Her biggest challenge—and opportunity—comes with the company's CityCenter development on the Las Vegas Strip. The massive multi-use project, which includes casino space, several hotel properties, condominiums and time-shares, retail shops, entertainment venues and much more, is the largest privately-financed development in the United States and could reach in excess of \$10 billion to complete.

"With CityCenter came the concept that you get a few great minds together to design the city of the future. What

happened during those conceptual designs was that all these brilliant people were all saying the same thing—that the focus of building needs to be on sustainable construction, that buildings should be high-performance buildings, and if you want to build a city of the future that's the way you need to build," Ortega said.

Luckily, CityCenter's development—currently about one-third of the way complete—comes at a time when environmentalism has become a hot social and political issue. While green building practices have been around for years, they've only become "popular" in the last three to four years—largely thanks to topics like global warming and energy costs receiving heavy media coverage.

Barry Thalden, partner and co-founder of Thalden Boyd Architects, said his company has been committed to eco-friendly building and operational practices since its inception 36 years ago. But he said he's "been unable to get anyone in the casino industry interested until the last couple of years."

"My belief is that the casino industry is incredibly customer sensitive. It is very quick to perceive what the customer is or isn't interested in. It wasn't until the general public showed interest that the casino industry responded

at all. I think that is what is making the change now. The change is not coming from Washington [D.C.]. This movement is coming from the grassroots up. People are concerned about energy, about water, about rising gas prices. Prior to that interest by the customer, you couldn't sell [casinos] on the idea that the lights might not all be on or that the sheets don't get changed every day in the hotel room. But today, not only are people OK with it, they appreciate it. They understand that you're doing it for world-conscious reasons and not just to make more money."

#### A united effort

But what constitutes an eco-friendly, "green" building or operation? In 1993, a group of environmentally-conscious developers and builders sought to answer that question and many more. Today, the non-profit U.S. Green Building Council (USGBC) has become the foremost authority on green practices. And its Leadership in Energy and Environmental Design (LEED) certification process is considered the stamp of eco-friendly approval.

There were three founders: David Gottfried, a developer with the original idea to bring fellow developers together on the topic; Rick Fedrizzi, who currently serves as the organization's CEO; and Mike Italiano, an environmental attorney in Washington D.C.

"If you're going to advocate green buildings, the first thing you have to do is determine what a green building is," said Michelle Moore, senior vice president of policy and public affairs for the USGBC. "So David, Rick and Mike set about to bring together a very broad-based membership organization that would work around a consensus process. That process created what is now known as the LEED green building rating system."

The LEED system has four successive levels of achievement—certified, silver, gold and platinum. Both buildings and building projects can be LEED certified and there are LEED rating systems for every aspect of built environments. Every LEED rating system category has prerequisites for the applicant.

"One, for instance, is no smoking. You can't have any indoor smoking in a LEED rated building," Moore said.

In addition to the prerequisites, there are also sets of credits that can be earned that will determine the level of

## Barona already a green leader

*Southern California resort has had a number of eco-friendly practices in place*

**B**arona Valley Resort and Casino in Lakeside, Calif., has engaged in environmental sustainability practices for years. In fact, the resort's commitment to green initiatives goes back to its owners, the Barona Band of Mission Indians, which works diligently to protect and conserve natural resources on the San Diego County reservation.

The tribe's reverence for the environment, "spans thousands of years since the time our ancestors moved through the region, living in harmony with nature's bounty," according to a pamphlet on the tribe's Environmental Sustainability Program. "We continue this respect by practicing energy and resource conservation throughout our reservation and resort property."

Its first on-site water treatment facility went online in 1994. In 2000, a \$3.5 million, state-of-the-art water reclamation plant was completed and implemented. The facility uses pioneering scientific processes, with ultraviolet as the disinfectant agent, to produce cleaner water at a higher usable volume, safely and efficiently, according to the tribe. At peak capacity, it can treat 750,000 gallons of water.

Today, an innovative water recovery program captures rainwater and irrigation runoff and reclaims almost 100 percent of the resort wastewater. The reclaimed water is used to meet Barona's landscaping and golf course irrigation needs.

Barona's championship golf course incorporates natural terrain and uses drought-tolerant turf. Each sprinkler head is individually controlled to optimize water usage. Ponds are used as part of the water collection and storage system, and serve as a home to migrating water fowl. In fact, Barona's golf club has been an Audubon International Certified Signature Sanctuary since 2002.

Measures are not limited to Barona's golf course and grounds.

Other measures also have been taken inside the resort facility. Guests are encouraged to reuse linens and towels, and efforts are made to recycle materials from offices and resort trash cans. "Green" light bulbs are used, as well as non-toxic "green" cleaners (Green Seal GS-47 or better). Solatubes, which reflect and magnify natural light, are used in offices to minimize or eliminate the need for electrical lighting during the daytime, and dual-pane low-E windows are installed in guest rooms.

The property also focuses on energy efficiency. Public spaces in the resort and casino are maintained at 74 degrees, and electric golf and utility carts are used for moving people and materials around the site.

The tribe has received numerous awards for its efforts, including a San Diego EarthWorks EARTH award in 2006 for its water resource management practices.

The casino is also currently going through the LEED certification process.

—Marian Green

LEED certification. Those credits are earned across six different categories including energy and environment, which addresses energy efficiency; indoor environmental quality; materials and resources; water efficiency; sustainable sites (for instance, where is the building located and whether it uses elements to its advantage, such as the sun); and lastly innovation.

"We know we don't know everything, and we give people credit for thinking up great ideas," Moore said. "And the rating system evolves over time, so as the market advances and we learn more, then the rating system evolves along with that knowledge."

Moore said the USGBC has seen a surge of LEED applications from gaming and hospitality projects. In Nevada,

she acknowledged a state tax credit for green building projects (which has been at least temporarily suspended due to the amount of applications and the perceived tax shortfall it would create) has helped that surge and shifted attention toward green building.

"But we're confident that the companies that aggressively step forth and take a leadership position and pledge to build and operate green will learn that people are healthier and happier in green buildings," she added. "When >>

#### Want to know more?

Visit [www.casinojournal.com](http://www.casinojournal.com), where you'll find the full interview with the USGBC's Michelle Moore, as well as related articles on conservation and eco-friendly practices.



## Solutions

### COVER STORY

you're hosting people—they're staying overnight or using your facilities for recreation—giving people a better indoor environment in which to do that is going to be really beneficial in building customer relationships. The bottom line savings in terms of energy efficiency and water are just tremendous. On average, a green building shaves 35 percent off energy consumption compared to a typical building. That's a lot of operating dollars back in your pocket."

#### Significant developments

Because most of the design, development and construction firms are still on a learning curve about the latest environmentally-friendly practices and resources, going green can present some challenges—especially for a mega-project like CityCenter.

"Being the first really big green project [in Las Vegas] has had a set of challenges that were unbelievable," Ortega said, citing water usage as one example. She said that CityCenter is expected to be 50 percent water-efficient on the outside, but inside the buildings, water demands coupled with limited availability of resources could lead to water efficiency of 30 percent.

"Of all the challenges we had, water was a tough one," she said, noting that different thought processes have to go into designing for residential and hotel spaces versus the rest of the development. "There are things like low flow toilets that people don't normally buy. We had a lot of time put into the design of the showerheads and then tested them out in some of the rooms at [the company's Mirage Hotel & Casino] to see if guests commented. We went through quite a few trials. In the end, we ended up having a custom faucet for CityCenter designed."

CityCenter will have its own power plant, which will produce about 10 megawatts of power.

"The Environmental Protection Agency encourages producing your own power so that there don't have to be large power plants that transport it into the grid," Ortega said. CityCenter will also have a natural gas plant referred to as the combined heat and power plant. It will take the excess heat and use it for productive purposes like heating water.

The development is serving as a training ground of sorts as well.

"By the time we are done we will



Boyd Gaming's Echelon development is the only LEED for New Construction Version 2.2 project in Nevada.

have put 10,000 construction workers and other site personnel through LEED training. I'm very proud of that and I don't want to sound like I'm boasting for the company but it was a significant effort for this company to take on," Ortega said.

Meanwhile, another big project is embracing the green movement as well. Boyd Gaming's \$4.8 billion Echelon development at the site of the former Stardust Hotel & Casino will include 5,000 hotel rooms, 750,000 square feet of convention and meeting space, entertainment venues, 30 dining and nightlife venues and a 140,000-square-foot casino. It is also the only LEED for New Construction Version 2.2 resort-casino facility currently being undertaken in Nevada, said company spokesman Rob Stillwell.

"While other resort-casino projects are meeting Version 2.1, Echelon faces a higher bar of environmental performance as a result of registering the project with the U.S. Green Building Council as a LEED 2.2 project," Stillwell said.

Stillwell said Echelon is expected to be about 25 percent less energy consumptive than CityCenter because the project is required to meet the 2004 version of the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) standards which are stricter than a 2.1 project that only needs to meet the 1999 ASHRAE version and a lower energy performance threshold.

With regard to water, the project is expected to net 50 percent savings in landscape irrigation and pursuing other non-potable water alternatives. Indoor water savings are expected to be 20 percent more than the Energy Policy Act of 1992 standards. Stillwell said Boyd Gaming is contemplating methodology to get to 30 percent water savings.

Indoor air quality will be improved by using only low-emitting materials such as paints, adhesives, sealants and coatings that have limited off-gassing potential inside all occupied spaces; while carpeting used will meet the strict requirement of the Carpet and Rug Institute and minimizes the off-gassing of

volatile organic compounds.

Boyd Gaming is also taking steps to more effectively manage waste at Echelon.

"We're targeting 85 percent of our construction waste to be diverted from landfills to recycling programs, including materials from the Stardust like furniture and equipment," Stillwell said. "Twenty percent of our construction and fit-out materials are coming from regional manufacturers [within a 500-mile radius], thereby reducing our carbon footprint. We're also specifying that construction and fit-out materials have a recycled content target of 20 percent, thereby increasing the demand for building products that incorporate recycled content materials and reducing impacts resulting from extraction and processing of virgin materials."

Even trees are part of Echelon's green equation—600 trees that were recovered are being maintained and will be reused as part of the project's permanent landscape.

#### A little effort, big rewards

Eco-friendly projects and operations don't just center around new, multi-billion-dollar developments. The green movement has become so popular, that almost every company is now implementing some form of green strategy or practice.

Two years ago, Las Vegas-based Penta Building Group, which has undertaken projects for companies like Harrah's Entertainment and Station Casinos, adapted its strategic planning process to include eco-friendly practices.

"We decided we wanted to get proactive and get on the front edge of green building," said the company's president and co-founder Jeff Ehret. "What we're doing is developing our

*Continued on page 28*

## Solutions

### COVER STORY

own internal green building policy that we will apply project-wide. These are policies that will not affect the total cost to the owner. In addition, we are advocates of green building in terms that if we have an opportunity to steer owners into implementing green practices, we will. We've also put on board an environmental manager in a full-time salaried position."

Penta's building of Station Casino's new Aliante Station Hotel & Casino in North Las Vegas will incorporate many of the firm's green initiatives.

Other properties are getting on the green bandwagon as well. The new Spa Resort Casino in Palm Springs, owned by the Agua Caliente Band of Cahuilla Indians, is generating its own electricity with a state-of-the-art, on-site power plant, consisting of four natural gas-operated "co-generation" units. The installation marks the first time such a system of this size will be used by a tribe as a primary electrical source in California, the tribe said.

During a panel discussion on green energy at last year's Global Gaming Expo in Las Vegas, it was noted that Native American gaming tribes have arguably the biggest opportunity to become leaders in eco-friendly operations—especially since Indian gaming has become a \$26 billion a year industry.

"We haven't always had the opportunity to be influential in how development has come up around us," said Ray Halbritter, CEO of the Oneida Indian Nation of New York's business enterprises. "Now we are in a better position to have some influence in our own development and setting an example for others. Going green is nothing new for Native people. Our traditions teach us to take care of Mother Earth, and now that message is becoming increasingly important as we see the global issues of environment and energy come home to everyone."

Of course, not every green strategy has to revolve around new buildings or projects. The MontBleu Resort Casino in South Lake Tahoe, Nev. recently introduced its "Bleu Goes Green" campaign, which consists of a number of smaller measures. Among them: using recycled paper for all business cards and letterhead; placing paper and plastic recycling bins in back-of-house employee areas; recycling printer and fax toner cartridges, batteries and fluorescent lights; planting more trees and plants around the inside and outside of



Boyd Gaming recently built a state-of-the-art green laundry facility in Henderson, Nev. that can handle 150,000 pounds of linen a day.

the hotel; serving water upon request only in restaurants; adding Aveda in-room toiletries that are environmentally-friendly; replacing hazardous cleaning products with eco-friendly ones; more efficient use of lighting inside and out, often through the use of timers; and placing reminder cards in rooms asking guests to let housekeeping staffs know when they want new towels and sheets in an effort to lessen water and energy costs associated with laundering every day.

"Being surrounded by such natural beauty, it only makes sense for MontBleu to introduce a program like this," Kim Sumimoto, general manager of MontBleu's casino operations and committee chair for Bleu Goes Green, said on the company's Web site. "We know how important the environment is to both guests and employees and we hope to continue to develop new and creative ways for everyone to get involved and do their part to maintain the gorgeous region that we love to live in and that guests love to experience."

Back at MGM Mirage, Ortega said the company recently finished up a project to replace lighting in parking garages and other areas of its properties.

"The interesting thing about the lighting is that it's not just about using less energy, it's that the light doesn't put off as much heat," she said. "People don't really understand that they pay a bit more for the bulb but they're using so much less electricity and the bulb will last much longer than regular bulbs. On a global scale, we figured out that we could change out all of our garages for a small expense and the payback was really quick."

#### Clean and green

One unique and forward-thinking green strategy presented itself through Boyd Gaming's dirty laundry.

According to Rick Darnold, vice president of strategic sourcing for Boyd, the company decided a couple of years ago that it wanted to handle its immense laundering needs in-house rather than outsource it. After acquiring an existing building on a five-acre parcel in Henderson, Nev. the company realized it had the opportunity to develop a completely green operation from the ground up.

"What we did on the front end was we hired an architect, and some of our professional consultants had experience in creating environmentally friendly and sustainable buildings. We really took it to task as far as designing a building that would be as energy efficient as possible," Darnold said.

The facility incorporated tunnel technologies for its washing machines, which uses significantly less water than traditional machines. Once Echelon is completed, Darnold estimates the company will be washing more than 150,000 pounds of linens daily, but the tunnel-washing system will save 20 million gallons of water a year.

"We're reusing about 75 percent of our water in the operation. We have designed a system that takes dirty water and filters it and reinserts it into the operation. The only water that really gets discharged back to the sewer system is the water from the heavily soiled items," he said.

The entire system is also built around using—and reusing—heat energy.

>>

## Solutions

### COVER STORY

"When the water comes from the City of Henderson, it comes out at about 78 degrees. That water has to be heated to 120 degrees before we can utilize it. The water that comes out of the tunnel—the water we filter and are reusing—comes out at about 90 degrees. What we do then is take the heat energy from the boilers, where we installed what we call heat economizers. They're like big radiators that go around the exhaust ports of the boilers. That air being shot out is about 200 degrees. It's the opposite of what your radiator for your car would do where it dissipates heat energy. What happens then is that we're able to heat the 78 degree water up to 90 degrees by reusing it and then the boiler gives it the final push back up to 120 degrees," Darnold said.

The laundering process uses enzymes rather than traditional bleaches and cleaning agents. The enzymes only have to be heated to the 120 degrees in order to work correctly, while traditional agents require temperatures of 140 degrees or more.

The facility also was built with an engineered floor where steam and water pipes are gravity fed—requiring much less energy than needed with pump methods. Boyd Gaming reused virtually every piece of concrete, wood and other materials in renovating the facility. Skylights take advantage of natural light, waterless urinals were installed, furniture from other properties was reused and eco-friendly cleaning and maintenance materials are used to upkeep the facility.

Even lint is getting the green treatment. "We generate about 100 to 200 pounds a day in lint," Darnold said. "It's basically just cotton and polyester. There's a company right now that is testing this for stuffing it in plastic enclosures used in boats. We have a couple of companies we've challenged to look at what to do with our lint, because we have a lot of lint."

#### Getting started

While the green movement has certainly become popular, the USGBC's Moore said the biggest roadblock is still misperception.

"There's still a lot of people out there who think to be green, it's going to cost you a pound of flesh and you're never going to get it back," she said. "That misperception that green inherently cost more or is something that is a philanthropic act that doesn't necessarily connect directly with



**P**rior to that interest by the customer, you couldn't sell [casinos] on the idea that the lights might not all be on or that the sheets don't get changed every day in the hotel room. But today, not only are people ok with it, they appreciate it. They understand that you're doing it for world-conscious reasons and not just to make more money."

— Barry Thalden,

bottom line benefits, it prevents some folks from going forward and taking that step."

Thalden Boyd is trying to get all of its clients interested and educated about green building. The most common question, Thalden said, is "where do I start?"

"There's three ways. If you're doing a project with an architect, architects have become very knowledgeable about the resources. Second, look at existing operations and find ways to become more efficient. Third, and perhaps the place to start, is the U.S. Green Building Council."

Moore noted that those involved with green strategies are qualitatively different from traditional builders and architects in that people are very willing to share their stories—not only what's worked, but what hasn't. "Sometimes you do take a wrong turn," she said.

Additionally, the USGBC offers a wealth of education, and local chapters are a great place to start.

"The chapters provide one- and two-hour educational courses that can get you oriented. From the building perspective, we have a new site called [www.greenbuild365.org](http://www.greenbuild365.org). Then, in terms of getting a really big dose and a broad perspective on what can be done with green buildings, we offer the Green Build Conference and Expo every year. This year, it's Nov. 18-21 in Boston."

There are also a number of companies that provide green goods and services, such as EGM Green, which designs eco-friendly casino furniture like gaming tables and chairs. Another furniture company, Vivavi, was founded by Josh Dorfman, who also has his own environmentalism show on Sirius satellite radio called the Lazy Environmentalist ([www.lazyenvironmentalist.com](http://www.lazyenvironmentalist.com)).

"Green is not rocket science. A lot of it is just common sense," Dorfman

said. "The biggest challenge is to demystify it for people so they can figure out they need more insulation and more efficient light bulbs. There aren't magic things that happen with green. It's just developing a strategy that saves money and helps the environment. We're going to help you become more efficient. When you approach a client like that, they get really excited."

Thalden said for businesses, there are really three categories of green strategies: "There are things which don't cost any money at all, which we call smart design—things like designing buildings in relation to the sun, using non-detergent soaps and powders, there's a long list.

"The second category are things that you spend money on but have a very quick payback, such as changing out thermostats or having to use your door card to turn on the electricity in your room.

"The third category costs money and there is some payback down the road, but you're doing it because you want to save energy and help the environment. Solar panels are a great example of this."

With building projects, Penta's Ehret said that while the LEED certification process can sometimes be complicated, the burden is on the designer and contractor. The project's owner, by choosing to go green, enjoys immense cost-savings and greatly enhanced life-cycle costs.

But once any effort is undertaken, Dorfman warns against overdoing public relation efforts for the sake of publicity.

"Saying you're now a green business just because you changed a few light bulbs isn't honest and in the end it will hurt your business," he said. "The best thing to do is to let everyone know that you're trying something and you'll keep trying new things in order to be more eco-friendly. People respond to that and appreciate the honesty and effort."

**CJ**