



# Business Partners

Fall 2006 | A newsletter to inform the customers of Roseville Electric

## Roseville Utility Exploration Center Puts Sustainable Practices into Action

Many people, including Roseville residents, have a strong interest in reducing the use of limited natural resources by applying sustainable practices to their daily lives—and teaching their children to do the same. Sometimes referred to as “cultural creatives,” the group is estimated to make up about 30 percent of the adult population in the United States. With rising fuel prices, dwindling resources, signs of global warming, and other indicators prompting change, this green segment appears to be at the leading edge of a larger long-term trend.

### Moving ideas into actions

The City of Roseville shares that concern for the future and is a strong proponent of sustainable design, building and living. The development of the new Mahany Park Complex with sports venues and a 30,000 square foot library and technology center puts those ideals into practice in one of the region’s most innovative facilities and is expected to become the first LEED-certified new construction project in Placer County (see sidebar on page 2). From the soccer field built over thousands of crumbled recycled tires, to its recycled wastewater irrigation system, to a library elevator that applies innovative and award-winning technology, to flooring made from rapidly renewable resources—every aspect of the facility’s design incorporates green building principles.

### Learning through exploration

Roseville Electric and Environmental Utilities have teamed up to create a learning center from the facility through a 5,000-square-foot indoor Utility Exploration Center (UEC) surrounded by additional outdoor learning venues. The UEC will provide an education and demonstration hub where children and adults can come to learn how the city is reducing energy consumption, conserving water, protecting the environment, and lessening the amount of waste going into our landfill. Through hands-on exhibits and displays, all ages will be able to learn about city programs and ways they can help preserve natural resources. The center will also feature demonstration areas and workshops for people to learn about the latest innovations in sustainable building materials, new technologies, design approaches, and practices.

“Today it’s still affordable to pump in enough air conditioning to correct poor design. But the city is looking forward to a fast-approaching future where that will no longer be true,” said Jack Paddon, principal of the project’s architectural firm Williams + Paddon. “For a city like Roseville, incorporating the exploration

*Continued on next page*



### UEC Sponsorship Puts You in Good Company

If your company is interested in reaching the growing market for sustainable products, educating children and adults about conserving and protecting natural resources, or both, becoming a Utility Exploration Center (UEC) sponsor can help you achieve that goal. The UEC is projected to become a regional epicenter for people interested in sustainable living by providing interactive displays, demonstrations, and workshops on newly emerging building practices, materials and technologies. Several types and levels of sponsorships will be available soon. To learn about sponsorship opportunities, contact Martin Bailey at (916) 774-5617 ([mbailey@roseville.ca.us](mailto:mbailey@roseville.ca.us)) or David Bradford at (916) 746-1672 ([dbradford@roseville.ca.us](mailto:dbradford@roseville.ca.us)).



Roseville Electric

### Roseville Utility Exploration Center

continued

center into a LEED-certified green building creates a direct technology transfer that allows people to see and experience products and principles in daily use.”

#### Sustainable and affordable

The facility was designed to be affordable to build and use, so that it can serve as a practical model for sustainable building practices. To balance upfront project costs against low long-term operational costs and the requirements for LEED certification, the city has put the project through rigorous value engineering processes that ensure taxpayer dollars are being spent wisely. Keeping costs within the budget required Williams + Paddon architects and interior design professionals to keep the focus on sustainability measures that lower lifecycle costs and reduce ongoing expenses.

#### Elements and innovations

Michael Lehmberg, architect and director of sustainable design for Williams + Paddon says that green buildings combine elements and systems into a cohesive whole.

“Some are basic principles that are often overlooked, like siting the building in the proper position relative to the sun. Once that’s accomplished, we add elements that let sunlight in and keep heat out—like overhangs, sun shades, skylights, low-emissive (LowE) window glazing, a cool roof, and good insulation,” Lehmberg said. “The Mahany facility is designed to let in daylight and distribute it effectively. That creates a pleasant environment and requires fewer electric lights.”

The next focus was to include a heating and cooling system with an advanced control system that will operate 35 percent more efficiently than California’s stringent Title 24 Building Code requires. Intelligent controls were also an important part of the lighting system. The high-efficiency T5 fluorescent lighting features occupancy sensors where appropriate, and also includes daylight sensors and controls that will monitor light levels, turning on and off lights to match.

Water conservation was another important consideration. Installing low-flow toilets and fixtures throughout will make it possible for the facility to consume 30 percent less water than comparable buildings. Using recycled water for irrigation will deliver additional water savings as well. In addition, an on-site stormwater collection vault that filters rainwater runoff before releasing it will protect water quality in nearby creeks.

#### Recycled or rapidly renewable

Some of the building’s more intriguing features are the products made from recycled materials and rapidly renewable resources. This fast-growing market niche offers a wealth of new products that made it possible for the design team to select eye-catching surfaces like Marmoleum® flooring made linseed oil, pine tree rosin, wood flour, and jute. The facility will also feature cork flooring, a surprisingly durable surface made of bark that can be harvested every nine years from living trees. Carpet tiles used in place of wall-to-wall carpeting will allow inexpensive replacement of worn or stained sections. Furnishings will also incorporate recycled or renewable resource

products wherever they make good economic sense. And bathroom countertops made from recycled glass and concrete are certain to generate interest, as well.

“One of the best ways to encourage people to use recycled and renewable building products is to show how attractive and versatile they’ve become,” said Lehmberg. “But there are many other recycled materials in the building that won’t catch anyone’s eye. The acoustic tiles, for example, are made from recycled ceiling tiles and the structural steel contains a high recycled content.”

#### Healthy buildings, happy people

The quality of the environment the building provides is an important part of the LEED certification process. The program aims to protect the people who will work in and use the Mahany facility. Specific types of paints, sealants, adhesives, carpets, and building materials were selected because they give off low or no odors or volatile organic compounds (VOCs).

“The goal of LEED certification is to consider all aspects of how a building will affect the people who use the building and the present and future environment. When it’s complete, the Mahany facility will provide healthy indoor air quality, create minimal impact to the local environment, conserve water and energy, include locally manufactured products to reduce hauling, and incorporate materials made from recycled or renewable resources,” Lehmberg said. “And, of course, the Mahany Library and UEC will purchase its power through Green Roseville, Roseville Electric’s renewable energy program.”

## What Is LEED Certification?

Leadership in Energy and Environmental Design (LEED) is a voluntary building certification program that defines high-performance green buildings, which are more environmentally responsible, healthier, and more profitable structures. LEED was created to establish a common standard of measurement for what constitutes a ‘green’ building. LEED serves as a design guideline for green building and offers third party validation of a building’s green features.

In addition, the USGBC explains that “LEED provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.”

LEED certification is based on a point system covering the five areas. The number of points acquired and verified by a LEED reviewer determines the level of certification: Certified, Silver, Gold or Platinum. Presently, there are fewer than 500 LEED-certified new construction projects.



## New Lighting Reduces Energy Use and Employee Stress

When the city's Corporation Yard building was first constructed as a one-story building in 1993, its large metal halide light fixtures offered a viable choice for energy efficiency. The addition of two mezzanine levels turned the bright metal halide lights into blinding nuisances for employees who looked directly into the fixtures from their upper-level offices. Newer lighting technology also made the 20 fixtures needlessly expensive to operate.

The city worked with Doug Coleman of Cal Lighting to come up with a better solution that would lower energy costs and eliminate the employee discomfort caused by the old fixtures. "We looked into different suspended lighting solutions," says Coleman, "but the installation costs were extremely high. Instead, we disconnected the ceiling fixtures and mounted new fixtures to the top of ground-level cubicles. The fixtures were simple to install and allow employees to turn them off when daylight is sufficient. The fixtures can also be moved easily if the city decides to rearrange the cubicles."

The T8 Winglites from Axis Lighting also produced dramatic energy savings compared to the 400-watt metal halide lights that remained on constantly. Energy use plummeted from 8,000 watts to about 2,600 watts, without taking into account that many employees don't turn on the lights if the sun is shining.

"This is a more elegant solution," said Facility Manager Dan Allen. "Employees appreciate the new lights and we're saving more than 5,000 watts of electricity, which translates directly to lower energy costs."

## Five Reasons to Design and Build for Energy Efficiency

If you are planning a new construction or major remodeling project, consider these reasons to include energy efficiency measures:

1. Investing less than 2 percent of construction costs in energy efficiency can result in savings of up to 20 percent or more over the building's life.
2. Better zoning and a more efficient HVAC system can increase employee and customer comfort and reduce complaints.
3. Shade trees can cut energy costs up to 15 percent when properly placed. (The Roseville Shade Tree Program provides free trees to qualified commercial projects.)
4. A cool roof can reduce your summer energy costs by 20 percent.
5. The most important reason...Roseville Electric will provide a rebate of up to \$400 per kW saved. To earn the highest rebates, incorporate energy efficiency early in the project's planning stage.

Early planning also makes it much easier to take full advantage of energy-efficiency measures and can reduce your costs considerably.

Our New Construction Program provides rebates for lighting, mechanical systems, building envelope and whole building measures. To qualify, Title 24 reports and categories must be 10 percent better than required.

Don't forget to ask about our Solar Electric Generation Program for rooftop systems! For more information contact Mark Riffey via e-mail ([mriffey@roseville.ca.us](mailto:mriffey@roseville.ca.us)) or call 746-1667.

## Energy Efficiency Rebates Are Still Available

With the summer heat behind us, now is the perfect time to upgrade to new energy-efficient measures and systems. There are still rebates available for new lighting, heating and air conditioning, and chiller retrofits. We can also work with you to create a customized rebate program if you have an idea of how you can reduce your energy load. For more information, visit the commercial rebate section at [www.rosevilleelectric.org](http://www.rosevilleelectric.org) or contact Kris Blair at 774-5581 or [kblair@roseville.ca.us](mailto:kblair@roseville.ca.us).



Manager Steve Anderly (L) and owner Bobby Coyote (R) accept their Green Roseville Certificate.

## Thinking Green!

We want to thank Bobby Coyote for choosing Green Roseville for his Dos Coyotes Restaurant. The restaurant, located at 2030 Douglas Boulevard, is making a conscious choice to support the Roseville community and the environment by enabling Roseville Electric to buy the amount of power it uses from renewable wind and solar resources.

“Dos Coyotes is excited to partner with Roseville Electric as a Green Roseville member. Dos Coyotes remains committed to the environment and is happy to help out,” said owner Bobby Coyote.

To become a Green Roseville business partner visit [www.rosevilleelectric.org](http://www.rosevilleelectric.org) or call 79-POWER.

## REP Scheduled to Open in 2007

Next year, the new Roseville Energy Park will be ready to start initial operations. The 160-megawatt facility, expected to produce 40 percent of the city's electricity needs, has undergone a year-long site preparation and the switchyard is now taking shape. Construction is nearly complete on the heat recovery steam generators and installation is underway on the two gas turbines and the steam turbine and generator. In addition, 20 new Roseville Electric employees have completed an extensive training program that began this summer.

The new power generation facility features the best available technology to produce electricity and reduce emissions. Owned and operated by Roseville Electric, the REP is located on 12 acres next to the City's Pleasant Grove Wastewater Treatment Plant to provide convenient access to recycled wastewater that will be used in the cooling process.

The REP is Roseville's first electric power generating facility and one of only a few such facilities currently being built in California.

RECYCLED PAPER

**BUSINESS PARTNERS** IS PUBLISHED QUARTERLY  
FOR ROSEVILLE'S BUSINESS COMMUNITY BY  
ROSEVILLE ELECTRIC, @2006. COMMENTS AND  
SUGGESTIONS ARE WELCOME—PLEASE SEND  
TO THE ATTENTION OF VONETTE MCGAULEY:  
2090 HILLTOP CIRCLE  
ROSEVILLE, CA 95747-9704  
916 797-6937 | 916 774-5220 TDD  
916 774-5428 OUTAGE HOTLINE  
FIND US ON THE WEB:  
[WWW.ROSEVILLEELECTRIC.ORG](http://WWW.ROSEVILLEELECTRIC.ORG)



PRSRRT STD  
US POSTAGE PAID  
SACRAMENTO, CA  
PERMIT NO 618