# PCH GROWING Green

PHOENIX CHILDREN'S Hospital®

*Utilizing sustainable design principles, thoughtful green construction techniques and preparing for environmentally friendly operations, the Phoenix Children's Hospital expansion is setting a new benchmark in sustainable health care design and development.*

*Along with its construction partners, design architects HKS Inc. of Dallas and general contractor Kitchell of Phoenix, Phoenix Children's has built one of the most innovative and environmentally sound children's hospitals in the nation.*


*Main Entrance of the new Phoenix Children's Hospital*

Phoenix Children's Hospital is one of the country's 10 largest healthcare facilities for children.

With the rapidly growing pediatric population in Arizona, the hospital is scheduled to open its $538 million expansion this June, which includes the new 11-story patient tower that will nearly double available beds by 2012.

The hospital not only provides a healthy future for its patients with this new facility, the building uses sustainable practices in its design, construction and operations that supports a healthy future for our community.

PHOENIX CHILDREN'S Hospital®

11-0072

# *Edwin and Nancy Van Brunt Central Energy Plant*

At the heart of the Hospital's sustainability effort is the Edwin and Nancy Van Brunt Central Energy Plant (CEP) that now powers the 34-acre campus in the heart of Phoenix. This high efficiency CEP features an 800-ton water-to-water heat pump chiller, a technology widely used in the Middle East. In fact, Phoenix Children's CEP employs the first application of the water-to-water heat pump chiller in a health care facility of its size in the United States. This innovative technology will translate to substantial energy savings for the Hospital, in addition to boosting Phoenix's conservation efforts overall.

The APS Solutions for Business program awarded a $463,737.50 incentive payment – the program's largest gift ever – to the Central Energy Plant project for its efforts to improve energy efficiency. Over 600 APS customers have participated in the program since 2006. These customers will save $327 million in energy costs, cut 2 million tons of greenhouse gas emissions and save 1 billion gallons of water over the lifetime of their measures.


*Edwin and Nancy Van Brunt with CEO Bob Meyer*

## *Energy Plant Results Include:*

1. **Conserving of 5.6 million gallons of water annually (the equivalent of the water needs of 120 households)**
2. **Reducing discharges to the sanitary sewer system by 600,000 gallons per year**
3. **Reducing natural gas consumption by 70 percent**
4. **Saving nearly $11 million in energy and operating costs over 15 years**

## *Maximizing Energy and Water Efficiency*

- In patient rooms, views of the mountains on both sides of the Valley are maintained with high-performance low-e windows and sun-shading screens to help minimize solar heat gain.
- The exterior lighting is designed to reduce light pollution.
- Combined with an efficient mechanical system design, the new facility uses 20 percent less energy than maximum capacity required by code.
- Installation of low-flow plumbing fixtures with automatic flushing sensors reduces water use in the new building.

*Private patient rooms have ample space for families and views of the Valley*


*A three-story atrium lobby welcomes patients, families and visitors*

## *Connecting with our Environment*

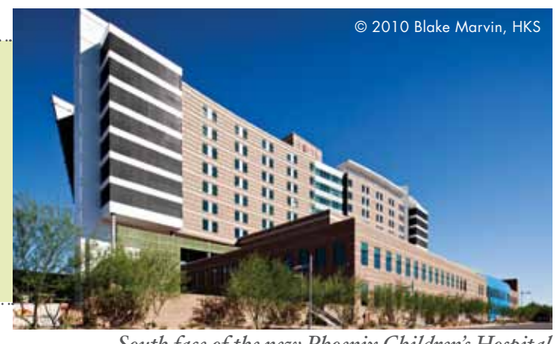
- Phoenix Children's Hospital has planted indigenous shrubs and trees to create exterior places of respite.
- Local flora line the sidewalks and keep visitors cool and reduce solar heat gain.
- An expanded cafeteria, roof garden, indoor areas with natural views and other tranquil spaces on the new campus help keep employees, patients and families on-site and off the road during heavy traffic times.
- The new facility offers convenient bike storage, a staff locker room in the basement of the new tower and preferred parking for carpool and alternative-energy cars.

## *Protecting Indoor Air Quality*

- No mercury products or urea-formaldehyde resins were used in construction.
- The new cooling system uses non-CFC refrigerant which prevents ozone depletion.
- Recycled flooring products and low-VOC paints and sealants ensure air quality.

## *Corporate Social Responsibility*

- Taking the lead in sustainable construction, the project team created a paperless strategy where portals and online distribution of materials sent to subcontractors save paper, time and money.
- Kitchell has conducted a large effort in recycling. More than 80 percent of construction waste was recycled, which keeps a significant amount of materials out of landfills.
- In a region where dust control in the streets and air can be quite challenging during construction, the site took extreme measures to reduce the effects of dust on the neighboring community.




*South face of the new Phoenix Children's Hospital*