The physics inside may be high-energy, but Berkeley Lab’s new User Support Building (USB), adjacent to the domed Advanced Light Source (ALS), is loaded with state-of-the-art energy-saving features.

The User Support Building opened in September 2010. It was built to support staff and visiting scientists who conduct experiments at the ALS, which generates one of the world’s brightest sources of X-ray beams for state-of-the-art research in materials science, biology, chemistry, physics, and the environmental sciences. Each year some 2,000 users from across the nation and world conduct research using this unique facility, and their work conducted here has been well recognized including awards of Nobel prizes.

The User Support Building has been designed to use 47.1 percent less energy than American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 90.1, the national standard for energy efficient buildings, would allow. An application for LEED Gold certification has been submitted.

**User Support Building**

Situated of the User Support Building adjacent to a shuttle stop and the primary user destinations: the ALS, the Guest House lodging, the Lab Commons with its dining, banking, and meeting facilities.

- Daylighting, High-R-value insulation, a “cool roof,” energy efficient lighting
- Taking advantage of our mild climate, all offices have operable windows, space heating and cooling systems respond to open windows and unoccupied offices to help maximize overall energy savings
- A heat-recovery system in the Computer Server Room that redeploys waste heat for productive use elsewhere in the ALS complex
- A Flexible, 9,000 square foot assembly space designed to be quickly adapted to changing needs
- A low-water use design throughout the facility and landscaping
- Use of renewable materials and use of simple polished concrete for flooring
- Recycling of construction waste

**A User Support Facility Full of Green Features**