

CASE STUDY AUSTIN ENERGY SYSTEM CONTROL CENTER

GREEN BUILDING RATING: $\star \star \star \star$



"The AE System Control Center reflects Austin Energy's leadership in green building by adapting an existing building to meet technologically advanced needs of a mission critical facility. The most satisfying experience was demonstrating the great value that Commissioning can contribute when the owner, designers, and contractors embrace and support it."

- Ricardo Troncoso, ACR Engineering, Commissioning Authority





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GREEN BUILDING RATING: * * * *

TOP FEATURES:

- » Thermal energy storage system enables the facility to shift peak electricity demand to the utility's off-peak period, saving money and mitigating peak demand events.
- » Monitored data demonstrates that the 523.6 kW solar system can displace up to 60% of the total building power.
- » The project, which consists of a major renovation of an existing building and an addition, maintained over 95% of the existing structure and envelope.
- » The owner required rigorous commissioning of all building energy systems and the building envelope to ensure the building's complex systems were properly installed and operate as intended.
- » Salvaged wood is featured extensively on the interior and exterior.
- » The main building includes a large employee break area, fitness center, and patio shaded with a green screen, encouraging employee health and wellness.

PROJECT DESCRIPTION:

The Austin Energy System Control Center (AE SCC) was commissioned to replace the Energy Control Center building in downtown Austin. Austin Energy, the project owner, required an advanced, 24/7 mission critical facility. AE SCC houses a state-ofthe-art transmission and distribution control room, Corporate Security, IT including the Corporate Data Center, Real Estate Services and various support functions. A new building (MRAB), adjacent to the renovated main building houses the Maintenance and Restoration Group.

ENVIRONMENTAL FEATURES:

Austin Energy built a technologically advanced facility that supports system reliability, while contributing to the utility's energy conservation and peak demand reduction goals. The large solar system provides electricity on sunny days when demand is highest. The central HVAC system is tied to a 380,000 gallon thermal energy storage system that enables peak electricity demand for the project to occur during off-peak hours. Extensive use of LED lighting reduces electrical consumption and space cooling associated with internal heat gains. Additionally, numerous lighting control devices minimize power consumption through use of occupancy sensors, light sensors and dimmers.

AE SCC personnel monitor essential utility system operations, including Austin Energy's transmission and distribution system, and must be ready for prolonged periods of intense activity under critical conditions. The control room and support spaces optimize occupant comfort and health through an underfloor air distribution system and dimmable overhead lighting. An outdoor patio, shaded by a green screen, breakroom and kitchen, and employee fitness room encourage wellness and provide staff with space for respite.

Low flow plumbing fixtures help reduce indoor water consumption by 20%. The project will also be connected to the Montopolis main "Purple Pipe" reclaimed water system, which will eliminate the use of all potable water used for landscape irrigation.

More than 3,790 tons (91% of construction waste generated) were diverted from the landfill and building materials contain more than 20% recycled content.



Thomas McConnell

PROJECT PROFILE

Zip Code » 78741 Neighborhood » Pleasant Valley Building SF » 173,600 sq.ft. Main Building, 18,600 sq.ft. MRAB Addition Rating Date » 2013

Owner » Austin Energy

Construction Inspection » City of Austin Public Works Department Contract Management » City of Austin Contract Management Department Legal » City of Austin Law Department Architect » Ellerbe Becket/AECOM Construction Manager » DPR Construction MEP Engineers » Ellerbe Becket/AECOM, Joshua Engineering Group Structural Engineer » Jose I. Guerra Civil Engineer » Raymond Chan & Associates Landscape Architect » MWM DesignGroup LEED Consultant » Office of Local Architecture Commissioning Authority » ACR Engineering

Austin Energy Green Building is leading the building industry to a sustainable future with green building ratings and educational/professional development services.

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