Developing an Attainment Model for LEED Re-certification at Pauley Pavilion

UCLA Institute of the Environment and Sustainability

UCLA Sustainability Action Research

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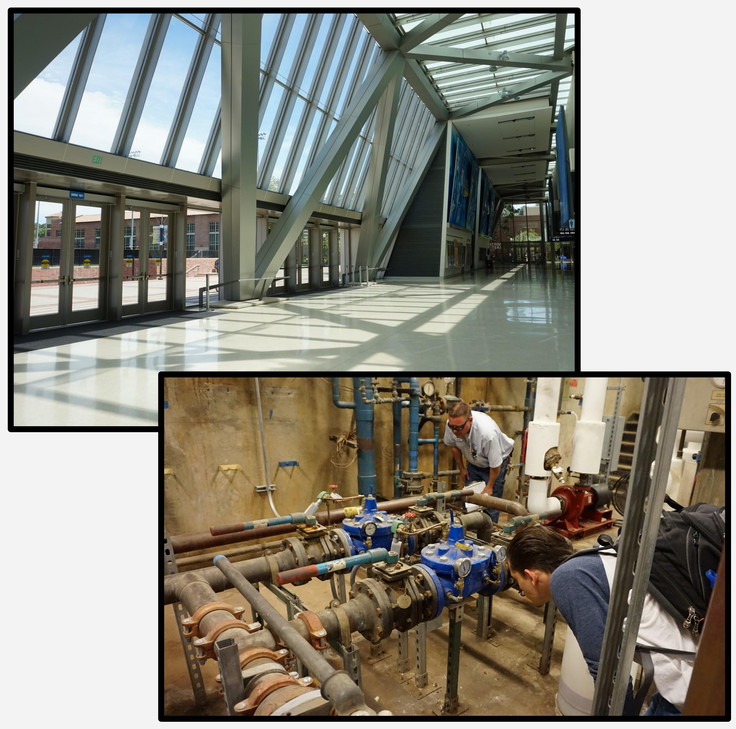
Todd Lynch; Principal Project Planner, UCLA Capital Programs

Research Objective

To make Pauley Pavilion more energy-efficient and sustainable through utility data analysis and LEED v4 O&M* compliance.

*Leadership in Energy and Environmental Design v4 for Operations and Maintenance.



Methodology

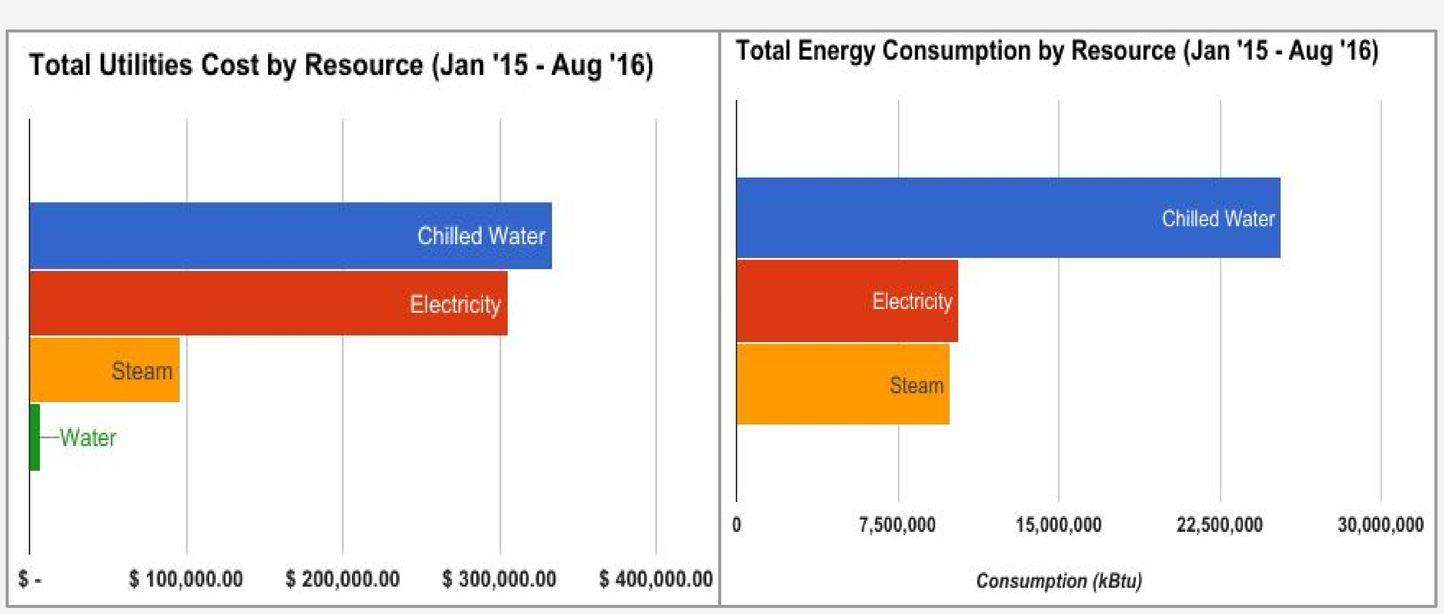
- Cross-reference materials from Pauley Pavilion's initial certification under v2.2 New Construction standards with the requirements of new v4 O&M* standards.
- Analyze Pauley Pavilion's utility records and conduct a site visit to better understand building operations.
- Evaluate building commissioning plans for processes such as green cleaning practices and waste management.
- Create a LEED certification attainment model that includes cost estimates for each LEED rating level (Certified, Silver, Gold, and Platinum), along with descriptions of associated assumptions made and relevant knowledge gaps.

Pauley Pavilion

UCLA's on-campus arena, home to 5 UCLA Division I sports teams and events like Spring Sing and Dance Marathon.

Opened in 1965; later renovated from 2010-2012 to seat 13,800; certified LEED Gold under New Construction standards.

Renovations include an exterior glass concourse, 1,000 additional seats, and the Pavilion Club.



Utility Analysis

Chilled water accounts for the largest share of Pauley Pavilion's energy consumption and utility costs.

Pauley Pavilion draws steam and chilled water from UCLA's on-campus cogeneration plant for heating and cooling.

LED lighting retrofits and occupancy sensors have helped reduce the building's electricity consumption.

Conclusions

- Pauley Pavilion's utility record-keeping could be improved; notably, the units across all meters should be specified.
- Increased steam consumption during the summer months may be partly attributable to humidity control measures (e.g. decreasing condensation on the arena floor).
- Water is an undervalued resource, and motivation for water-efficiency improvements depends on directives and mandates from the University of California and external governments.

Acknowledgements

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