



# University of Utah



## THE OPPORTUNITY

Serving more than 31,000 students, the University of Utah is the state's premier institution for higher learning. Its facilities comprise 298 buildings across more than 1,500 acres. The University has adopted long-range plans to make the campus even more environmentally friendly and to become carbon neutral by 2050. Starting in the late 1990s, the University has improved campus facilities by focusing on energy use and demand on site. They sought a reliable energy expert team who would not only address known needs but help plan for ongoing growth of the student population and opportunities for expansion over time.

## THE PARTNERSHIP

Starting in 1998, the University entered into a partnership with ENGIE Services U.S. (ENGIE) to determine if enough savings could be generated to help fund all or part of a new central plant. What started out as a 13-building project scope eventually turned into an extensive project during which upgrades and improvements were implemented in 81 buildings, all under self-funding performance contracts. After completing five phases of energy efficiency work, ENGIE designed and installed a natural gas-fired turbine-generator and heat recovery cogeneration system and new substation switchgear to save energy and improve operations.

### Program Highlights

- Captured annual savings of \$1.75MM over 16 years
- Reduced carbon footprint to successfully align program with the University's Climate Action Plan
- Improved reliability of all campus-wide facilities with no disruption to campus services

### Technical Scope

#### Phase I, II and IV

- High-efficiency lighting system
- Comprehensive HVAC improvements
- New and upgraded energy management system

#### Phase III

- 6,800-ton chilled water plant

#### Phase V

- New 210 mmBTU high-temperature hot water plant

### Phase VI

- New 6.0-MW natural gas turbine

#### Technical Scope (continued)

- New 100 MMBTU/hr waste heat recovery unit (WHRU)
- New nitrogen blanketing system
- Demolition and removal of two hot water generators
- Asbestos removal and abatement (boilers and piping)
- Substation upgrades

### Phase VII

- North Campus chilled water plant with 3.4 million gallon thermal energy storage

## 3 DIMENSIONS OF IMPACT

ENGIE is committed to building three dimensions of impact in every customer's future:



**Supporting People**



**Saving Money**



**Protecting the Environment**

From the first energy savings performance contract in 1998 through the North Campus chilled water plant project completed in 2011, ENGIE and the University staff have worked together to make significant and lasting improvements to the campus facilities at the University of Utah. To date, the projects have saved the University over \$27 million in energy costs, \$5.9 million more than originally projected. By modernizing campus infrastructure, lowering utility and operating costs, and improving the overall reliability of campus facilities, the energy program has increased occupant comfort while successfully meeting the University's goals to modernize and become more self-sustainable.