

Contact: Joan Racki

**TIER FACILITIES CASES**

**Action Requested:** Receive an update on the TIER facilities business cases.

**Executive Summary:** The TIER study identified two facilities cases for further study:

- FAC-03 Reduce utilities and operational costs by limiting use of buildings during evenings and summer (UNI), and
- FAC-04 Reduce energy consumption by investing in energy management initiatives (ISU and UNI).

The following summarizes the status of these cases; Iowa State University and University of Northern Iowa personnel will provide further information, including the status of energy management initiatives, at the Committee meeting:

**FAC-03 Reduce Utilities and Operational Costs by Limiting Use of Buildings During Evenings and Summer**

The University of Northern Iowa reports that this initiative refined work which had been in place for many years. A team met with every academic department head and the majority of department heads in other units. Options discussed included the changing of building set points to shut off or reduce heating and air-conditioning in the evenings and summer. Evening schedules were already in place. Potential savings opportunities were identified for summer; those schedules are in place. Realized savings will not be known until end of summer. This case is complete.

**FAC-04 Reduce Energy Consumption by Investing in Energy Management Initiatives**

**Iowa State University**

In FY 2014, the University's general fund buildings consumed almost \$27.6 million of utility services for electricity, steam, and chilled water. Thirteen buildings collectively consumed 50% of those utility resources.

Under the University's Resource Management Model (RMM), building occupants are billed for their utility services. Thus, any savings generated by energy conservation efforts would be savings for the RMM units.

The University plans to undertake the following projects, proceeding as funding becomes available:

1. Quick Wins in Top 13 Energy Consuming Buildings;
2. Building Re-Commissioning;
3. Review Building Energy Plans;
4. T12 Lamp and Ballast Replacement;
5. Energy Conservation Assessments;
6. Install Occupancy Sensors
7. Laboratory Plug Loads;
8. Building Pump Check Valves;
9. Convert Constant Volume HVAC Systems to Variable Flow;
10. Develop Building Systems Master Plans;
11. Solar;
12. Energy Recovery Opportunities; and
13. Energy Efficient Motor Opportunities

University of Northern Iowa

The University of Northern Iowa has implemented a two-pronged approach to address this initiative.

The first process involves a re-commissioning operation for major buildings on campus. A technology tool was implemented that performs a diagnostic analysis of a building's systems and generates a report that highlights the portions of the system that failed to respond as anticipated. An interdisciplinary campus team deduced causes of component inferior performance, and implemented corrective measures. In addition, the team conducted the sequence of operations identified by the original engineering specifications and ascertained if systems were still working as designed. The analysis is complete for two buildings.

The second process was an identification of specific projects. This is a continuation of an activity which was begun several years ago. Eleven specific projects were identified in the TIER case presented in October. During planning stages, two additional projects were identified and added to the list. In total, four projects have been completed, three are in progress and the remaining ones are awaiting funding.