

St. John's University

Chapter 3: Communicate Regularly with Stakeholders

Strategy: Track energy usage and the success of energy efficiency projects and re-commission

Founded in 1870, St. John's University (SJU) is a private, Catholic and Vincentian University with over 21,000 students. Since committing to the Challenge in 2007, SJU has reduced its GHG emissions intensity by more than 23 percent through a combination of large-scale capital improvements, re-commissioning and new energy efficient construction. In order to ensure that the energy efficiency improvements have delivered their expected cost savings and GHG reductions, as well as maintain their effectiveness, SJU has put into place a robust energy monitoring system and has made ongoing re-commissioning a top priority.

In 2009, SJU conducted an ASHRAE Level III investment grade audit of existing university buildings to discover the biggest opportunities for energy efficiency improvements. After the audit was complete, SJU assembled an Energy Capital Project Plan and received approval from its Board of Trustees to borrow \$20 million for project implementation. Using this funding, SJU employed a diverse set of improvements. While the shortest returns on investment came from projects like the lighting and steam trap maintenance, it was the new high efficiency chilled water central plant that accounted for almost two-thirds of SJU's GHG reductions from capital investment. Currently, the \$2.1 million in annual savings from energy projects offsets the cost of debt for these projects. Aside from the projects in the Energy Capital Project Plan, SJU also invests millions of dollars annually in capital renewal and replacement. Some of these upgrades include: motors and speed drives, central heating plant components, LED light bulbs, and instantaneous hot water heaters.

SJU has proactively tracked the success of these projects by developing a utility tracking system that helps show the effects of energy efficiency investments by graphically displaying cost-savings as well as energy and GHG reductions from utility accounts. Every building is also equipped with an energy dashboard that gives building operators a tool to compare energy consumption profiles and peak demand information. These dashboards help make the University community aware of energy consumption and help engage students in behavior change campaigns like the Campus Conservation Nationals – an annual energy reduction tournament for the University's residence halls.

SJU also trains their facilities team to understand how to effectively operate equipment to advance the energy performance of both new and existing building systems. In 2015, some of SJU's facilities staff achieved certification in 'Building Re-Tuning' through CUNY's Building Performance Lab. This training helps staff learn specific strategies to "tune-up" buildings for optimal and consistent performance. In particular, the training helps develop the technical skills needed to examine trend log data in HVAC systems to analyze how systems are performing resulting in identifying and solving problems which lead to significant energy savings and GHG reductions.

Key Highlights:

- Capital investment of \$20 million in Energy Capital Project Plan.
- Utility tracking system and building energy dashboards to monitor building performance.
- Staff training in CUNY Building Performance Lab's 'Building Re-Tuning' training.