

## Utilities Operations achieves savings and reductions

### **Challenge**

Due to its sheer size, and the fact that it is a comprehensive research university, Rutgers University utilizes considerable energy. The total annual utility costs are \$90 million. The challenge is to reduce energy consumption and our carbon footprint. Doing so will also reduce the amount we spend on energy.

### **Approach**

The first task was to create a sustainability model for University Facilities. Energy reduction was a part of that model. The approach was to use less energy, install more efficient equipment, and incorporate renewable energy. One of the first projects was to replace standard efficiency motors with premium efficiency motors. Additionally, an audit was done on all lighting for Rutgers (legacy). Under the PSEG direct install program 31 buildings were retrofitted with new lighting. Several buildings were upgraded with new lighting and equipment through the NJ Clean Energy program. These programs had a less than three year payback. As for renewable energy, Rutgers University installed two large Solar Energy systems: a 1.4 MW solar farm, and an 8 MW solar canopy over 29 acres of parking. It also has a 700 ton geothermal HVAC system for its New Business School.



### **Results**

In 2009 Rutgers University signed a memorandum of Understanding with the Environmental Protection Agency. As part of the MOU the University reports its greenhouse gas usage and reduction. To date, according to the EPA report, the University has mitigated a cost of \$41 million dollars and reduced its carbon footprint by 261,080 Metric Tons of CO<sub>2</sub> equivalent. This is the equivalent of reducing carbon dioxide emissions from the burning of 1,565 railcars of coal or a coal train stretching 24 miles long.