



1111 3rd Ave, Seattle Energy-based Control System Optimization

Project Overview

With 34 Stories and more than 580,000 square feet, 1111 Third Avenue is an icon of the Seattle Skyline. This high profile building also had a high energy profile. The building owner and property manager partnered with ATS as their energy services professional to increase building efficiency. ATS developed a three-year energy conservation plan inclusive of capital efficiency projects and operational optimization measures.

Seattle City Light Pay for Performance

ATS was one of three companies chosen to be part of Seattle City Light's (SCL) Pay for Performance (PfP) program. PfP was a three-year pilot program designed to provide energy efficiency incentives while ensuring projects deliver energy savings year over year. PfP required monthly performance verification by comparing the building's energy consumption on a 15 minute interval basis to a baseline energy model with adjustments for weather and other building variables. To manage the PfP program, 1111 Third Avenue turned to ATS's Energy Group.

4,564,891 kWh

**Year 1 - 3 energy savings
15% 3 year reduction**

\$849,070

**Year 1 - 3 electrical bill
savings & utility incentives**

26%

Occupancy
Increase

15%

kWh
Decrease

"1111 Third Avenue is currently going through a transformative architectural renovation. The SCL Pay for Performance program and ATS allow me to invest in energy conservation and take the building through a transformative energy efficiency renovation as well."

- Bruce Hoffman, Senior Chief Engineer, 1111 Third Avenue

Energy Conservation Measures

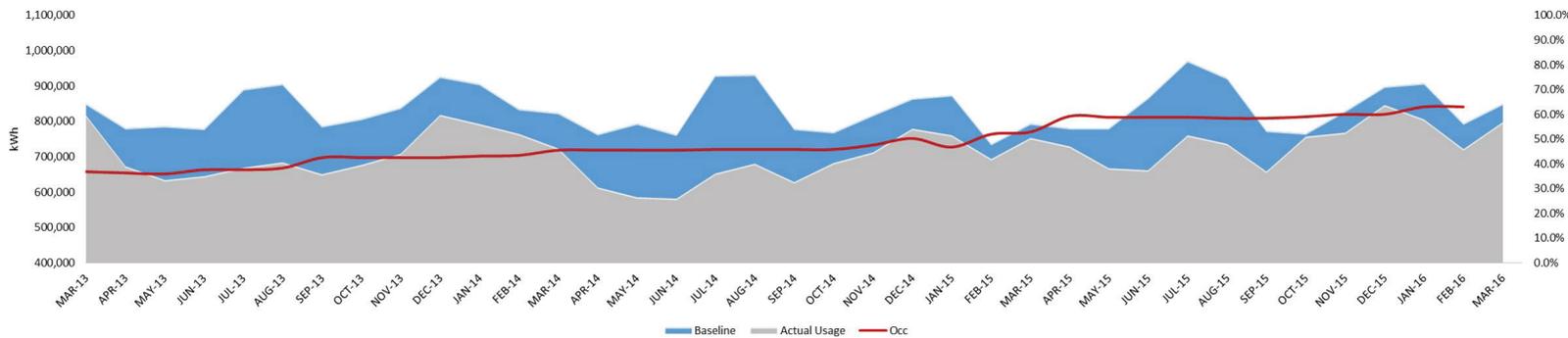
Floor Isolation Dampers	High Efficiency Chiller	AHU VFDs
Supply air isolation control dampers installed to eliminate conditioned air delivered to unoccupied floors.	Aging 550 ton chiller replaced with new high efficiency chiller. New high efficiency chiller used as first stage of chilled water cooling.	Variable frequency drives added to 12 AHU variable-pitch Joy axial fans—1,060 total HP.
Variable Flow Plant Mods	Optimized Plant Sequences	Garage Lighting Upgrades
1,100 ton chilled water plant modified from a constant flow to a variable flow system.	Optimized CHW variable flow, CHW reset, CW reset, and cooling tower control sequences implemented.	Garage lighting replaced with high efficiency lamps and occupancy sensors added to perimeter lights.

Savings Details

Since ATS began implementing energy conservation measures at 1111 Third Avenue the energy consumption has dropped considerably, despite a 26% occupancy increase. 1111 Third Avenue now enjoys a smaller ecological impact and greater ongoing financial savings.

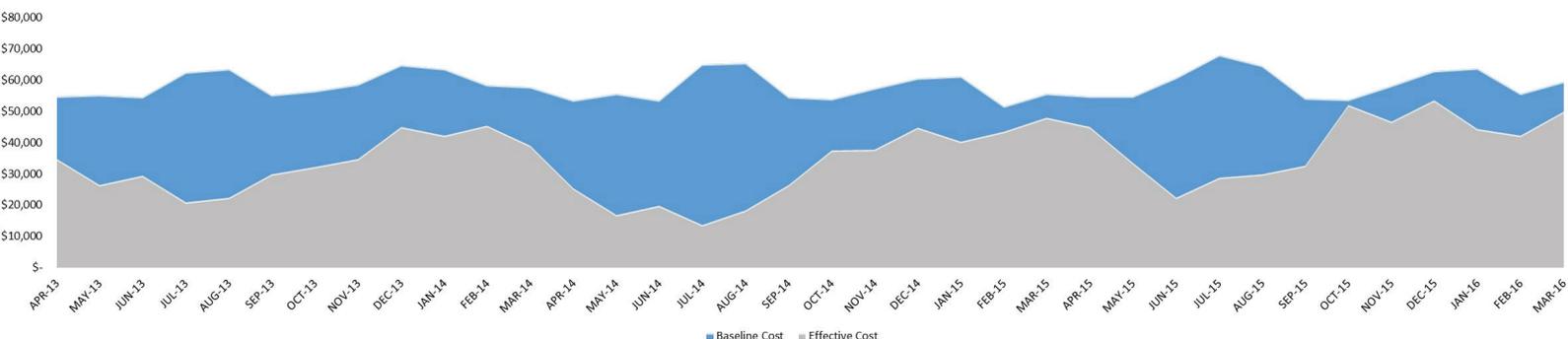
The following graph shows 1111 3rd Avenue's 3-year monthly consumption (blue) compared to the weather normalized baseline year monthly consumption (grey).

Total energy savings for performance years 1 - 3 was 4,564,891 kWh.



The following graph shows 1111 3rd Avenue's 3-year monthly effective utility cost (blue) compared to the weather normalized baseline year monthly utility cost (grey).

Total financial savings for performance years 1 - 3 was \$849,070



About ATS

ATS, established in 1986, specializes in custom engineered and installed Building Automation Systems control solutions for buildings' mechanical and electrical systems, allowing owners to reduce energy consumption and maximize effectiveness of facilities management personnel. ATS has offices in Washington, Idaho, Montana, Colorado and Alaska. Contact your local ATS representative to find out how you can start running your building more efficiently and economically. Visit www.atsinc.org to find the location near you.

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