



# Save Money and Energy With Incentives for Major HVAC Controls Upgrade With City Light

## Financial Incentives for Commercial Buildings Owners Looking To Save on Their Energy Bills

City Light offers financial incentives of **\$0.36/kWh** (up to 70% of installed cost) for completing a major HVAC controls upgrade in your building. Control systems are a sound long-term investment that can lower your energy bills for years to come. Our incentives help make them more affordable by reducing your upfront costs.

### Benefits

- Improved comfort and performance
- Guaranteed base incentive after installation and verification
- Performance incentive after 12 months and meeting minimum savings target
- Lower energy costs, typically 10% - 15%

There is a guaranteed base incentive after installation and successful verification. An additional performance incentive is given after the controls are in place for at least 10-12 months and the minimum savings target is met.

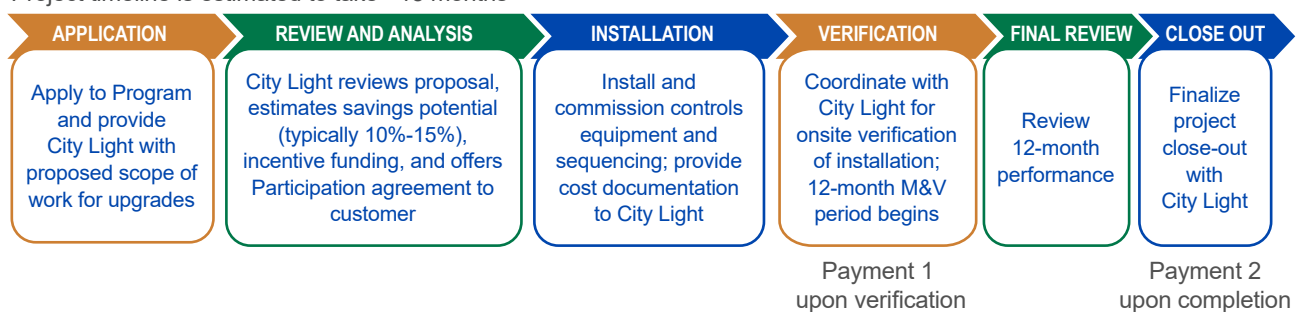
### Eligibility Criteria

- Seattle City Light electricity customer
- The building has at least 50,000 ft<sup>2</sup> conditioned space
- Annual electricity consumption correlates to outside air temperature
- Plan to complete a major HVAC controls upgrade, that includes:
  - » Install new control equipment with a web-based interface
  - » Implement at least three major energy-efficiency HVAC control sequences (listed below)

## Process for HVAC Controls Incentive

Before starting work or purchasing equipment, you must sign a participation agreement with City Light.

Project timeline is estimated to take ~15 months



### Questions or want to initiate an application?

Contact Seattle City Light Energy Advisors: [SCLEnergyAdvisor@seattle.gov](mailto:SCLEnergyAdvisor@seattle.gov) or (206) 684-3800.

More information available online, including full program requirements and application, at: <https://seattle.gov/city-light/business-solutions/large-commercial-and-industrial-business-solutions#commretroincentives>

## Measurement and Verification (M&V)

The performance period of one year will start once the controls upgrade is complete and commissioned. City Light will perform whole building analysis to calculate savings. The incentive amount is dependent on verified savings  $\geq 5\%$  and based on \$0.36/kWh saved.

## Payment

- 1. Base Incentive:** Once the project is commissioned, City Light will issue a 50% payment of the contracted incentive amount upon receiving required submittals and verification of the installed measures.
- 2. Performance Incentive:** The remaining payment will be issued upon completion of the performance period if the savings are  $\geq 5\%$  and prove to be higher than the 50% already paid.

The participant shall provide the following documents for verification of savings:

- On site verification of the new control hardware,
- Invoices showing the total project cost of labor, materials, and sales tax,
- Commissioning report,
- An as-built sequence of operation,
- Screen shots showing the new control system installed and operating.

## Major Controls Upgrade Can Include

### Scheduling

- Holiday Scheduling
- Zonal Scheduling
- Override control and tenant billing
- Night setup/setback
- Optimum start and stop
- Morning warm-up/cool-down

### Ventilation Control

- Carbon dioxide sensors
- Occupancy sensors
- Supply air volume/ outside air damper compensation routines
- Exhaust fans
- Air-side economizers
- Air-side approaches
- Night ventilation purge

### Lockouts

- Chiller system
- Direct expansion compressor cooling
- Resistance heat

### Energy monitoring

- Whole building or end-use
- kWh or demand

### Resets

- Supply air/discharge air temperature
- Hot deck and cold deck temperature
- Entering condenser water temperature
- Chilled water supply temperature
- Variable air volume fan duct pressure and flow rates
- Chilled water pressure

### Demand control

- Demand limiting or load shedding
- Sequential start-up of equipment
- Duty cycling

### Miscellaneous

- Simultaneous heating/ cooling control
- Zone-based HVAC control
- Chiller staging
- Building space pressure
- Variable speed drive control
- Heat recovery

## Case Study Data From City Light Incentivized Controls Project

### Facility Information

100,000 ft<sup>2</sup> commercial office building with multiple heat pumps serving various zones

### Project Details

Added system capability:

- Temperature setback during unoccupied hours
- DCV based on occupancy
- Optimization of equipment start/stop

### New Equipment added

- VAV controllers
- Zone sensors and discharge air sensors
- Heat pump controllers & I/O controllers

Incentive & Cost Savings - Sample Data	
Normalized Annual Consumption	1,700,000
Estimated Annual Savings (10%)	170,000 kWh/year
Incentive Rate	\$0.36/kWh
5% kWh Savings (Install Complete)	85,000 kWh
Payment 1 - Base Incentive (5%)	\$30,600
Performance savings 7%	119,000 kWh
Payment 2 - Performance Incentive (7%)	\$42,840
Total Percentage Savings	12%
Total Annual Savings	204,000 kWh/year
Total Payment	\$73,440
Total Project Cost	\$250,000
% of Cost Incentivized	29%
Avoided Costs (at \$0.10/kWh)	\$20,400