

# 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 up to 70% 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.

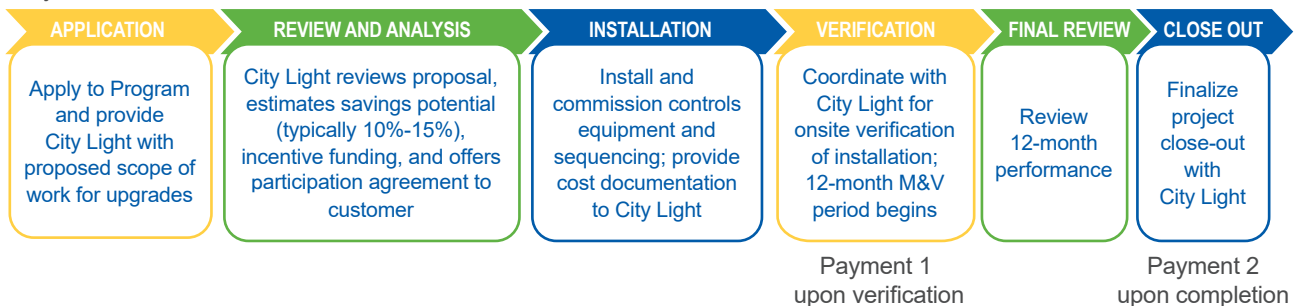
### Eligibility Criteria

- 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 \$0.23/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,
- 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 Two City Light Incentivized Controls Projects

	2018 Completed Project	2021 Completed Project
<b>Property Details</b>	>70,000 ft <sup>2</sup> office/retail in 100-year-old building	>100,000 ft <sup>2</sup> mixed use with residential in 15-year-old building
<b>Project Details</b>	<b>Existing controls adjustments included:</b> <ul style="list-style-type: none"> <li>• reset strategies</li> <li>• schedules, set-points</li> </ul> <b>New Equipment included:</b> <ul style="list-style-type: none"> <li>• VAV controllers</li> <li>• Zone sensors &amp; discharge air sensors</li> <li>• Heat pump controllers &amp; I/O controllers</li> </ul>	<b>New control system (none existed prior) installed to:</b> <ul style="list-style-type: none"> <li>• Enable alarms</li> <li>• Utilize trending</li> <li>• Schedule set-backs</li> <li>• Monitor through a graphical interface</li> </ul>
<b>Total Project Cost</b>	\$122k	\$119k
<b>Base Incentive Payment 1</b>	\$20k upon verification of installation	\$11k upon verification of installation
<b>Performance Incentive Payment 2</b>	\$20k upon one-year calculated savings	\$25k <sup>^</sup> upon one-year calculated savings
<b>Est. Annual kWh Savings</b>	170,000 kWh/yr	160,000 kWh/yr
<b>Est. Annual Avoided Costs</b>	>\$13.6k/yr	>\$12.8k/yr

<sup>\*</sup>numbers have been rounded for anonymity and ease of sharing

<sup>^</sup>final performance payment was larger than originally estimated