



*HVAC, ACCESS and LIGHTING CONTROL SYSTEMS*

# PROPOSAL

Dear Mr.

CONED released the new Rebate Incentives for 2018 ( see attachment with e-mail) and the above referenced building is a perfect candidate because the building is 100% Electric. I have never seen such generous rebates. Under the new program I can apply for 50% to 70% of the project to be paid for by the Utility.

I have worked up some numbers based on 50% of the job cost being paid for by CONED. The Electric Savings will quickly pay for the balance of the project. It seems like a no brainer.

This proposal is based on a survey that I completed in 2012.

## EXECUTIVE SUMMARY

\$ 1,424,258		Project Cost
\$ 2,070,000		2011 Electric Cost Annually
\$ 1,242,000		60% of Electric is HVAC
15%		% of Savings Annually HVAC
\$ 186,300		Electric Savings Annually( <b>Recurring Revenue</b> )
\$ 712,129		1 Time Rebate @ 50% of Project
\$ 898,429		First Year Savings + Rebate
\$ 525,829		Out of Pocket to Owner
2.82		Return On Investment ( Years)

- Note: 1. The ROI will be quicker if the building qualifies for a 70% Rebate  
 2. PEPCO will require previous 12 month utility bills to calculate actual rebate.

## TOP 5 REASONS TO INSTALL THIS SYSTEM

1. Improve overall occupant comfort
2. Save over \$ 186,300 in utility costs each year .
3. Receive a one time cash rebate of \$ 712,129 from CON ED. (Estimated)
4. Central and Remote point of control for entire HVAC system via **WEB based** color graphics
5. Reduce the building carbon footprint and help protect the environment.

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**CON ED Rebate**

PEPCO will complete all necessary paperwork and do all the leg work required to obtain the rebate. This project will be contingent on PEPCO obtaining a "Offer Letter" from CON ED detailing the amount and terms of the rebate. Customer is under no obligation to do the job. If a rebate is obtained the rebate will be assigned to PEPCO as part of its compensation. Customer to proved 12 months of Utility Bills.

**Here is what we propose:**

PEPCO proposes to furnish, install and provide on-going service and support for the installation of a DELTA Building Automation System ("BMS") that will reduce building electric costs, provide recurring cash revenue and improve tenant comfort.

**Our Scope Of Work Includes:**

1. All design engineering necessary to complete the work.
2. We include Shop Drawing, CAD Submittal, Sequence Of Operation and Operating and Maintenance Manuals.
3. Furnish and Install a DELTA [www.deltacontrols.com/products/energy-management](http://www.deltacontrols.com/products/energy-management)
4. Furnish and install solar powered wireless RF Temperature Sensor, Window Sensors, Occupancy Sensors and wireless RF relays to cycle power on and off to the regulate the Electric Baseboard Heat and A/C Units.
5. We include furnishing and installing a WIFI network through out the campus. The WIFI network will be dedicated to Tenants only. They will be given the WIFI Password.
6. We include all new plenum rated low voltage wiring where required to make system operate as designed.
7. We include BMS control Software and Hardware as necessary to meet the Sequence Of Operation.
8. PEPCO will provide an APP that will allow each tenant to control their individual HVAC.
9. Upon completion PEPCO will provide on-site training to staff on system operation.
10. We include Alarms and Trending.
11. We include 1 year Warranty

The system will be installed in 446 apartments:

Inputs

- i. Apartment Temperature ( Adjustable)
- ii. Occupancy Sensor
- iii. Window Open/Closed Sensor ( Limited to 1 window per room)

Outputs

- iv. Control Electric Base Board Heat
- v. Control A/C unit

12. Electric Meter

- a. We will arrange for CON ED to install a pulse counter on the building electric meter. The BMS will monitor the meter in real time and will display from the color graphic. The BMS will record usage and demand so profiles of usage can be examined. Programs can be implemented such as Demand Response that can substantially reduce operating cost beyond the limits of this proposal. Cost to upgrade the CON ED meter to pulse counter type with real time pulse outputs shall be by owner.

13. REMOTE MONITORING and REPORTING

- a. PEPCO will remotely monitor the new system via the inter-net from our Central Station Monitoring Center for one year after installation. Our monitoring center is staffed with skilled engineers trained in operating HVAC systems like yours.
- b. Our engineers will remotely make adjustments and changes to control settings that will improve efficiency and regulate space temperatures to achieve occupant comfort while

- maximizing kw savings.
  - c. We will set up and monitor alarms. We will e-mail operating reports with our comments aimed at improving overall operating efficiency. After the adjustments are completed we will BACKUP all the databases on to our office server.
  - d. Owner must maintain a IP internet connection to the system
  - e. We will offer a Service Agreement at the end of the first year of operation.
14. Savings Programs designed to reduce electric usage
- a. Demand Response: PEPCO will implement a reactive or preventative method to reduce, flatten or shift peak demand. Demand Response includes all intentional modifications to consumption patterns of electricity by our customer that are intended to alter the timing, level of instantaneous demand, or the total electricity consumption.
  - b. Dynamic Demand: PEPCO programming will monitor and regulate the HVAC to delay the operating cycles by a few seconds to increase the Diversity factor of the set of loads. The concept is that by monitoring the real time Kw demand, concurrent with usage, individual, intermittent loads would switch on or off at optimal moments to balance the overall system load with the supply of power, reducing critical power mismatches. As this switching would only advance or delay the HVAC operating cycle by a few seconds, it would be unnoticeable to the end user.
  - c. Optimum Start / Stop: When a setback schedule is in effect, the building experiences delays in dropping down its temperature at the beginning of the setback period, and increasing its temperature at the end of the setback period. The Optimum Start / Stop function learns the response of the system in order to calculate a start time for the heating/cooling so that the building is warmed/cooled up when the occupied period begins. The Optimum Start / Stop function increases the efficiency of the system and provides more comfort.
  - d. Soft Start or Staggered Start : This is a program designed to prevent the HVAC from all starting at the same time. The HVAC's will be started sequentially at staged intervals to prevent a surge.
15. PAYMENT TERMS: To Be Determined
- a. Utility Rebate Payments will be assigned directly to PEPCO
16. JOB COST:                      TURNKEY Project Cost.....                      \$ 1,424,258
17. EXCLUSIONS, ASSUMPTIONS and EXCEPTIONS:
- a. No Standby, Weekend or Overtime work
  - b. All labor shall be Non Union
  - c. Prevailing Wages do not apply
  - d. All new Low voltage wiring shall be plenum rated



- e. All new high voltage wiring shall be in conduit
- f. We exclude any Asbestos Abatement
- g. Customer to furnish a Capital Improvement Certificate ST124 or Sales Tax will be added (

If you have any questions please do not hesitate to call me at 631-965-1010 or e-mail me at [tlynch@pepcocontrols.com](mailto:tlynch@pepcocontrols.com) .

Sincerely,

*Timothy P. Lynch*

Timothy P. Lynch  
 President  
 PEPCO™

Approved By: \_\_\_\_\_ Date \_\_\_\_\_

Terms and Conditions:

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The following pages comprise the Terms and Conditions.

### General Provisions

- 1.A The products and services provided under this agreement shall be provided during our normal working hour, Monday through Friday inclusive, excluding holidays, unless otherwise stated in this agreement.
- 1.B This agreement, when accepted in writing by you (also referred to herein as "the Client") and approved by an authorized PECONIC Energy Products Corporation (also referred to herein as "PEPCO™", "We or "Us") representative, shall constitute the entire agreement between the two parties.
- 1.C All equipment, components and parts furnished under this agreement shall remain property of PEPCO until payment is made in full.
- 1.D If in the event, during the term of this agreement or within 90 days thereafter, you hire or in any way engage, any PEPCO™ employee who is presently performing services such as this agreement provides; compensation equal to the current annual salary of said employee will be paid by you to PEPCO™.
- 1.E This agreement shall be governed by, construed, and enforced in accordance with the laws of the State of New York.
- 1.F This agreement is limited only to controllers, controls, sensors, control actuators and control devices unless otherwise stated. This agreement does not include work typically furnished by mechanical contractors or electrical contractors.
- 1.G PEPCO will provide 2 attempts under this agreement to install temperature sensors inside the designated space. If additional trips are required customer to pay PEPCO its prevailing rates of \$140.00 pr/hr plus travel.

### Existing Equipment

- 2.A This agreement pre-supposes that all equipment is in satisfactory working condition. If we find any equipment in need of repair or replacement, we will notify you in writing of the deficiency and the proposed correction. We will not be responsible for the commissioning of our system to control your equipment until the equipment is restored to a condition acceptable to us. If no corrective actions is taken within 5 days of our notice to you of deficiency, we will consider our work complete and any additional work preformed will be invoiced at our prevailing rates.
- 2.B Customer to provide access to all parts of facility at time of installation. If customer fails to provide access and additional trip is required to complete installation, customer shall be billed at prevailing rate.

### Charges and Payments

- 3.A Invoices are due and payable upon receipt of invoice. If payment is not received when due, the agreement may be considered to be breached, and we may take whatever actions are available through law, including but not limited to suspension or termination of services and acceleration of payment for material and labor furnished.
- 3.B If service is performed at your request on equipment not furnished and installed by us, you shall be charged at our preferred customer prevailing rates or unless stipulated elsewhere in this agreement.
- 3.C You shall be responsible to pay any present or future sales, use, occupancy, excise or other federal, provincial, or local tax owed with respect to the services and material covered by this agreement.
- 3.D Late payment shall be assessed 1 ½% APR per month on any late outstanding unpaid balances.

### Warranty

- 4.A We warrant for one year from original purchase date or beneficial use, whichever occurs first, that all equipment manufactured by us or bearing our nameplate shall be free from defects in material and workmanship which arise from normal use and service, provided the equipment has been properly installed and operated in accordance with our instructions. If any equipment should prove defective under this warranty, we will at our option, repair, replace, or issue credit for any such item.
- 4.B For materials furnished but not manufactured by us nor bearing our nameplate, we will extend the same warranty we received from the manufacturer.
- 4.C We warrant the materials and installation labor is guaranteed for 1 year beginning the day of beneficial use.
- 4.D This express warranty is in lieu of and excludes all other warranties, guarantees, or representations, expressed, or implied including warranties of merchantability or of fitness for a particular purpose.
- 4.E Your remedies with respect to equipment found to be defective in material and workmanship shall be limited exclusively to the right of repair, replacement or credit of such equipment.
- 4.F PEPCO™ in no way shall assume any liability for any damages, consequential or inconsequential caused by or resulting from the installation of equipment or sensors or labor preformed except for the repair or replacement of equipment or sensor supplied by PEPCO™.
- 4.G This warranty is assignable to a new building owner.

### SEQUENCE OF OPERATION

Temperature Settings:

The Building Automation System is programmed to locally and remotely monitor and control the heat and

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A/C to each apartment as follows:

Time Of Year

Heat will be turned "ON" and to maintain indoor space temperatures starting October 1<sup>st</sup> and stopping May 15<sup>th</sup>.

Outdoor / Indoor Air Temperature

Heat will be turned "ON" only when Outdoor Air Temperature drops below 55 degrees (adj) and will be turned "OFF" within 1 hour after reaching 56 degs (adj).

Time of Day	If Outside Temp. is less than:	Inside Temp must be more than:
6:00 am - 10:00 pm	55°	72° (Occupied)
10:00 pm - 6:00 am	55°	68° (Unoccupied)

Note: These are the factory default settings. All settings are adjustable from WEB Graphics by Client and PEPCO virtual engineer.

Cooling will be turned "ON" to maintain space temperature starting May 16<sup>th</sup> and stopping September 30<sup>th</sup>.  
Outdoor / Indoor Air Temperature.

Cooling will be turned "ON" only when Outdoor Air Temperature rises above 65 degrees (adj) and will be turned "OFF" within 1 hour after reaching 64 degs (adj).

Time of Day	If Outside Temp. is > than:	Inside Temp must be more than:
6:00 am - 10:00 pm	65°	74° (Occupied)
10:00 pm - 6:00 am	65°	78° (Unoccupied)

Motion Sensor

If there is no motion in any room for 1 hour will the BMS will switch the space to UNOCCUPIED. Upon sensing motion the BMS will switch to OCCUPIED.

Window Sensors

Upon sensing a window OPEN for more than 5 mins the HVAC will be switched OFF. Upon sensing the window is CLOSED the HVAC will be switched ON. This design requires only 1 window per room to be able to be OPENED. Additional Windows will be screwed closed.