



## HVAC, ACCESS and LIGHTING CONTROLS

Established 1985

### FACT SHEET

PECONIC ENERGY PRODUCTS CORPORATION ("PEPCO™") reduces energy usage of Gas, Oil, Electric and Steam in multi-family residential, commercial and industrial facilities etc... by regulating, monitoring and controlling building mechanical and electrical systems (Boilers, Pumps, Fans, Chillers, AHU's, RTU's, FCU's and Lighting) via Computerized Building and Energy Automation Systems powered by DELTA CONTROLS [www.deltacontrols.com](http://www.deltacontrols.com).

PEPCO™ products include the following:

1. Custom Control Systems ( H.V.A.C, Lighting, Access Control Systems)
2. ENERGUARD™ - Large Building **Wireless** HEAT COMPUTER (Prices starting at \$12,000)
3. HEAT-MASTER™ - Small Building **Wireless** HEAT COMPUTER (Prices starting \$7,500)
4. HEAT-CON™ - Residential or Small Building HEAT COMPUTER (Prices starting at \$2,900)
5. FUEL TANK LEVEL MONITORING (FTM) - Reports Fuel Deliveries And Oil Tank Level.
6. BACnet Network Ready Wall Thermostats
7. Wireless Control System

PEPCO is a CON-ED Market Partner ( <http://www.conedci.com/MPAwards.aspx> ). As a Market Partner prospective PEPCO customers can receive up to 70% rebate toward the purchase price of a PEPCO system. Since 2010 PEPCO customers have received over \$2,600,000 in Utility Rebates.

- Reduce building energy usage and operating costs by up to 50%
- Monitor and Control a single building or a portfolio of properties via IPAD, Cell Phone, Laptop or PC.
- Utility Rebates of up to 70% of purchase price with Return On Investment in 2 years or less
- Demand Response and Permanent Load Curtailment
- Easily expandable to include Card Access, Lighting Controls, CCTV, Electric and Water Metering/Sub-Metering
- Provide more comfortable tempered environments for tenants

PEPCO™ offers 24/7/365 remote monitoring of facilities from our Deer Park facility. Critical alarms such as "burner failure" are directed to customer e-mail or text to cell phone. PEPCO™ also offers on-site and emergency service.

**OFFICES:** Main Office: 561 Acorn Street, Suite H Deer Park, N.Y. 11729  
Ph#: 631-940-1030 Fax: 631-254-0597  
Web Site: [www.pepcocontrols.com](http://www.pepcocontrols.com)

**KEY OFFICIALS:** Timothy P. Lynch, CEO/President Chris Saul, V.P. Operations

### **PEPCO systems are currently installed in over 1,852 buildings through out the NY Metropolitan area.**

Hofstra University, Hempstead NY	1199 East River Housing Co., Harlem NY
Park Place Towers, Hartford CT	Schwab House, 11 Riverside Dr. NY NY
Fresh Meadows Apartments, Queens NY	Bayridge Management Co. Brooklyn NY
25 Central Park West, NY	Caramoor Music Center, Katonah NY
Kaufman Organization, NY (Entire Portfolio)	Parc Vendome, NY, NY
200 West 79 <sup>th</sup> Street (Brown Harris Stevens)	Village View Housing NY, NY
825 Fifth Ave. NY (Brown Harris Stevens)	Morning Side Heights Housing Corp, NY
New York University (NYU) NY	Fordham University, Lincoln Center NY
311 North Street, White Plains, NY	ALGIN Management
Lincoln Guild Housing Corp. NY	Betinna Equities NY (18 Buildings)
Pan Am Equities (Entire Portfolio)	FS Energy
Clinton Development (The OHM) NY	Phipps Housing (Westbeth Artists Building)
Partnership for Inner City Education, NY	Trinity Real Estate, NY NY
NY Design Center, 200 Lexington NY	DDG Partners, NY NY

**BOILER CONTROL \* HVAC CONTROL \* HEAT-MASTER™ \* ENERGUARD™ \* WIRELESS TEMPERATURE SENSORS  
LIGHTING CONTROL \* CARD ACCESS \* DDC SYSTEMS \* ENERGY MANAGEMENT \* BMS SYSTEMS  
ENGINEERING \* DESIGN \* SALES \* SERVICE \* SERVICE CONTRACTS \* INSTALLATIONS**

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# NEW YORK DESIGN CENTER

200 Lexington Ave., NY



## CASE STUDY

System: Demand Response

### The New York Design Center (NYDC)

is a luxury furniture showroom building located in Manhattan's Midtown East area. World Class furniture designers make up the tenant roster for this building where they can collaborate and provide a centralized market for designers, architects and purveyors of luxury and functional home furnishings. The NYDC has been actively leading the energy efficiency improvement and sustainability of its building since the movement began and serves as a role model for other commercial landlords. In 2013/2014 NYDC's building-wide LED conversion initiative included tenant spaces as well as common areas and has netted a permanent demand reduction of 300 kW annually.

Showroom owners in the NYDC have been demanding that the classic Manhattan industrial styled look and feel of the showrooms be converted into a homey and cozy one that would be indicative of a suburban or coastal style residential setting. From a facility services standpoint, this required removal of ducted central air conditioning systems and replaced with ductless split air conditioning units manufactured by Daikin

The result was over 128 mutually exclusive air conditioning systems that provided excellent temperature and humidity control however from a whole building point of view, the equipment operated sporadically which contributed to a volatile kW demand profile and low load factor. These conditions further resulted in less than favorable supply prices and undue stress on building electrical systems. NYDC engaged LC Associates to evaluate potential alternatives to the existing condition and after modeling several options it was concluded that the most cost effective means and methods available was to deploy a building wide energy management system and take advantage of the ConEdison/NYSERDA Demand Management Program which offered incentives to lower and "manage" kW demand of buildings.

LC Associates led a team of ConEdison Market Partners i.e. the "Green Team", who collaborated on the design of a building automation system that would permanently reduce kW demand and also provide automated demand response for NYISO curtailment opportunities.

A recursive building automation protocol that constantly monitors current conditions and feeds that information back into itself for fine tuning with amazing results. The protocol was designed to pre-cool the building during exceptionally hot days, limit the operation of coincident air conditioning systems to 80% while safeguarding space temperatures and implementing a demand response protocol.



### Project Highlights Include:

- \* Install a DELTA BMS Control System
- \* Install controls on 95 packaged AHU's
- \* Connect 33 Daikin A/C to BMS via BACnet.
- \* Hire LC Associates as Energy Engineers
- \* File for CON ED and NYSERDA Rebates
- \* Removal of Electric Boilers
- \* Install new Lobby and Hallway A/C Units

### The results were amazing!

- \* 841,000 kWh Annually Saved
- \* 639 Tons of Carbon Reduction
- \* 1,000 kW Curtailed

The system was fully functional in May of 2015 and after a couple of months of fine-tuning the BMS system limited coincident air conditioner operation to 60% while maintaining space temperatures!

The unique makeup of the building made it easy to cool at a moment's notice. The BMS system was designed to sub-cool the spaces prior to a curtailment event and what we found was that the BMS was able to curtail over 1,000 kW for a full 4 hours using the curtailment algorithm as a result of this measure.

The carbon offset for this project is based upon saving 841,000 kWh annually resulting in 639 Tons of Carbon Dioxide removed from the atmosphere each year which roughly equates to the following metrics:

- \* 122 Passenger Vehicles driven for 1 year
- \* 52.9 homes' energy use for 1 year
- \* 65,254 Gallons of gasoline consumed
- \* 14,870 Tree seedlings grown for 10 years

For additional information contact:

Timothy Lynch 631-965-1010  
[tlynch@pepcocontrols.com](mailto:tlynch@pepcocontrols.com)

# PARC VENDOME

340 West 57<sup>th</sup> Street, NY

## **MODEL: ENERGUARD™ 102 Zone Valve Controls**

The elegant Parc Vendôme Condominium, a landmark residential property on West 56th & 57th Street, between Eighth and Ninth Avenue is located in the heart of New York City at Columbus Circle. Parc Vendome is a luxurious pre-war building renowned for its distinctive homes featuring the architectural romance of high beamed ceilings, arches, oak plank floors and fireplaces. Built in 1931, Parc Vendome is truly one of the finest in world class residential living, set around an award winning Fountain & English Tea Garden. This unique complex of four buildings has 560 condominium homes and offers a return to the pre-war elegance of the 1920's and 1930's with all the amenities and security of the year 2015.



### ***PARC VENDOME***

The building heating plant was converted from city steam to a central boiler plant in 1984. The new plant consists of (2) 500 HP Dual Fired Cleaverbrook Boilers with a vacuum steam heating system which includes 4 MEPCO valves. This design grossly overheated the building. To remedy the overheating problem PEPCO engineered, designed and installed a new DELTA Energy Management System that included the installation of 500 new wireless temperature sensors used to regulate and control 102 new Belimo 2 Way Riser Zone Valves. Instead of heating the entire building at one time the new valves provide individual temperature control of each riser maintaining the building's temperature at a comfortable 72 degrees all winter long.

The project cost was \$595,00 turnkey. The building qualified for a CON ED Gas Rebate of \$100,000 because the facility will cut gas usage by 80,000 therm. The Return On Investment is just under 3 years. The savings combined with overall tenant comfort is a double win for the board.

In addition the entire heating system is remotely monitored and managed by PEPCO. Hi and lo temperature and boiler alarms, vacuum iwc" and pump alarms are directed to Parc Vendome management and PEPCO via e-mail and text messaging. Further expansion of the system for 2016 includes control of 4 Lobby A/C's and new Chiller Plant along with Card Access and Lighting Control.

#### **HIGHLIGHTS:**

- \* \$595,000 Project Turn-Key
- \* 80,000 Gas Therm Saved
- \* 2.8 Year Return On Investment
- \* Year Completed 2015
- \* Furnish and Install (102) 2", 3" and 4" Steam Valves
- \* Control Vari-Vac Steam System
- \* 500 Inovonic Wireless Temperature Sensors
- \* 5 DELTA Control Panels
- \* Control (2) 500 HP Boilers
- \* Domestic Hot Water Monitored
- \* Weather Station installed on Roof
- \* Web Based Color Graphics
- \* Password Protected
- \* Alarms\Exception Reports
- \* P.C. Color Graphics
- \* Historical Trending

Contact: Call PEPCO for contact info

# KAUFMAN ORGANIZATION

450 Seventh Ave.  
New York City, N.Y.



## CASE STUDY:

**The Kaufman Organization** is a three-generation, family-owned and operated New York-based real estate company active in ownership of commercial and residential property, office leasing, management and acquisitions, with a portfolio of approximately 6 million square feet. Drawing upon a century of experience, the Kaufman Organization divisions work fluidly with each other to ensure maximized value for their partners, tenants, and clients. Kaufman Management Company LLC, Kaufman Leasing Company LLC, and Kaufman New Ventures LLC are comprised of a strong team of professionals that provide complete brokerage services, third-party property management, acquisition advisory and asset management services to institutional clients.



*Kaufman Headquarters  
The NELSON Tower  
450 7th Ave. New York*

Keeping fuel costs to a minimum across an entire portfolio of buildings while maintaining tenant comfort was no easy task for Mr. Charles Reid, Director Of Operations and Maintenance for The Kaufman Organization. Often in the winter, buildings would be overheated with boilers operating over a weekend or weeknight. Daytime outdoor air temperature would reach 70 plus degrees yet the heating plant would still be operating, delivering heat to an already overheated building.

If a tenant complained of being cold the superintendent would manually override the limited Heat Timing Device to force heat to the entire building. Overheated Tenants would open windows because indoor temperatures were sweltering. Mr. Reid decided it was necessary to install an energy management system that would bring control to over 40 buildings from a central point.

After investigating several systems Mr. Reid found only one company that addressed all his requirements. PEPCO Controls was selected for 2 primary reasons. PEPCO has engineers and technicians familiar with how heating system work and because of the diverse power of the DELTA Controls system [www.deltacontrols.com](http://www.deltacontrols.com)

Several gas heated buildings in the portfolio qualified for cash rebates that helped lower the Return On Investment.

Connecting 40 Buildings via Wide Area Network presented no problem for the DELTA System. It was clear that not only could the entire portfolio be networked but the system was limitless in what it could do. Gas Leak Detection and Carbon Monoxide Sensors were recently installed in every boiler room along with House Tank Temperatures sensors that were easily added to the system.

### HIGHLIGHTS:

- \* Fuel Saving across the portfolio exceed 21.92%
- \* Typical Return On Investment in under 2 years
- \* Several buildings qualified for CON-ED Gas Rebates
- \* Control of CON-ED Steam Valves
- \* Control of Vacuum Steam System
- \* Over 1,000 Wireless Temperature Sensors
- \* Web Based Color Graphics
- \* House Tank Water Level Control
- \* Separate Nights and Weekends Time Schedules
- \* Holiday Shut Down Schedule for Office Buildings
- \* Zone Valves Control
- \* Password Protected
- \* Alarms are E-mailed direct to management
- \* Historical Trending and XY Trend Plot
- \* Eliminated all heat timing devices
- \* Card Access Controls
- \* 24/7/365 Service Contract

**Contact:** Call PEPCO for contact info  
[www.pepcocontrols.com](http://www.pepcocontrols.com)

# THE CENTURY

25 Central Park West, NY

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## **MODEL: ENERGUARD™**

**THE CENTURY** The sister of the Majestic apartment building several blocks to the north on Central Park West, the Century is one of the masterpieces of developer Irwin S. Chanin, who also built the great 56-story Chanin Building on East 42nd Street and many famous theaters around Times Square such as the Roxy, the Biltmore and the Majestic.

The building heating plant was converted from city steam to a central boiler plant in 1997. The plant consists of (3) 500 HP Federal Boilers and is Dual Fuel. The ENERGUARD™ was installed in May 2009 and controls the automatic Start Stop, Lead Lag and Fuel/Air Modulation of the boilers. Six (6) Zone Valves regulate the heat through out different parts of the building. The ENERGUARD™ controls the valve modulation to each zone using feedback from wireless temperature sensors placed inside tenant apartments. The Resident Manager sets the zone temperature from a PC and monitors the temperature through out the day and night via a web browser. A weather station on the roof of the building tracks wind speed, wind direction, RH% and Outdoor Air Temperature. On high windy cold days the Resident Manger increases space temperature settings in the zone most impacted by severe weather conditions. This has reduced tenant complaints and reduced fuel consumption in excess of 20%.

Each year the system is expanded to include additional mechanical equipment in the building including Gas Booster Pump, Stack Induced Fan System, Sump Pump Overfill, Leak Detection, Carbon Monoxide, Carbon Dioxide, Gas Leak Detection and Vacuum Steam Control.

Further expansion of the system will include Card Access and Lighting Control.



*The CENTURY*

### **HIGHLIGHTS:**

- \* Fuel Savings 20% Plus
- \* Control (6) 8" Steam Valves
- \* Control MEPCO Vari-Vac System
- \* Apartment Temperatures
- \* Control (3) 500 HP Boilers
- \* Domestic Hot Water Monitored
- \* Weather Station installed on Roof
- \* Web Based Color Graphics
- \* Password Protected
- \* Alarms\Exception Reports
- \* P.C. Color Graphics
- \* Historical Trending
- \* XY Trend Plot Of All Variables

Contact: Call PEPCO for contact info

# 311 North Street Associates LLC

311 North Street  
White Plains, N.Y.



## CASE STUDY

*311 North Street* LURED by the recent economic revitalization of White Plains, a Manhattan-based firm bought the 23-acre St. Agnes Hospital property for \$21.4 million at a state-run auction. The winning bidder, the Noyack Equity Group, a partnership of six investors formed to acquire and develop the hospital property, said it plans to build a world class medical facility and housing for the elderly on the site.

The facility is now the home of many smaller medical practices including Hospice and Palliative Care, NYU Medical Practices, Roker Adult Social Day Care Center, Pisani Anthony R MD, Dr. Kenneth B Goldman, MD and over 15 other medical practices including ambulatory surgery and recently signed 6 floor assisted living facility which is presently under construction.

PEPCO began to furnish and install a DELTA Control System in 2007 as part of the base job. The facility is heated and cooled from a penthouse roof top power plant and consists of a 300 Ton Trane Chiller, 2 non-condensing hot water boilers and over 85 VAV's. Four large AHU's equipped with Pre-Heat Coils, Cooling Coils, Exhaust Air, Mixed Air and Fresh Air Dampers, RH%, DAT, RAT, Static Pressure Sensors, Freeze Stats and Variable Speed Drives for the Supply and Return Fans supply the occupied space with heating and cooling. Each VAV is equipped with a DELTA BACstat and allows the occupant to regulate his own space temperature.

The entire control system including all VAV's are networked together and are monitored and controlled using ORCAweb.

Over the past several years the DELTA Control Systems has been expanded to include control over an additional 60 VAV's, Common Area Space Temperatures and Lobby Fan Coil Units .

With proper password operators and PEPCO staff remotely log in to the system.

Further expansion of the system includes Card Access and Lighting Control.



**311 North Street Associates  
White Plains, NY**

### CONTROL HIGHLIGHTS:

- \* 4 Large AHU's controlled
- \* 2 Non Condensing Boilers
- \* 10 Variable Speed Drives
- \* Static Pressure
- \* 145 VAV's Controllers
- \* 145 DELTA BACstats
- \* Web Based Color Graphics
- \* Password Protected
- \* Alarms\Exception Reports
- \* P.C. Color Graphics
- \* Historical Trending
- \* XY Trend Plot Of All Variables

**Contact:** Call PEPCO for contact info

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# MORNINGSIDE HEIGHTS HOUSING CORPORATION

80 LaSalle Street  
Harlem, N.Y.



## CASE STUDY

### **MORNINSIDE HEIGHTS HOUSING CORPORATION**

("Morningside Gardens") is a residential cooperative apartment complex with more than 980 units and is located on the upper west side of Manhattan. Opened in 1954, the eight acre, beautifully landscaped campus borders on Broadway and Amsterdam Avenue and comprises six high-rise buildings, twenty-four floors each. The buildings are heated by a central plant consisting of (4) 500hp boilers that supplies 5 lbs steam pressure to each building. Steam flow to each building is regulated by a One Pipe MEPCO Vari-Vac Steam system.

PEPCO furnished and installed the ENERGUARD in building 70 as a pilot project to demonstrate to the board that overheating could be controlled and the proposed upgrade could be paid for thru fuel savings in under 2.4 years. Before the ENERGUARD was installed the studio line apartment temperatures averaged 88 degrees and the 2 bedroom apartments barely reached 67 degrees. To achieve even heat distribution PEPCO installed (13) new 4" riser steam valves and 91 Wireless Apartment Temperature Sensors that were connected to the PEPCO system for control. As the space temperature in the studio zone lines reached set point the steam supply was shut off. This resulted in even heat distribution through-out the entire building. When the installation was completed the fuel savings were 29% and tenant comfort greatly improved.

The savings were verified by Schuyler Engineering who was hired by the board to oversee the project and verify savings (independent report available upon request).

Because the pilot project was a huge success the Board approved a budget of \$1,650,250 to expand the ENERGUARD System in the 5 remaining buildings. PEPCO furnished and installed a total of 85 new 4" Steam Valves, 750 wireless Apartment Sensors, took direct control of the 4 Boilers and control of 12 Vacuum Steam Stations creating a fully integrated Heat Control System.

Further expansion of the PEPCO/DELTA system ([www.deltacontrols.com](http://www.deltacontrols.com)) includes BACnet and MODBUS Integration, Card Access and Lighting Control.



***Morningside Heights Housing Corp.  
New York, NY***

#### **HIGHLIGHTS:**

- \* Fuel Savings 29%
- \* \$100,000 CON-ED Cash Rebate
- \* Control (85) 4" Steam Valves
- \* (6) MEPCO Vari-Vac Systems Controlled
- \* (750) Wireless Apartment Sensors
- \* (105) Condensate Temperature Sensors
- \* (12) Hi and Lo Rise DHW Temperatures
- \* (4) 500 HP Boilers Controlled
- \* Weather Station installed on Roof
- \* Web Based Color Graphics
- \* Password Protected
- \* Alarms\Exception Reports
- \* (8) Card Access Doors
- \* (1,000) FOBS Issued
- \* House Tank Water Level Controlled
- \* Gas and CO2 Levels Monitored
- \* 322 Alarm Points directed to E-Mail
- \* Historical Trending
- \* XY Trend Plot Of All Variables

**Engineer:** Schuyler Engineering, P.C.  
**Contact:** Call PEPCO for contact info

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# MORNINGSIDE GARDENS NEWS

A PUBLICATION OF MORNINGSIDE GARDENS TENANT-COOPERATORS

Volume 49, No.2

[www.mgca.coop](http://www.mgca.coop)

June, 2011

## Morningside Heights Housing Corporation Receives \$100,000.00 Check From Con Edison

On March 25, 2011, Consolidated Edison awarded Morningside Heights Housing Corporation an energy rebate check for \$100,000. The rebate came after a long process. Beginning with MHHC Board approval last summer for the installation of the new Delta Building Management System (BMS), Peconic Energy Products Company (PEPCO), began seeking sponsored energy rebates for our project. Schuyler Engineering had already reviewed the results of the 70 LaSalle Street BMS and determined that an estimated 29% decrease in steam consumption each winter (over 182,000 gas

THERMS equating to a cost savings of approximately \$365,000) could be realized if the system were expanded to become the central monitoring system for any future installed energy saving system. Despite the size of our project the board had approved \$1M for the installation this project and energy savings were not large enough to qualify for a 10% NYSERDA rebate.

### Lockheed Martin and Con Edison to the Rescue

Enter Lockheed Martin, the Long Island-based Aeronautics' company whose engineering expertise and commitment to sus-

tainability and energy efficiency made them the obvious choice for Consolidated Edison who needed an outsourced partner to oversee the utility's new rebate program. Con Edison, owing to

the ever expanding limitations of NYSERDA to help small and mid-sized companies, created with Lockheed Martin an energy rebate program for those Con Ed customers who would use innovatively engineered systems to reduce power and / or natural gas consumption in New York City.

Morningside Gardens' BMS project became the largest energy saving project considered by the Lockheed Martin / Consolidated Edi-

son Team after an extensive review by their team engineers and a certified energy estimate provided by MHHC's Professional Engineer, Schuyler Engineering. The \$100,000 rebate is more than twice the amount awarded to any other project by Con Edison.

Currently, the Lockheed Martin/Con Edison/Pepeco team is working with Maria Platis and Alan Legaspi on additional rebates for MHHC's approved exhaust fan project and the upcoming NYC code compliant lighting project.

—Assistant General Manager, Maria Platis

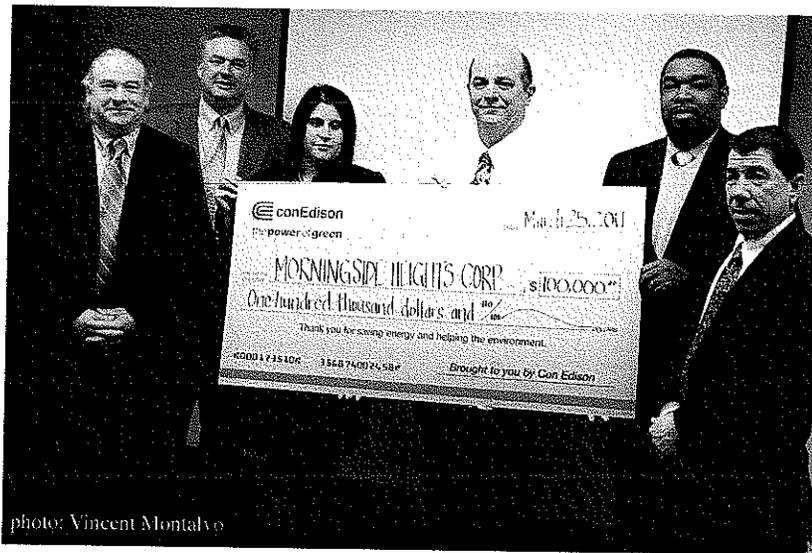


photo: Vincent Montalvo

From left to right: Tim Lynch (Pepeco) Mike McMahon (COO/GM, MHHC) Maria Platis (Assistant General Manager, MHHC) David Pospisil (Con Edison) Duane Balwin (Lockheed Martin) Daniel DeLeon (Lockheed Martin)