

Site Information - Parc East

Location

Parc East
240 East 27th Street
New York, New York 10016

Site Contact

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Overview

CDH was on site 6/17/2016 to install and commission the instrumentation on the 75 kW Cogen Unit at Parc East at 240 East 27th Street, New York, NY.

The main purpose of the site visit was to:

- Install and commission the M&V instrumentation
- Establish communications with the CDH servers and M&V system

M&V Instrumentation Installation

CDH provided the data logger and enclosure. Aegis provided and installed the power and gas meters. Aegis installed the CDH enclosure and performed wire pulls from the power meter and BTU meter locations to the CDH enclosure and provided 120V power. CDH terminated wiring to the data logger. The M&V enclosure was located in the boiler room with the cogen unit, the useful heat recovery BTU meter, and gas meter. The cogen power meter is located in the 89L-2 disconnect and the building power meter is located inside the Beckwith protective relay enclosure, both are in the building electrical room. The following table shows the data points being measured by the M&V system.

Monitored Data Points

Logger Channel	Data Point	Description	Eng Units	Instrument / Transducer	Output
MB-002	WT	Gross Power Output	kWh	Veris H8035-0300	Modbus RS-485
MB-001	WP	Parasitic Loads	kWh	Veris H8035-0100	Modbus RS-485
-	WG	Net Power Output	kWh	-	Calculated
1	FG	Cogen Gas Consumption	cf	Romet Rotary Meter	Pulse
MB-003	FHW	Recovered Heat loop Flow	gpm	Badger Series 380	Modbus RS-485
MB-003	THW1	Recovered Heat Loop - Supply Temp.	°F	Badger Series 380	Modbus RS-485
2	THW2	Recovered Heat Loop - Temp. After HX1 (DHW)	°F	Veris 10k Type 2 Thermistor	Resistance
MB-003	THW3	Recovered Heat Loop - Temp. After HX2 (Space Heating)	°F	Badger Series 380	Modbus RS-485
3	THW4	Recovered Heat Loop - Temp After Dump Radiator	°F	Veris 10k Type 2 Thermistor	Resistance
4	IVFD	Dump Radiator Current	Amps	Veris H921 (0-30 A)	4-20 mA
-	QDHW	Useful Heat Recovery - DHW	Mbtu/h	-	Calculated
-	QSH	Useful Heat Recovery - Space Heating	Mbtu/h		Calculated
-	QR	Rejected Heat Recovery	Mbtu/h		Calculated
MB-003	QU	Total Useful Heat Recovery	Mbtu/h	Badger Series 380	Modbus RS-485
MB-004	WB	Building Power	kWh	Veris E50 Power Meter	Modbus RS-485

M&V Communications

IP information has been provided to CDH for the data logger. This will allow CDH to access the data logger remotely.

IP Address:	24.103.230.234 port 4081
Netmask:	255.255.255.248
Gateway:	24.103.230.233
Primary DNS:	24.29.99.36
Secondary DNS:	24.29.99.35

Verification Data

Flows

FHW was not verified during the site visit as data was not yet recorded and the system was not running on 6/17/16. FHW variation to be reported.

FHW1 (gpm)		
Badger BTU Meter	Ultrasonic Flow Meter	% Diff
-	-	-

Pipe and Sensor Specs	
1.5" Type L Copper	
Sensor Spacing	- in
OD	- in
Thickness	- in

Temperatures

Stand alone temperature sensors were installed on the main cogen supply loop, in order to break out the individual useful heat loads being supplied by the cogen. Temperature readings were not verified during the site visit as data was not yet recorded and the system was not running on 6/17/16. Temperature varication at each sensor location to be reported.

THW2 (°F)		
Fluke	Veris	% Diff
-	-	-
-	-	-
-	-	-
avg	-	-

CCP Panel and Parasitic Power

The current for the CCP panel that contains all the parasitic power loads is measured with an analog CT. Verifiction measurements with the two VFDs on at 40% and 100% to be reported.

IVFD @ 40% (A)

Fluke	Veris CT	% Diff
-	-	-
-	-	-
-	-	-
-	-	-
avg	-	-

	Power (kW)	Power Factor
Phase A	-	-
Phase B	-	-
Phase C	-	-

*VFD1 - 23 Hz, VFD2 - 30.8 Hz

Site Photos



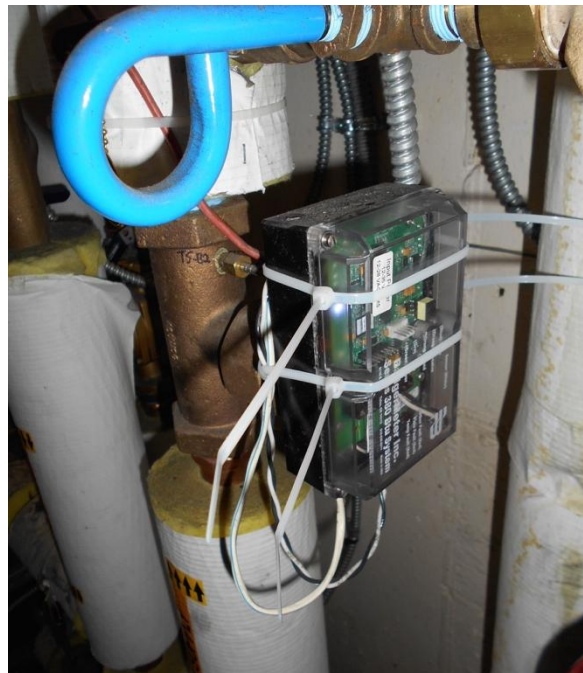
75 kW Cogen Unit



Gas Meter



CDH Monitoring Enclosure w/ Obvius Data Logger



HW Loop BTU Meter (In Boiler Room)



DHW Load & Building Heat Load Skid



THW2 Installed



Dump Load Skid



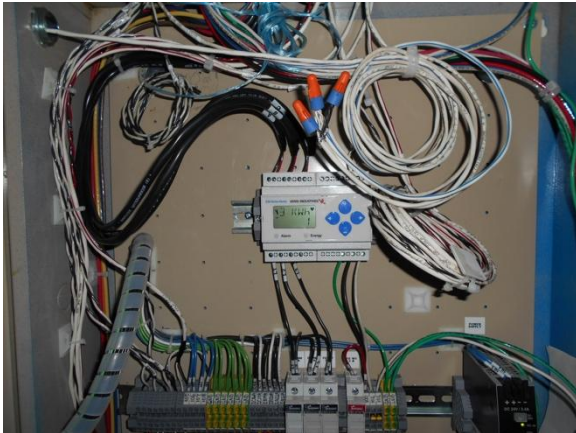
CDH Panel and Existing Boiler



Automatic Transfer Switch and Standby Panel



Inverter



Veris E50 for Building Power in Beckwith



Veris 8035 for Cogen Power in 89L-2



Veris H921 Analog CT on Dump Radiator



CCP Panel with VFD and Veris H921 Analog CT