Urban Horizons – Database Notes

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	Obvius AcquiSuite A8812 15 –minute Obvious Upload
Site Information	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses:	Capstone C65 65 kW Hot Water Domestic Hot Water, Space Heating
DG/CHP Generator Electrical Output	Meter: Engineering Units: Energy Measurement (net/gross): Measurement Type:	(2) Veris H8035-100 power transducer kWh Gross Power Measured, Net Power Calculated Accumulated energy per interval Power transducers for turbine output and hot water pump input
DG/CHP Generator Electrical Output Demand	Meter: Engineering Units: Measurement Type:	(2) Veris H8035-100 power transducer (same as above) kW Maximum 15-minute power measurement Power transducers for turbine output and hot water pump input
DG/CHP Generator Fuel Input	Meter: Engineering Units: Measurement type:	Onicon F-5000 thermal mass meter CF/CFH Installed on May 14, 2015 – gas data before this date based on curve-fit of data vs power documented in *Urban Horizons Gas Data - Update 2015Jun29.pdf*

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DG/CHP Useful Heat Recovery	Meter: Engineering Units: Heat Measurement Type:	Onicon System 10 BTU Meter MBtu (Calculated Value) One thermal loop –BTU meter measurement for flow and two temperature measurements. Unused (rejected) heat not measured.
DG/CHP Status/Runtime	Engineering Units:	Hours Set to ON when system net power > 5 kW, calculated in 15-minute increments
Facility Purchased Energy	Meter: Engineering Units: Measurement type:	Shark 100 kWh Accumulated energy per interval
Facility Purchased Demand	Meter: Engineering Units: Measurement type:	Shark 100 kW Maximum 15-minute power measurement
Other Facility Gas Use	Engineering Units: Measurement Type	CF Not measured

Table 2 Event Timeline

Date	Event
2013/10/1	Logging begins. Microturbine gas data not valid improper meter span (see *Urban Horizons Gas Data - 2014Dec03.pdf*)
2014/2/9	Gas meter replaced. Microturbine gas data still not valid (see *Urban Horizons Gas Data - 2015Apr09.pdf*)
2015/5/14	Gas meter replaced. Microturbine gas data now in reasonable range. Curve fit of data used to fill in back data. Verification of new gas meter will use Con Ed bill from summer 2015 (when available – see *Urban Horizons Gas Data - Update 2015Jun29.pdf)*

Urban Horizons – Database Notes

Data Point	Hourly Data Method	Units	Sensor Lower Range	Sensor Upper Range	Database Lower Range	Database Upper Range	Notes
DG/CHP Generator Output	Sum	kWh/int	n/a	n/a	-1	20	Negative values account for net power calculation
DG/CHP Generator Output Demand	Max	kW	n/a	n/a	-10	80	Negative values account for net power calculation
DG/CHP Generator Gas Use	Sum	cfh	n/a	n/a	0	1200	Modbus output
Total Facility Purchased Energy	Sum	kWh/int	n/a	n/a	0	40	
Total Facility Purchased Demand	Max	kW	n/a	n/a	0	160	
Other Facility Gas Use	-	cf/int	-	-	-	-	
Useful Heat Recovery	Avg	MBtu/h	n/a	n/a	0	600	
Status/Runtime of DG/CHP Generator	Sum	On/Off	n/a	n/a	0	1	Calculated based on power
Ambient Temperature	Avg	°F	-20	130	-20	130	WUG Airport Code - NYC

Relational Checks

Table 4. Relational Checks

Evaluated Point	Criteria	Result
FG	WG > 5 and FG <=0	DQ Level for FG set to 2

Notes: FG – DG/CHP Generator Gas Use

WG–DG/CHP Generator Output

Additional Adjustments to Data

- None