Church Street Hilton – Database Notes

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	BACnet DDC 15 – minute FTP over site internet/daily
Site Information	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses: Excess Heat:	2 – 250 kW SDP Energy reciprocating generators 500 kW Hot Water Domestic Hot Water, Space Heating, Hot Water for Absorption Chiller Rejected from engine jacket coolers on thermal glycol/water loop return loop
DG/CHP Generator Electrical Output	Engineering Units: Energy Measurement (net/gross): Measurement Type: Generator Power Measurements: Parasitic Power Measurements:	kW/kWh Net calculated = gross minus parasitics Modbus 2 total – One for each generator #1 and #2 (meter reports avg kW) One for entire parasitic panel (meter reports kWh/interval)
DG/CHP Generator Electrical Output Demand	Engineering Units: Measurement Type:	kW From energy measurement, based on peak 15-min power
DG/CHP Generator Fuel Input	Engineering Units: Measurement type:	CFH 4 – 20 mA Hot wire anemometer
DG/CHP Useful Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu (calculated value) One thermal loop - flowmeter and two temperature measurements across all useful loads

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DG/CHP Unused Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu (calculated value) Flowmeter and multiple temperature measurements across CHP loop dump radiator – system reports only MBtu value
DG/CHP Status/Runtime	<u>Engineering Units:</u> <u>Measurement Type:</u>	0 – 1, System On/System Off
Facility Purchased Energy	<u>Engineering Units:</u> <u>Measurement Type:</u>	Not collected
Facility Purchased Demand	<u>Engineering Units:</u> <u>Measurement Type:</u>	Not collected
Other Facility Gas Use	<u>Engineering Units:</u> <u>Measurement Type:</u>	Not collected

Note - See addendum for further details

Table 2 Event Timeline

Date	Event
February 1, 2014	Logging begins

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Range Checks

Table 3. Range Checks

Data Point	Units	Hourly Data Calculation Method	Database Lower Range	Database Upper Range	Notes
DG/CHP Generator Output (WG_d)	kWh/int	Sum	-5	125	
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	-10	500	Database lower range account for parasitic loads
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	1500	
Total Facility Purchased Energy (WT_d)	kWh/int	-	-	-	Not installed
Total Facility Purchased Demand (WT_KW_d)	kW	-	-	-	Not installed
Other Facility Gas Use (FT_d)	cf/int	-	-	-	Not installed
Useful Heat Recovery (QHR_d)	MBtu/int	-	0	2500	Calculated Value
Unused Heat Recovery (QD_d)	MBtu/int	-	0	2500	Calculated Value
Status/Runtime of DG/CHP Generator (SG_d)	hr	-	0	1	
Ambient Temperature (TAO)	°F	Avg	-30	130	WUG Airport code -NYC

Notes:

1. This table contains values from *churchst.csv*

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Relational Checks

Table 4. Relational Checks

Evaluated Point	Criteria	Result

Notes:

1. This table contains values from *relational_checks.pro*