

Table 1. Database Notes

<b>Data Collection</b>	Data Logger: Data Collection Interval: Collection Method:	Obvius AcquiSuite A8812 1 - Minute Nightly Obvius Building Manager Online upload to CDH servers.
<b>Site Information</b>	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses: Excess Heat:	One (1) Aegen TP75-LE cogen unit 75 kW Hot Water Space heating and DHW Rejected to atmosphere using dump radiator
<b>DG/CHP Generator Electrical Output</b>	Engineering Units: Energy Measurement (net/gross): Measurement Type:	kWh Net generator power Calculated using kW measurements from 1x cogen power meters and 1x parasitic power meter (Veris H8035 typ)
<b>DG/CHP Generator Electrical Output Demand</b>	Engineering Units: Measurement Type:	kW Calculated from generator electrical output; max kW / int * # intervals
<b>DG/CHP Generator Fuel Input</b>	Engineering Units: Measurement type:	CF Pulse output from utility meter (not installed as of 10/21/2015)
<b>Other Fuel Input</b>	Engineering Units: Heat Measurement Type:	- -
<b>Utility Energy Import</b>	Engineering Units: Measurement Type:	kWh Measured with Veris E50 - Modbus 485 reading

<b>Utility Energy Import Demand</b>	Engineering Units: Measurement Type:	kW Calculated from utility energy import; max kW / int * # intervals
<b>DG/CHP Useful Heat Recovery</b>	Engineering Units: Measurement Type:	MBtu/hr Calculated using 1-minute flow and temperature measurements
<b>DG/CHP Rejected Heat Recovery</b>	Engineering Units: Heat Measurement Type:	MBtu/hr Calculated using 1-minute flow and temperature data.
<b>Generator Status</b>	Engineering Units: Measurement Type:	Hours 0 to 1, system on / system off. Generator output must be above 10 kW to be considered on.
<b>Ambient Temperature</b>	Engineering Units: Measurement Type:	Deg. F Weather Underground airport code NYC.

Table 2 Event Timeline

Date	Event

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	0	2	
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	0	120	$WG\_KW\_d = WG\_d * \# \text{ Intervals}$
DG/CHP Generator Gas Use (FG_d)	Cfh/int	Sum	0	20	
Total Facility Purchased Energy (WT_d)	kWh/int	-	0	10	
Total Facility Purchased Demand (WT_KW_d)	kW	-	0	600	
Other Facility Gas Use (FT_d)	cf/int	-	-	-	
Useful Heat Recovery (QHR_d)	MBtu	-	0	800	
Unused Heat Recovery (QD_d)	MBtu	-	0	800	
Status/Runtime of DG/CHP Generator (SG_d)	hr	-	0	1	0-1, System On/System Off
Ambient Temperature (TAO)	°F	Avg	-20	130	WUG Airport Code: NYC

Notes:

1. This table contains values from *madison\_house.csv*

Table 4. Relational Checks

Evaluated Point	Criteria	Result

Notes:

1. This table contains values from *relational\_checks.pro*