

Kyoto Building – Database Notes

Table 1 Database Notes

Data Collection	<u>Data Logger:</u> <u>Data Collection Interval:</u> <u>Collection Method:</u>	Obvius Aquisuite A8812 1 – Minute Obvius Upload Manager to CDH servers
Site Information	<u>Cogeneration Units:</u> <u>Nameplate Capacity:</u> <u>Heat Recovery Medium:</u> <u>Heat Recovery Uses:</u> <u>Excess Heat:</u>	Aegen TP-75LE Synchronous w/ Inverter 75 kW Hot Water Domestic hot water, and space heating Rejected to atmosphere by dump radiator
DG/CHP Generator Electrical Output	<u>Engineering Units:</u> <u>Energy Measurement (net/gross):</u> <u>Measurement Type:</u>	kWh Net Power (calculated from gross and parasitic measurements) Accumulated kWh
DG/CHP Generator Electrical Output Demand	<u>Engineering Units:</u> <u>Measurement Type:</u>	kW Calculated : accumulated kWh/int * # intervals
DG/CHP Generator Fuel Input	<u>Engineering Units:</u> <u>Measurement type:</u>	CF Pulse output from utility meter (not yet installed)
DG/CHP Useful Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu/hr Calculated from 1 minute analog flow and temperature data
DG/CHP Unused Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu/hr Calculated from 1 minute analog flow and temperature data
DG/CHP Status/Runtime	<u>Engineering Units:</u> <u>Measurement Type:</u>	Hours Calculated based on generator output

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Facility Purchased Energy	<u>Engineering Units:</u> <u>Measurement Type:</u>	kWh Accumulated kWh
Facility Purchased Demand	<u>Engineering Units:</u> <u>Measurement Type:</u>	kW Calculated : accumulated kWh/int * # intervals
Other Facility Gas Use	<u>Engineering Units:</u> <u>Measurement Type:</u>	- -

Table 2 Event Timeline

Date	Event
March 30, 2015	CDH on site to install data logger, terminate sensor wiring, and verify metering. Data collection 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	0	2	
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	0	100	$WG_KW_d = WG_d * \# \text{ Intervals}$
DG/CHP Generator Gas Use (FG_d)	cf/int	-	-	-	<i>Meter not yet installed</i>
Total Facility Purchased Energy (WT_d)	kWh/int	Sum	0	10	
Total Facility Purchased Demand (WT_KW_d)	kW	Max	0	600	$WT_KW_d = WT_d * \# \text{ Intervals}$
Other Facility Gas Use (FT_d)	cf/int	-	-	-	
Useful Heat Recovery (QHR_d)	MBtu/hr	Avg	0	800	
Unused Heat Recovery (QD_d)	MBtu/hr	Avg	0	800	
Status/Runtime of DG/CHP Generator (SG_d)	hr	-	-	-	
Ambient Temperature (TAO)	°F	Avg	-20	130	<i>WUG Airport Code - NYC</i>

Notes:

1. This table contains values from *birchwood_kyoto.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*