

## **Bay Club #2 – Database Notes**

**Table 1 Database Notes**

<b>Data Collection</b>	<u>Data Logger:</u> <u>Data Collection Interval:</u> <u>Collection Method:</u>	Obvius Aquisuite A8812 1 – Minute Obvius Upload Manager to CDH servers
<b>Site Information</b>	<u>Cogeneration Units:</u> <u>Nameplate Capacity:</u> <u>Heat Recovery Medium:</u> <u>Heat Recovery Uses:</u> <u>Excess Heat:</u>	Four (4x) Aegen TP-75LE Induction w/ Inverter 75 kW each – 300 kW combined Hot Water Domestic hot water and space heating Rejected to atmosphere by dump radiator
<b>DG/CHP Generator Electrical Output</b>	<u>Engineering Units:</u> <u>Energy Measurement (net/gross):</u> <u>Measurement Type:</u>	kWh Net Power (calculated from 4x gross and 1x parasitic measurements) Accumulated kWh
<b>DG/CHP Generator Electrical Output Demand</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	kW Calculated : accumulated kWh/int * # intervals
<b>DG/CHP Generator Fuel Input</b>	<u>Engineering Units:</u> <u>Measurement type:</u>	CF Accumulated cubic feet
<b>DG/CHP Useful Heat Recovery</b>	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu/hr Calculated from 1 minute analog flow and temperature data
<b>DG/CHP Unused Heat Recovery</b>	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu/hr Calculated from 1 minute analog flow and temperature data
<b>DG/CHP Status/Runtime</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	Hours Calculated based on generator output

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

**Table 2 Event Timeline**

<b>Date</b>	<b>Event</b>
April 2, 2015	CDH on site to install data logger and terminate sensor wiring.
May 1, 2015	CDH on site to setup communications and wire additional metering. Data collection begins.

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### ***Range Checks***

**Table 3. Range Checks**

<b>Data Point</b>	<b>Units</b>	<b>Hourly Data Calculation Method</b>	<b>Database Lower Range</b>	<b>Database Upper Range</b>	<b>Notes</b>
DG/CHP Generator Output (WG_d)	kWh/int	Sum	0	6	
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	0	360	$WG\_KW\_d = WG\_d * \# \text{ Intervals}$
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	70	
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	2,500	
Unused Heat Recovery (QD_d)	MBtu/hr	Avg	0	2,500	
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 *bay\_club\_1.csv*

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### ***Relational Checks***

**Table 4. Relational Checks**

<b>Evaluated Point</b>	<b>Criteria</b>	<b>Result</b>

Notes:

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