

Terrace Gardens #2 – Database Notes

Table 1 Database Notes

Data Collection	<u>Data Logger:</u> <u>Data Collection Interval:</u> <u>Collection Method:</u>	Obvius AcquiSuite A8812 15 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>	Tecogen Inverde INV-100 reciprocating generator 100 kW Hot water Domestic hot water and boiler feed water preheat 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>	kW/kWh Net Calculated = gross minus parasitics Accumulated kWh
DG/CHP Generator Electrical Output Demand	<u>Engineering Units:</u> <u>Measurement Type:</u>	kW Instantaneous kW reading
DG/CHP Generator Fuel Input	<u>Engineering Units:</u> <u>Measurement type:</u>	CF Rotary gas meter with pulse output
DG/CHP Useful Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu (calculated value) Two thermal loops – flowmeter and two temperature measurements across all useful loads
DG/CHP Unused Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu (calculated value) Flowmeter and two temperature measurements across CHP dump radiator
DG/CHP Status/Runtime	<u>Engineering Units:</u> <u>Measurement Type:</u>	Hour When generator power greater than 30 kW

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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

Table 2 Event Timeline

Date	Event
December 9, 2014	Logging begins
January 5, 2015	Data posted to NYSERDA DG/CHP website
March 28, 2016	Data adjust change so that QSH only included in QHR_d when THS and THR > 190.

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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	-10	40	Database lower range less than zero to account for parasitic loads
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	-10	300	Database lower range less than zero to account for parasitic loads
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	5000	
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	6000	Calculated value
Unused Heat Recovery (QD_d)	MBtu/int	-	0	6000	Calculated value
Status/Runtime of DG/CHP Generator (SG_d)	hr	-	0	1	
Ambient Temperature (TAO)	°F	Avg	-20	130	WUG Airport code NYC

Notes:

1. This table contains values from *steuben_231.csv*

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Relational Checks

Table 4. Relational Checks

Evaluated Point	Criteria	Result
FG	$WG > 10$ and $FG \leq 0$	DQ Level for FG set to 2
WG	$FG > 100$ and $WG \leq 0$	DQ Level for WG set to 2

Notes:

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