Doral Arrowwood – Database Notes

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	Obvius Aquisuite (AMDG) Datalogger samples all sensors approximately once per second and record five-minute totals (of pulse or digital sensors) or averages (of analog sensors) Obvius Upload to CDH energy server and to the Obvius Building Manager Online (BMO) system
Site Information	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses: Excess Heat:	3 Tecogen InVerde 100 300 kW Hot glycol/water loop Space Heating, Domestic Hot Water Rejected from hot glycol/water loop to heat exchanger with dump radiator
DG/CHP Generator Electrical Output	Engineering Units: Energy Measurement (net/gross): Measurement Type: Generator Power Measurements: Parasitic Power Measurements:	kWh Net calculated: gross - parasitic Accumulated energy per interval 3 total – one for each engine One for entire parasitic panel
DG/CHP Generator Electrical Output Demand	Engineering Units: Measurement Type:	kW From power measurement, based on peak 5-min power
DG/CHP Generator Fuel Input	Engineering Units: Measurement type:	CF Engine heat rate calculated from utility data and measured generator
DG/CHP Useful Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu Contrec 212 BTU Meter measures flow and temperatures across useful loads

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DG/CHP Unused Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu (calculated value) Common flowmeter, additional temperature measurements across dump HX
DG/CHP Status/Runtime	Engineering Units: Measurement Type:	0 – 1, System On/System Off
Facility Purchased Energy	Engineering Units: Measurement Type:	kWh Metered by datalogger
Facility Purchased Demand	Engineering Units: Measurement Type:	kW Metered by datalogger
Other Facility Gas Use	Engineering Units: Measurement Type:	Not Collected

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Table 2 Event Timeline

Date	Event
December 5, 2012	Logging begins
May 13, 2013	Datalogger stops communications, TLS2 installed
July 31, 2013	Reestablish datalogger communications. Data collection resumes

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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	30	
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	-20	360	
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	350	Utility Gas Pulse
Total Facility Purchased Energy (WT_d)	kWh/int	-	0	100	
Total Facility Purchased Demand (WT_KW_d)	kW	-	1	1200	
Other Facility Gas Use (FT_d)	cf/int	-	-	-	Not collected
Useful Heat Recovery (QHR_d)	MBtu/int	-	0	300	Calculated Value
Unused Heat Recovery (QD_d)	MBtu/int	-	0	300	Calculated Value
Status/Runtime of DG/CHP Generator (SG_d)	hr	-	0	1	0 – 1, System On/System Off
Ambient Temperature (TAO)	°F	Avg	-30	130	WUG Airport Code - JFK

Notes:

1. This table contains values from *doral.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*