

# Albany Medical Center – Database Notes

Table 1 Database Notes

<b>Data Collection</b>	<u>Data Logger:</u> <u>Data Collection Interval:</u> <u>Collection Method:</u>	No dedicated data logger. Rovisys data system collects information from remote PLCs 15-minute AMC internal network from Rovisys to CDH
<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>	1 Mercury 50-6000R CHP 4500 kW Steam Low Pressure Steam, Process Steam Rejected from the heat recovery steam generator stack
<b>DG/CHP Generator Electrical Output</b>	<u>Engineering Units:</u> <u>Energy Measurement (net/gross):</u> <u>Measurement Type:</u> <u>Generator Power Measurements:</u> <u>Parasitic Power Measurements:</u>	kW Net Average kW/interval One for the gas turbine generator Two (one for each parasitic panel)
<b>DG/CHP Generator Electrical Output Demand</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	kWh Average power measurements, based on peak 15-min power
<b>DG/CHP Generator Fuel Input</b>	<u>Engineering Units:</u> <u>Measurement type:</u>	lbm/hr Mass flow meter from 3/20/2013 to 4/6/2014. After 4/6/2014 to 6/13/2014, gas input based on curve fit data. Mass flow meter 6/13/2014 to present.
<b>DG/CHP Useful Heat Recovery</b>	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu (calculated value) Net steam calculated using two steam meters (gross - DA). Heat content calculated using fixed steam enthalpy and measured feedwater enthalpy, 1- temperature measurement on HRSG feedwater at TBW

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<b>DG/CHP Unused Heat Recovery</b>	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	Not collected
<b>DG/CHP Status/Runtime</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	0 – 1, System On/System Off
<b>Facility Purchased Energy</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	Not collected
<b>Facility Purchased Demand</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	Not collected
<b>Other Facility Gas Use</b>	<u>Engineering Units:</u> <u>Measurement Type:</u>	Not collected

**Table 2 Event Timeline**

<b>Date</b>	<b>Event</b>
April 1, 2013	Logging begins.
March 20, 2013	CDH onsite to assist Rovisys (the system integrator) in providing the interval data collected to fulfill the NYSERDA monitoring requirements.

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**Table 3 Data Points Tag Name and CDH Point Name**

Data Point	Description	PID Label	Drawing Number	Sensor	Signal Type	Notes
WG	Gas Turbine Gross Electrical Output	DMMF-G1	E-113	Schweitzer Engineering Laboratories SEL-734 Power Meter	Enhanced data stream	13 kV meter located in protection relay
WPAR1	Parasitic Load MCC-1 GTG1/HRSG-1	DMMF	E-103	Siemens 9510/9610 Power Meter	Enhanced data stream	480 V meter
WPAR2	Parasitic Load MCC-4 Gas Compressor	DMMF	E-103	Siemens 9510/9610 Power Meter	Enhanced data stream	480 V meter
FS_gross	CHP Gross Steam Flow	FE1	M-113	Averaging Pitot Tube Mass Flow Transmitter	Direct analog	Gross steam output from HRSG
FS_DA	CHP DA Steam Flow	FE101	M-113	Averaging Pitot Tube Mass Flow Transmitter	Direct analog	Steam output to deaerator
TS	CHP Steam Temperature	TE101	M-113	MgO Mineral Insulated Thermocouple	Direct analog	
TC	CHP Condensate Temperature	TE-114	M-117	MgO Mineral Insulated Thermocouple	Direct analog	
FG	Turbine Gas Consumption	FM-586	M-122	Micromotion Coriolis Meter	Direct analog	Mass flow meter
FGB	Duct Turbine Gas Consumption	FE-4	M-123	Micromotion Coriolis Meter	Direct analog	Mass flow meter

## Site Name – Database Notes

### *Range Checks*

**Table 4. 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	-200	1500	Database range accounts for parasitic loads
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	-500	5000	Database range accounts for parasitic loads
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	60000	
Total Facility Purchased Energy (WT_d)	kWh/int	-	-	-	Not collected
Total Facility Purchased Demand (WT_KW_d)	kW	-	-	-	Not collected
Other Facility Gas Use (FT_d)	cf/int	-	-	-	Not collected
Useful Heat Recovery (QHR_d)	MBtu/int	-	0	15000	Calculated value
Unused Heat Recovery (QD_d)	MBtu/int	-	-	-	Not collected
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 - ALB

Notes:

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

## Site Name – Database Notes

### *Relational Checks*

Table 5. Relational Checks

Evaluated Point	Criteria	Result

Notes:

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