

Jewish Home and Hospital Greenwall Pavilion – Database Notes

Table 1 Database Notes

Data Collection	<u>Data Logger:</u> <u>Data Collection Interval:</u> <u>Collection Method:</u>	Obvius Aquisuite (CDH) 1-minute Obvius Upload
Site Information	<u>Cogeneration Units:</u> <u>Nameplate Capacity:</u> <u>Heat Recovery Medium:</u> <u>Heat Recovery Uses:</u> <u>Excess Heat:</u>	3 – Tecogen CM-100 300 kW Hot glycol/water loop Space Heating/Cooling, domestic Hot Water Rejected from the hot water loop to heat exchanger connected to building dump radiator
DG/CHP Generator Electrical Output	<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/kWh Gross Pulse output – 2.5 Wh/pulse One for three engines One for entire parasitic panel
DG/CHP Generator Electrical Output Demand	<u>Engineering Units:</u> <u>Measurement Type:</u>	kW Average power measurement, based on peak 1-min power
DG/CHP Generator Fuel Input	<u>Engineering Units:</u> <u>Measurement type:</u>	CF Engine heat rate calculated from utility data and measured generator energy output
DG/CHP Useful Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu (calculated value) One thermal loop – common flowmeter and multiple temperature measurements (across all useful loads)
DG/CHP Unused Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu (calculated value) Common flowmeter (pulse output), multiple resistance temperature measurements (across dump HX)

Jewish Home and Hospital Greenwall Pavilion – Database Notes

DG/CHP Status/Runtime	<u>Engineering Units:</u> <u>Measurement Type:</u>	0 – 1, System On/System Off
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

Note: See addendum for further details

Jewish Home and Hospital Greenwall Pavilion – Database Notes

Table 2 Event Timeline

Date	Event
March 23, 2012	Initial site visit. Datalogger and sensors rough in. DAS system operational but incomplete. Communications not operational (Adam Walburger).
March 30, 2012	Datalogger and sensors rough in continued. DAS system operational, awaiting gas meter installation and communications start-up (Adam Walburger).
April 24, 2012	Datalogger and sensors rough in completed. DAS system operational, awaiting gas meter installation, third Tecogen engine start-up, and communications start-up (Adam Walburger).
July 12, 2012	On site to install Phone Stick to share phone line with TECOCHILL unit. Net Power (WG) power transducer stopped functioning on June 19, 2012. Awaiting gas meter installation, new WG power transducer installation, and third Tecogen engine start-up (Adam Walburger).
August 20, 2012	Reconfigured phone stick to work with existing TecoChill phonenumber. Nightly data collection begins. Replaced WG power transducer with a Watt Node WNB-3D-408-P to prevent overvoltage damage. Tecogen units #1 and #3 are down for service.

Jewish Home and Hospital Greenwall Pavilion – Database Notes

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	6	
DG/CHP Generator Output Demand (WG_KW_d)	kW	Max	0	330	
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	100	Monthly bill data collected via internet
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	70	Calculated Value
Unused Heat Recovery (QD_d)	MBtu/int	-	0	70	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 -LGA

Notes:

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

Jewish Home and Hospital Greenwall Pavilion – Database Notes

Relational Checks

Table 4. Relational Checks

Evaluated Point	Criteria	Result

Notes:

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