

Lakeside Towers – Database Notes

Table 1 Database Notes

Data Collection	<u>Data Logger:</u> <u>Data Collection Interval:</u> <u>Collection Method:</u>	Tecogen control system 15 – Minute Nightly FTP upload to Frontier Energy servers
Site Information	<u>Cogeneration Units:</u> <u>Nameplate Capacity:</u> <u>Heat Recovery Medium:</u> <u>Heat Recovery Uses:</u>	One (1) Tecogen INV-125 e+ Unit 125 kW Hot Water Domestic Hot Water (DHW)
DG/CHP Generator Electrical Output	<u>Engineering Units:</u> <u>Energy Measurement (net/gross):</u> <u>Measurement Type:</u>	kWh Net Power: (calculated from gross and parasitic measurements) Measured kWh
DG/CHP Generator Electrical Output Demand	<u>Engineering Units:</u> <u>Energy Measurement (net/gross):</u> <u>Measurement Type:</u>	kW Net Power: (calculated from gross and parasitic measurements) Measured kW
DG/CHP Generator Fuel Input	<u>Engineering Units:</u> <u>Measurement type:</u>	CF Pulse output from gas meter
DG/CHP Useful Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu /hr Calculated from 15-minute flow and temperature data
DG/CHP Unused Heat Recovery	<u>Engineering Units:</u> <u>Heat Measurement Type:</u>	MBtu /hr Calculated from 15-minute flow and temperature data
Facility Purchased Energy	<u>Engineering Units:</u> <u>Measurement Type:</u>	kWh Measured kWh

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Facility Purchased Demand	<u>Engineering Units:</u> <u>Measurement Type:</u>	kW Measured kW
Other Facility Gas Use	<u>Engineering Units:</u> <u>Measurement Type:</u>	- -

Table 2 Event Timeline

Date	Event
January 10, 2020	Data collection begins
October 22, 2020	Added to NYSERDA website.
October 30, 2020	Gas measurements are provided and added to dataset. System efficiencies calculated.

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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)	kWh/int	Sum	-2.50	37.5	-
DG/CHP Generator Output Demand (WG_KW)	kW	Max	-10	150	-
DG/CHP Generator Gas Use (FG)	cf/int	Sum	0	2500	-
Total Facility Purchased Energy (WI)	kWh/int	Sum	0	200	-
Total Facility Purchased Demand (WI_KW)	kW	Max	0	800	-
Useful Heat Recovery (QU)	MBtu/hr	Avg	0	2000	-
Unused Heat Recovery (QD)	MBtu/hr	Avg	0	2000	-
Ambient Temperature (TAO)	°F	Avg	-20	130	<i>WUG Airport Code - LGA</i>

SITE NAME – LAKESIDE TOWERS

Relational Checks

Table 4. Relational Checks

Evaluated Point(s)	Criteria	Result
Electricity Generated	Fuel Consumed > 0 and Electricity Generated Invalid	Fuel Consumed = invalid
Fuel Consumed	Electricity Generated > 0 and Fuel Consumed Invalid	Electricity Generated = invalid