The Mayfair – Database Notes

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	Tecogen control system 15 – Minute Nightly FTP upload to Frontier Energy servers
Site Information	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses:	One (1) Tecogen INV-100 e+ Unit 100 kW Hot Water Domestic Hot Water (DHW) and space heating
DG/CHP Generator Electrical Output	Engineering Units: Energy Measurement (net/gross): Measurement Type:	kWh Net Power: (calculated from gross and parasitic measurements) Measured kWh
DG/CHP Generator Electrical Output Demand	Engineering Units: Energy Measurement (net/gross): Measurement Type:	kW Net Power: (calculated from gross and parasitic measurements) Measured kW
DG/CHP Generator Fuel Input	Engineering Units: Measurement type:	CF Pulse output from gas meter
DG/CHP Useful Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu /hr Calculated from 15-minute flow and temperature data
DG/CHP Unused Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu /hr Calculated from 15-minute flow and temperature data
Facility Purchased Energy	Engineering Units: Measurement Type:	kWh Measured kWh

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Facility Purchased Demand	Engineering Units: Measurement Type:	kW Measured kW
Other Facility Gas Use	Engineering Units: Measurement Type:	- -

Note:

- Parasitic values incorrect due to incorrect CT ratios. CT ratios fixed 1/26/2021. The average parasitic load used to stipulate parasitic loads, replacing the incorrect values.
- Pressure compensation applied to gas use based on 20inWC gas pressure.

Table 2 Event Timeline

Date	Event
March 19, 2020	Data collection begins
October 22, 2020	Added to NYSERDA website.
January 26, 2021	CT ratios corrected on parasitic meter
February 15, 2021	Gas correction and parasitic load stipulation loaded to the web

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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	30	-
DG/CHP Generator Output Demand (WG_KW)	kW	Max	-10	120	-
DG/CHP Generator Gas Use (FG)	cf/int	Sum	0	2000	-
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	1500	-
Unused Heat Recovery (QD)	MBtu/hr	Avg	0	1500	-
Ambient Temperature (TAO)	°F	Avg	-20	130	*WUG Airport Code - LGA*

Relational Checks

Table 4. Relational Checks

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