

TAXI 30-02 39TH STREET – DATABASE NOTES

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	Tecogen control system 15 – Minute FTP Upload to Frontier servers
Project Information (CHP)	DER Unit (make & model): Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses:	Two (2) Tecogen INV-100 e+ Unit 100 kW Hot Water Domestic Hot Water (DHW), Space Heating, and Pool
DER Electricity Generated (WG)	Engineering Units: Energy Measurement (net/gross): Measurement Type:	kWh Net Power (calculated from combined gross and parasitic measurements) Calculated using kW measurements from Veris E50C2.
Electric Utility Import (WI)	Engineering Units: Measurement Type:	kW Measured kW
DER Fuel Consumed (FG)	Engineering Units: Measurement type:	CFh Cubic feet per hour
DER Heat Used (QU)	Engineering Units: Heat Measurement Type:	MBtu/hr Measured Btu/hr from an Onicon Btu Meter
DER Heat Rejected (QD)	Engineering Units: Heat Measurement Type:	MBtu/hr Measured Btu/hr from an Onicon Btu Meter

Table 2 Event Timeline

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Date	Event
March 21, 2019	Data collection begins. No gas data.
January 10, 2020	Gas data starts.
April 23, 2020	Data on DER website truncated to this day. Date power data is accurate.
December 29, 2019	Added to NYSERDA website.
October 19, 2022	Gas data stipulated, from 5/27/21 to present, using measured power and gas prior to gas meter failure. See Appendix – Gas Calc for details.

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Range Checks

Table 3 Range Checks

Data Point	Units	Database Lower Range	Database Upper Range	Notes
DER Electricity Generated	kWh/hour	-5	240	
DER Fuel Consumed	cfh	0	2000	
DER Heat Used	MBtu/hour	0	3000	
DER Heat Rejected	MBtu/hour	0	3000	
Ambient Temperature	°F	-20	130	NOAA Airport Code - KLGA

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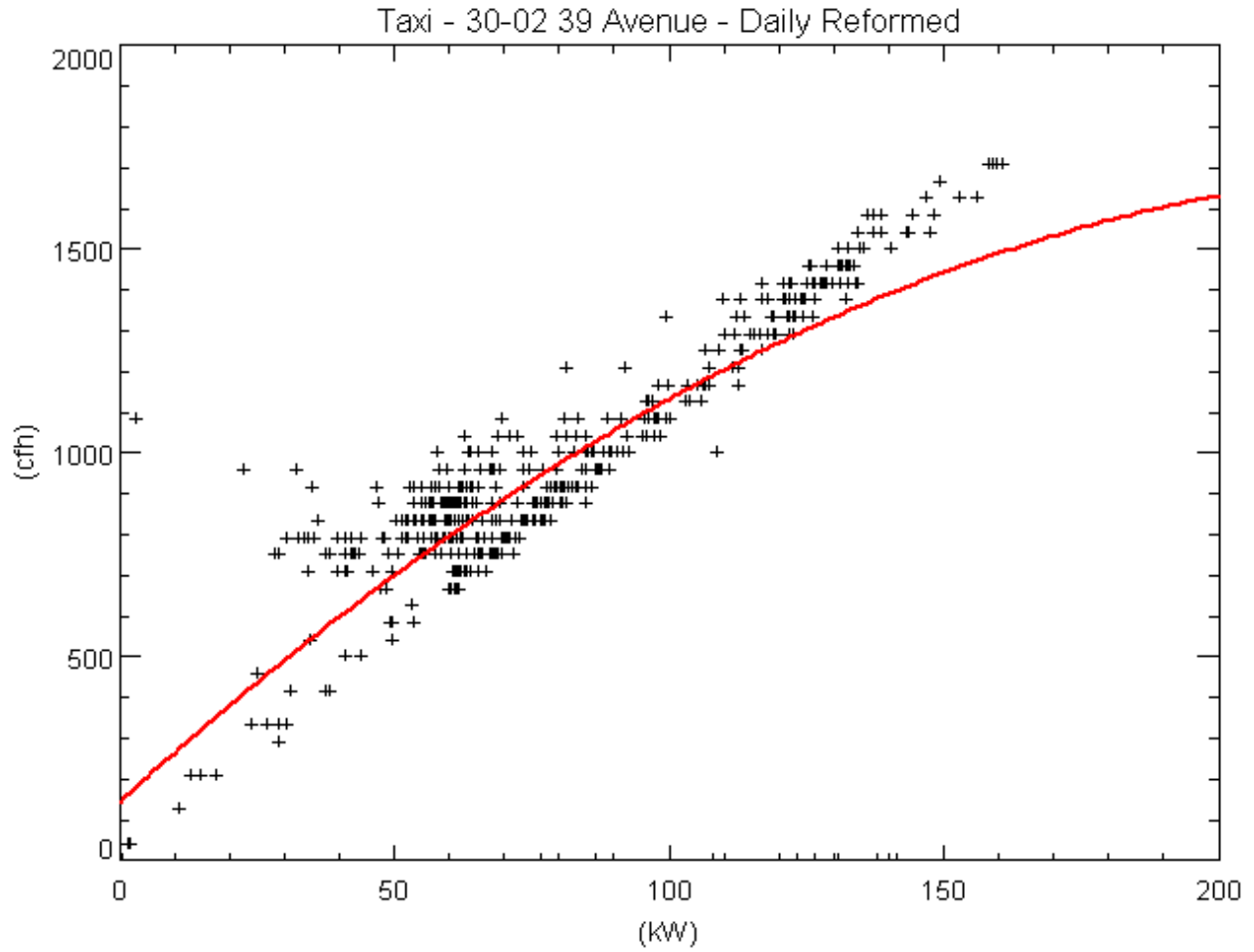
Relational Checks

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

TAXI 30-02 39TH STREET – APPENDIX A

Gas data is calculated from power generation by using gas curve developed from the measured power and gas data, prior to the gas meter failure on 5/27/21, for the two Tecogen INV-e+ 100 units.



Power generation (WT_KW), gas consumption (FG):

$$FG = -0.02449(WT_KW)^2 + 12.34078(WT_KW) - 143.37646$$