Transcontinental Ultra Flex Inc. – Database Notes

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	ALC control system 15 – Minute Nightly email to Frontier Energy from ALC control system
Site Information	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses: Excess Heat:	Five (5) Tecogen INV-125e+ 625 kW (125 kW each) Hot Water Absorption chiller, space heating, process heat Rejected to atmosphere by fluid cooler
DG/CHP Generator Electrical Output	Engineering Units: Energy Measurement (net/gross): Measurement Type:	kW / kWh Net Power (directly measured) Gross kWh and parasitic kWh from Eaton 250/260 shark meter
DG/CHP Generator Fuel Input	Engineering Units: Measurement type:	CF/h Cubic feet (16,000 cf/hour) – from Roots 16M175 utility gas meter
DG/CHP Useful Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu/hr Calculated from 15-minute analog flow and temperature data
DG/CHP Unused Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu/hr Calculated from 15-minute analog flow and temperature data
Facility Purchased Energy	Engineering Units: Measurement Type:	kWh / kWh Measured utility services – from Eaton 250/260 shark meter
Other Facility Gas Use	Engineering Units: Measurement Type:	- -

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Table 2 Event Timeline

Date	Event
July 1, 2018	Data collection begins.
September 14, 2018	Added to NYSERDA website.

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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_d)	kWh/int	Sum	0	700	
DG/CHP Generator Gas Use (FG_d)	cf/int	Sum	0	7500	
Total Facility Purchased Energy (WT_d)	kWh/int	Sum	9	1000	*WT_d = WT_KW_d / # Intervals*
Other Facility Gas Use (FT_d)	cf/int	-	-	-	
Useful Heat Recovery (QHR_d)	MBtu/hr	Avg	-500	5000	
Unused Heat Recovery (QD_d)	MBtu/hr	Avg	0	5000	
Ambient Temperature (TAO)	°F	Avg	-20	130	*WUG Airport Code - JFK*

Notes:

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

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Relational Checks

Table 4. Relational Checks

Evaluated Point	Criteria	Result

Notes:

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