

Exhibit No.: SC-02 - Atch-A

Docket No.: A.25-10-008

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Witness: Grubert

Exhibit SC-02 - Atch-A

Excerpt of R&D GREET spreadsheet, RNG tab, cell D35

Attachment 1

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Renewable Natural Gases Based Fuel

1) Scenario Control and Key Input Parameters

1.1) Shares of Landfill Gas and Biogas for Each Fuel

1.2) Assumptions Regarding RNG Production via Upgrading

Home

Inputs

Results

	RNG as Intermediate Fuel	MeOH	CNG	LNG
Landfill Gas	100%	100%	100%	100%
Bio-gas from AD of Animal Waste	0%	0%	0%	0%
Bio-gas from AD of Wastewater Sludge	0%	0%	0%	0%
Bio-gas from AD of MSW	0%	0%	0%	0%

Energy source for biogas upgrading	1	1--RNG, 2-- Fossil NG		
Select biogas upgrading technology	Pressure Swing Adsorption	Pressure Swing Water Scrubbing		
Electricity (MJ/m3 biogas)	0.954	0.954	1.026	
CH4 loss (%)	2.8%	2.8%	1.9%	
CH4 purity (%)	98.0%	98.0%	97.7%	
DEA	0.00			
MEA	0.00			
Potassium hydroxide	0.00			
Heat (MJ/m3 biogas)	0.00			
Biogas leakage during AD	1%			

	LFG-based	Manure-based	WWTP-based	MSW-based
	Micro Turbine	Micro Turbine	Micro Turbine	Micro Turbine
CHP Generator Electrical Efficiency	#NAME?	#NAME?	#NAME?	#NAME?
Heat Recovery Efficiency from CHP generator	70%	70%	70%	70%
Boiler Efficiency	80%			
RNG Upgrading Efficiency (powered by Electricity)	94.4%			
RNG Upgrading CH4 Leakage	2%			
RNG Small Scale Liquefaction Efficiency (powered by Electricity)	89.0%			

CNG Refueling Options	1	1 -- On-Site, 2 -- Off-Site		
Allocation Handling Method	2	1 -- Displacement, 2-- Energy Allocation		

Biogenic CO2 emission credits

-58,066 (gCO2e/mmBtu biogas combustion)