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To: UTC DL Records Center

Subject: Docket #190818: RNG Production Costs

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Greetings,

I'm following up on the question raised by Commissioner Danner at the October 29 workshop regarding the cost of RNG development. As discussed in the recent "Promoting Renewable Natural Gas in Washington State" report co-authored by the WA Dept of Commerce and WSU Energy Program, the approximate cost of capturing and upgrading biogas from various sources of anaerobic digestion generally varies from \$3-\$30/MMBtu, depending upon scale and source (see section 4 of the report):

- Large landfill projects ~\$1
- Large wastewater treatment facilities \$5-6
- Small wastewater treatment facilities and large dairies \$9
- Small dairies \$12

We estimated the amortized cost of pipeline interconnection at \$3/MMBtu. Any net revenue expected by private sector investors also needs to be taken into account, which can drive the cost towards the higher end of the range. In sum, though, there are ample opportunities in the \$10/MMBtu range, especially for projects involving publicly managed waste streams and infrastructure.

Thank you for your attention, please feel free to contact me with any questions.

Peter

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