

Oregon Department of Energy

*Leading Oregon to a safe, clean,
and sustainable energy future*

The Biogas / RNG Inventory – Advisory Committee

Meeting 3

January 11, 2018

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SB 334 – RNG Advisory Committee

Goals for today

Metro Presentation

Brief update on inventory work

Develop and prioritize a list of barriers, opportunities and policy concepts that relate to the production and utilization of RNG in Oregon



Chapter 1

A review of all the existing technologies available to this state for the conversion of biomass to biogas and RNG, including but not limited to anaerobic digestion and thermal gasification.

Goal: define available and near future technology to create biogas, RNG. Establish conversion rates (feedstock to biogas to RNG)

Work product: A written technical review on Thermal Gasification, Anaerobic Digestion, and other potential technologies (hydrothermal processing?) as well as biogas clean up – this is a found literature review only. Generate a table that presents the estimated range of conversion rates for various raw material to biogas by the different technologies. A second table will show the resulting amount of RNG after biogas is cleaned to pipeline standards. At each step identify where there are losses of gas and losses through conversion efficiency.

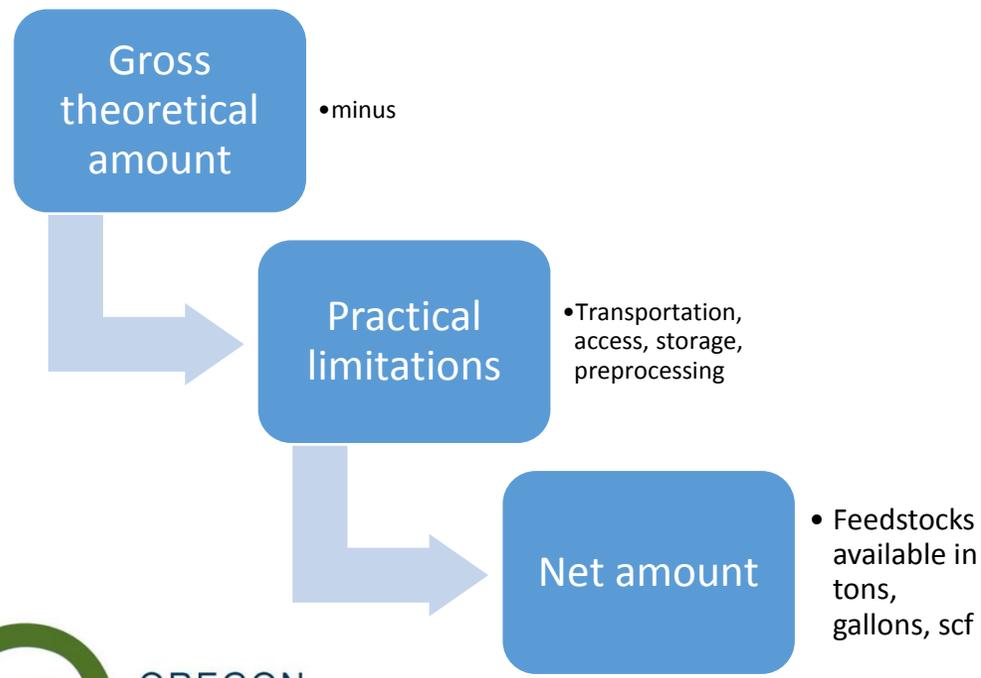
Group Questions: How much detail and how deep should we go for each technology? Are there other gas production technologies we should investigate and where do we draw the line for this initial 2018 report? Should we present a variety of pipeline gas standards at this point or elsewhere in a separate discussion?

Chapter 2

Section 1 (2) (a) A list of potential biogas and renewable natural gas sources in this state and the estimated potential production quantities available at each source

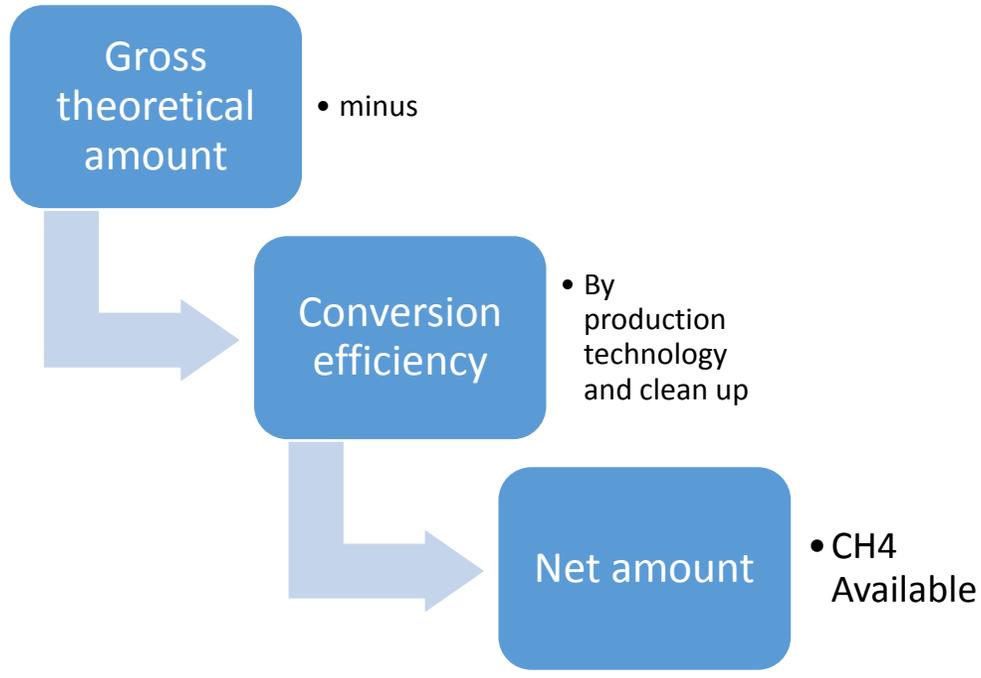
(b) An estimated energy content of listed potential biogas and renewable natural gas sources:

Feedstocks



By county and feedstock

CH4 scf and BTUs



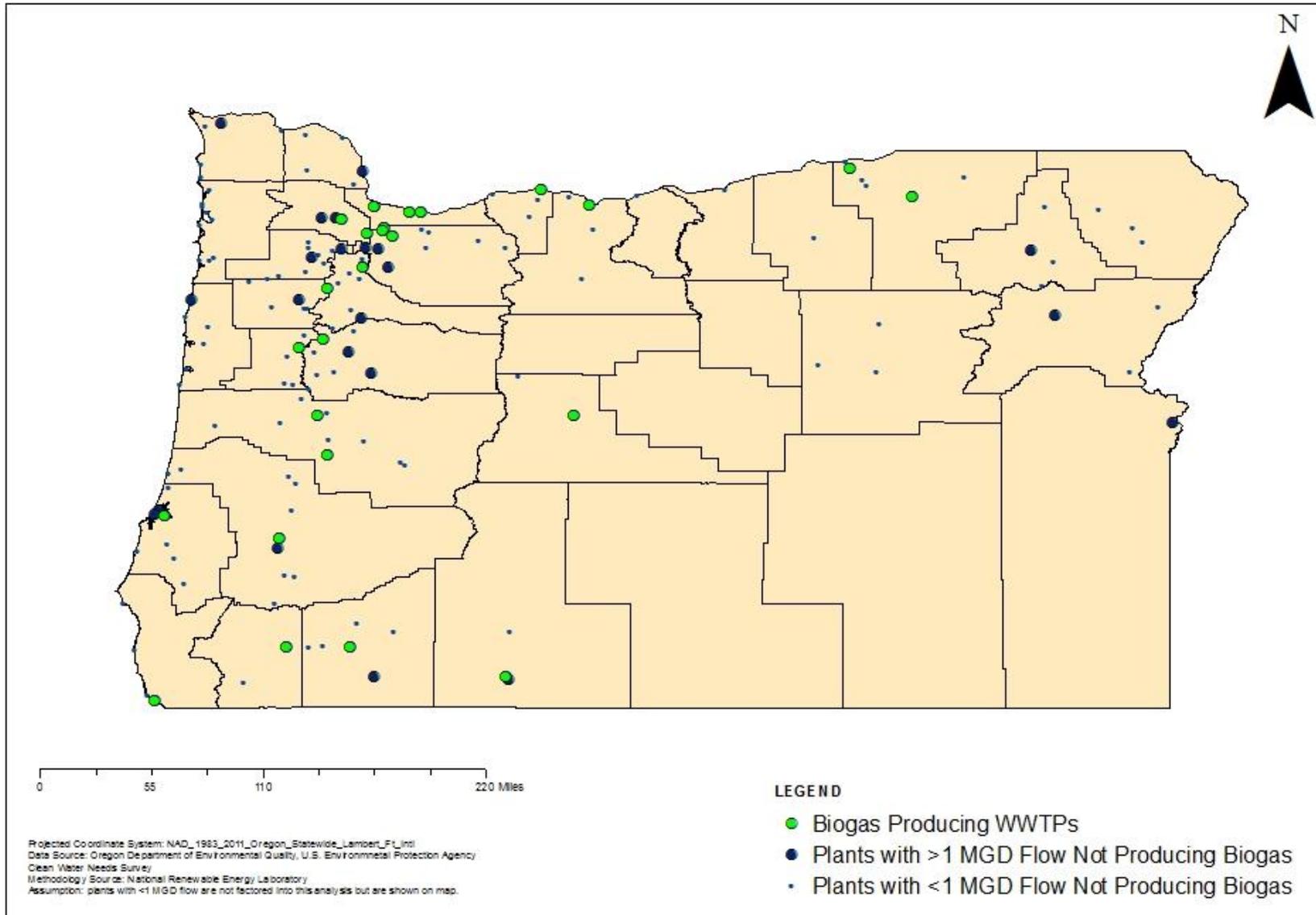
By county and feedstock



Chapter 2 table (table numbers are fictional)

County	Feedstock	Gross Volume	Net Volume	Net BTUs	CH4 scf	Biogas
Lincoln	Ag Manure	100,00 wet tons	30,000 tons	19,617,000,000	19,617,000	30,180,000
	Food Waste	500 wet tons	300 tons			
	WWT	1M gallons	1M gallons			
	LF	10 million tons				
	Forest Residuals	9 million bone dry tons				
	Agricultural Residuals	3 million bone dry tons				
County total						

Municipal Wastewater Treatment Plants in Oregon, 2017



The department shall appoint an advisory committee to assist in developing, maintaining and periodically updating the inventory required by this section. The committee must include but not be limited to persons familiar with the renewable natural gas industry.

The Committee shall make recommendations to the department:

(a) Regarding the identification and removal of barriers to producing and utilizing biogas and renewable natural gas in this state as a means toward providing the greatest feasible reductions in greenhouse gas emissions and improvements in air quality;

(b) On establishing policies to promote renewable natural gas; and

(c) On any other matters related to this section, as requested by the department.

Risk Categories

Producers

Developers

Local Distribution Companies

Fleets

Government

Policy, Barriers, and Opportunities

Long Term Policy

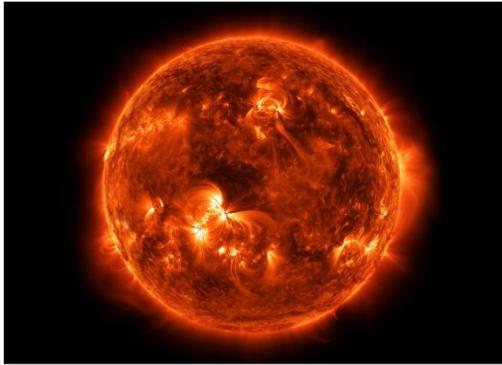
Short Term Policy

Regulatory Barriers

Commercial Barriers

General Opportunities

Questions



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Example

Example for anaerobic digestion

What about other technology like thermal gasification or?

