

<b>DOCKETED</b>	
<b>Docket Number:</b>	21-IEPR-05
<b>Project Title:</b>	Natural Gas Outlook and Assessments
<b>TN #:</b>	239710
<b>Document Title:</b>	PG&E Comments - PG&E Comments on IEPR Workshop on Renewable Natural Gas – RNG Supply, Availability, and Price in California
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	PG&E
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	9/14/2021 4:22:27 PM
<b>Docketed Date:</b>	9/14/2021

*Comment Received From: PG&E  
Submitted On: 9/14/2021  
Docket Number: 21-IEPR-05*

**PG&E Comments on IEPR Workshop on Renewable Natural Gas  
“ RNG Supply, Availability, and Price in California**

*Additional submitted attachment is included below.*



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September 14, 2021

California Energy Commission  
Commissioners Siva Gunda and Andrew McAllister  
1516 9th St  
Sacramento, CA 95814  
Docket Number 21-IEPR-05

**RE: Pacific Gas and Electric Company Comments on the Integrated Energy Policy Report (IEPR) Commissioner Workshop on Renewable Natural Gas – RNG Supply, Availability, and Price in California (Docket Number 21-IEPR-05)**

Dear Commissioners Gunda and McAllister:

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to participate in and comment on the California Energy Commission's (CEC) 2021 Integrated Energy Policy Report (IEPR) Commissioner workshop on renewable natural gas (RNG) supply, availability, and price in California held on August 31, 2021.

PG&E applauds the CEC's efforts in organizing this workshop and offers the following comments aligned with PG&E's Senior Manager of Research and Development and Innovation, Francois Rongere's presentation at the workshop, related to RNG and California Energy policy:

PG&E believes RNG is a critical component to reaching California's climate goals. RNG is already helping to decarbonize California's transportation sector and it could further benefit California by decarbonizing the gas pipeline system. Replacing 16 percent of California's natural gas throughput with RNG in the gas pipeline could have more climate benefits than electrifying 100 percent of the buildings in California.<sup>1</sup> Since biomethane avoids the release of methane, it reduces greenhouse gas (GHG) emissions beyond the offset of carbon dioxide (CO<sub>2</sub>) emissions in buildings due to natural gas combustion. Increasing the volume of RNG in the gas system helps decarbonize the fuel used in end-use appliances without significant changes to the equipment. It can also help decarbonize the gas-fired electric generation fleet.

RNG interconnection projects to PG&E's gas system experienced delays due to COVID-19, but project activity has picked up since the beginning of 2021. Current projects in development in PG&E's service territory represent a total production of 36 million cubic feet per day. The first of these projects will start injecting biomethane in PG&E pipelines in October 2021, which represents the first biomethane interconnection since the Vintage Dairy pilot in 2008.

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<sup>1</sup> [Getting the Facts on Renewable Natural Gas \(epa.gov\)](#), 2018; Navigant Consulting, "Gas Strategies for a Low-Carbon California Future," 2018

As a pipeline operator, PG&E focuses on facilitating the injection of biomethane supported by three short-term efforts to reduce costs:

1. Standardization of interconnection skids;
2. Optimization of gas quality measurements;
3. Reverse compression into transmission pipelines when the load of the local distribution network cannot absorb all the biomethane produced, especially in summer. This approach avoids the construction of dedicated transmission lines from the point of production to the transmission network.

In addition, PG&E is exploring a range of technologies and solutions to support the production and injection of biomethane. PG&E's [research and development \(R&D\) road map can be consulted online](#) for more information.

An example of a longer-term R&D effort is the conversion of carbon dioxide (CO<sub>2</sub>) to methane to improve the utilization of renewable carbon and increase the production of biomethane. Two alternative technologies are explored:

- Opus12, which is using an electrochemical process similar to an electrolyzer;
- An effort by Stanford University, which is using a bio-chemical process.

Beyond biomethane obtained from anaerobic digestion in dairies, landfills and wastewater treatment plants, woody residues can also be processed to produce methane generally called RNG. Woody biomass represents a resource typically four times greater than the feedstock of anaerobic digestion. Technologies using gasification or pyrolysis are currently in the transition from R&D to commercial units.

PG&E appreciates the Commissioners' questions and discussion related to timelines and incentives. PG&E is supportive of expanding Low Carbon Fuel Standard (LCFS) incentives to sectors outside of transportation or creating new incentives to encourage the injection of RNG into the pipeline as long as the incentives do not increase utility customer rates. Additionally, PG&E welcomes the opportunity to participate in a process to create a timeline that shows the potential volume of RNG injected into the California gas system. Before potential volumes and incentives can be determined, a review of the various forecasts of the prospective RNG supply (including emerging technologies such as gasification and pyrolysis of woody biomass) is needed to best inform target setting and incentives.

PG&E appreciates the time and effort that the CEC took to organize this IEPR workshop on RNG supply, availability, and price in California, the opportunity to speak and provide PG&E's perspective on this, and the opportunity to provide additional comments to share our learnings and insights on RNG and on hydrogen's potential in the clean energy transition. We would welcome further discussion with the CEC to further discuss the role of RNG and hydrogen and the synergies they can create between the gas and electric energy systems.

Sincerely,

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