



PRCI: Renewable Natural Gas SOTA and gap analysis

AMÉLIE LOUVAT, GRTGAZ, ON BEHALF OF PRCI

Objectives

- The overall goal of the study is to develop a concrete path forward to define the necessary projects that need to be completed for companies to safely and reliably inject RNG into their pipelines at certain blend levels. This helps address regulatory issues for natural gas utilities being required to accept RNG into their pipelines as well as provides economic benefits through GHG reductions

PRCI Project Team & External Outreach



RNG* Core Team:



- > 11 organizations
- > 45 experts

External outreach:



- > 5 organizations
- > 8 experts

*Renewable Natural Gas

Technical topics & methodology

Objective

Identify R&D needed for companies to safely & reliably inject renewable natural gas in their pipelines.

Methodology: 4 steps

1. Mapping
2. State-of-the-art Analysis
3. Gap Analysis
4. Roadmap

Timeline

April – September 2020

10 Technical Subjects

1. RNG Composition
2. Injection and dilution related impacts on gas grid
3. Safety
4. Analyzer
5. Odorization
6. Metering
7. Global Injection system
8. Storage
9. Reverse Flow Injection System
10. Gathering line for biogas

Goals

- This study will enable to establish a state-of-the art (SoTA) for Renewable Natural Gas (injected into gas network) in order to create a common base of knowledge, to identify related Research and Development (R&D) gaps and to propose key projects for PRCI to work on as the earliest in 2021

Summary of the work realized

- Keys numbers:

5 Months project

130 documents
collected

60 RNG projects
listed

24 Gaps identified
some are outside PRCI
perimeter –
partnerships

- Final report with 3 levels:

1. **Executive level** = presentation of key results & gaps identified
2. **Expert level** = summary of collected data
3. **All the raw data** collected

- Identify TOP Research Priorities for PRCI and list of possible partners to work on other gaps
- Creation of the Emerging Fuels Institute in August 2021 to coordinate all the R&D dedicated to Emerging Fuels

Top priorities



RNG Trace components Database

- Consolidate existing & new data on RNG trace components
- Link to PRCI Data Hub - Align trend of capitalizing data sets for continuous improvement
- Create a database open to PRCI members & developers
- Idea – collect existing RNG data & design the database



RNG Gas Quality Analyzer

- Find/develop/evaluate a single integrated unit to analyze main RNG components & selected trace components
- Control gas quality of RNG injected into the pipeline & cover associated Gas industry needs with a specific analyzer
- Idea – Summarize & benchmark Gas industry needs



THANK YOU FOR YOUR ATTENTION