



North Central Texas Organic Waste to Fuel Feasibility Study

PAG Kick-Off Workshop

November 30, 2021 | 2 p.m. – 3:30 p.m.

Workshop Attendees

Project Advisory Group

- Brendan Lavy, TCU
- Courtney Carroll, Fort Worth ISD
- Jaime Bretzmann, City of Plano
- Joao Pimentel, City of Fort Worth
- Katelyn Hearon, City of Lewisville
- Kathy Fonville, City of Mesquite
- Lynn Lyon, US Gain
- Sahana Prabhu, Texan by Nature
- Yarcus Lewis, City of Plano

Study Team

- Breanne Johnson, NCTCOG
- Lori Clark, NCTCOG
- Soria Adibi, NCTCOG
- Cassidy Campbell, NCTCOG
- Melanie Sattler, UTA
- Scott Pasternak, Burns & McDonnell
- Scott Martin, Burns & McDonnell
- Tiffany Moss, Burns & McDonnell
- Andrew Mitrisin, Burns & McDonnell
- Eric Weiss, Burns & McDonnell
- Matt Tomich, Energy Vision
- Phil Vos, Energy Vision

Workshop Overview

The Project Advisory Group (PAG) has been formed to provide technical guidance and regional expertise as the study explores the potential for organic waste, anaerobic digestion, and renewable natural gas (RNG) technologies in the region. The PAG Kick-Off Workshop held on November 30, 2021 included an overview of the project, real world perspectives and examples and a SWOT analysis. Three additional workshops will be held in the first half of 2022 (dates have not yet been determined) to review study data and gather additional input from the PAG.

SWOT Analysis

A SWOT Analysis was conducted to identify strengths, weaknesses, opportunities and threats that will need to be evaluated during the study. Responses for each category are provided below.

Strengths

- Air quality betterment in a non-compliant region
- Food/organic composition of the municipal solid waste
- Huge available feedstocks, local government interest in new technologies
- Lots of corporate headquarters in Plano in case there is need for additional corporate funding
- Existing oil, gas and chemical infrastructure outside of region in Texas
- Demand for biosolid management other than land application
- Several cities have organic waste programs, mostly yard waste diversion, in the region and a few have anaerobic digestors. Within the transportation sector, there are probably many opportunities to create demand for renewable gas within corporate fleets. Also, great regional partners with academic institutions and environmental groups to support this effort.
- S - Industry leadership with companies like WM and end users like DFW Airport, Texas understands CH₄, strong infrastructure with Texas triangle
- Other than landfill projects, of which there are already quite a few, there's a lot of potential for developing projects in wastewater, food waste, agriculture
- Limited regional landfill air capacity
- Availability of organic waste. Multiple interested stakeholders in the region.
- Regarding food waste, it seems like contamination is the trickiest part of collection

Weaknesses

- Wastewater treatment plants (WWTPs) hesitant to accept food waste or require major capital upgrades to process into RNG
- No statewide RNG incentive programs
- Large capital cost
- The cost of infrastructure
- Lack of infrastructure
- Landfill gas (LFG) competes with AD operations
- Existing landfill gas (LFG) operations
- The sheer size of the metroplex and the impact on transportation costs
- Lack of understanding carbon intensity (CI) scores
- Data is not comprehensive; hard to determine the number of processing facilities in the region
- In some ways, agricultural waste may be a limited resource. Cattle RNG projects are generally dairy, beef cattle produce less manure and less biogas. Also, open lot feed yards promote drying out and contamination of manure.

- Lack of resources in rural communities
- Evolving end-game for the generated gas
- Lack of understanding what RNG is, called "greenwashing"
- Would echo mention of "greenwashing" critique of RNG
- Cost of converting to anaerobic digestion. Cost/difficulty converting fleet to RNG.
- Few existing organics collection networks

Opportunities

- Substantial wastewater infrastructure in DFW region
- Commercial organics diversion (e.g., F&B, produce suppliers, etc.)
- Public/private partnerships
- Lots of opportunities for collaboration between local governments, private entities, and educational institutions, etc.
- Grant funding for infrastructure. Collaboration between local government and industry.
- Leverage existing infrastructure
- Leverage area expertise with CH₄
- [Hyllion trucks](#) combine RNG and electric drive train Cummins 15L coming soon

Threats

- Cost of implementation vs. relative inexpense of continued landfilling
- Cost of implementation
- Challenges guaranteeing feedstock uniformity and volume make it hard to finance capital projects/new build digesters
- Issue of contamination not being solved
- Electrify everything – all eyes on electric vehicles (EVs) and policy dollars
- Advancement in electric vehicles
- Pushback on pipelines
- Focusing too much on zero emissions
- Lack of demand for digestate product
- Difficulty connecting with landowners
- Lack of political will
- Misinformation about RNG