



North Central Texas Organic Waste to Fuel Feasibility Study

Workshop # 2

March 29, 2022 | 9:30 a.m. – 11:00 a.m.

Workshop Attendees

Project Advisory Group

- Katelyn Hearon, City of Lewisville
- Kathy Fonville, City of Mesquite
- Sahana Prabhu, Texan by Nature
- Katie Klein, Town of Shady Shores
- Brandon Evers, City of Dallas
- Susan Shifflett, Texas NGV Alliance
- Julie Winchell, City of Cleburne
- Leanna Kelleher, Shell RNG
- Sergio Gonzalez, Organix Recycling
- Nick Alford, DFWIA
- Darren Turley, Dairy Farmers of America
- Melissa Stewart, Texas Restaurant Association

Study Team

- Breanne Johnson, NCTCOG
- Lori Clark, NCTCOG
- Soria Adibi, NCTCOG
- Cassidy Campbell, NCTCOG
- Edith Marvin, NCTCOG
- Jared Wright, NCTCOG
- Melanie Sattler, UTA
- Scott Pasternak, Burns & McDonnell
- Scott Martin, Burns & McDonnell
- Julie Davis, Burns & McDonnell
- Andrew Mitrisin, Burns & McDonnell
- Eric Weiss, Burns & McDonnell
- Matt Tomich, Energy Vision
- Phil Vos, Energy Vision

Workshop Overview

The purpose of the workshop is to highlight work completed to date by NCTCOG's contractor – Burns & McDonnell – and included an overview of the regional market assessment and feedstock collection network for organics, as well as an understanding of the demand for RNG vehicles.

Feedstock Supply Analysis

- Methodology: estimated quantities of organic material generation based on local and regional studies and plans, waste characterization studies, TCEQ reported data, and population.
- Feedstock supply materials include food waste (residential and commercial), yard waste, brush, manures, crop residue, grease/sludge/biosolids.
- 8.3 million tons of organics generated annually
 - Food waste (25%), yard waste (20%), crop residues (25%), CAFO manures (27%), biosolids (3%)
- Existing biogas generation resources include landfill gas and existing digesters (WWTP and on-farm).
 - 17 landfills (opened and closed) collecting 44,000 scfm of biogas
 - 47 “major” WWTP in NCTCOG, 8 with AD

Fuel Demand Analysis

- Presented an overview of findings related to the fuel demand analysis for natural gas-powered vehicles in the North Central Texas region.
 - Described the methodology used to determine a range of counts of bus, commercial truck and refuse truck vehicles in the region based on Texas Department of Motor Vehicle data and DFW Clean Cities data.
- Presented estimates of current and future natural gas demand for vehicles in the three primary vehicle types, including projects based on realistic scenarios for NGV adoption in the region.
 - To tie the supply and demand analysis together, the project team described how future scenarios compare to existing and potential biomethane supply.
- Demonstrated how existing landfill gas-to-pipeline supply is sufficient to meet incremental increases in natural gas-powered vehicle adoptions and that total collected landfill gas supply is sufficient for further increases in demand beyond what is currently sent to the pipeline.
- Summarized the key findings from two recent stakeholder interviews as well as recent public policymaking activities cited by stakeholders that will increase NGV adoption.
- Presented an overview of the three primary vehicle types prioritized for adoption and why they are attractive candidates for further adoption.

Collection Network Analysis

- Presented an overview of organics collection network types and material types
 - Collection networks include residential, commercial, and agricultural/FOG
 - Material types include bag/bundled yard trimmings/brush, roll-cart based organics collection, and on-site commercial storage of pre-consumer food waste.
- Presented the municipal solid waste collection fleets in the region
 - Indicated if they collect from residential or commercial customers and any fleets that utilize natural gas vehicles
- Brief overview of the commercial solid waste collection markets
 - Discussed considerations related to exclusive/non-exclusive franchises, hauler licensing, and closed markets



- Reviewed Dallas' commercial organics collection pilot and commercial organics slurry collection and processing programs in the market
- Briefly reviewed the materials management infrastructure and ownership in the region
 - Included landfills, transfer stations, commercial composting facilities and wastewater treatment plants with AD capacity
- Discussion of next steps for the collection network analysis
 - Detailed evaluation of collection networks, operational requirements, and evaluation of potential partnership models

Potential RNG to Vehicle Fuel Projects

- Presented an overview of potential projects for further evaluation, including the following:
 - Leverage Existing AD Capacity - City of Dallas Southside WWTP
 - Leverage Existing AD Capacity - City of Denton
 - New Organics Digestion Facility Pilot – Discussed two options: 1. Greenfield facility accepting only organics waste (not a WWTP) and 2. Capital upgrades to add co-digestion at existing WWTP with AD

Next Steps

- Two additional workshops will be held to gather input from the Project Advisory Group
- Topics for each workshop:
 - Workshop #3 – Project Selection
 - Workshop #4 – Feasibility Study Conclusion
- Dates for the workshops have not yet been determined but will take place in 2022

