Dallas-Fort Worth CLEAN CITIES | North Central Texas Council of Governments

Summer 2020

DFW INTERNATIONAL AIRPORT

A Leader in Renewable Natural Gas

LIVE GREEN | DFW

Dallas Fort Worth International Airport (DFW) covers more than 26.9 square miles (larger than the island of Manhattan, New York!) and is one of the busiest airports in the world – with its bus fleet surpassing more than 4 million miles of annual usage alone.

When DFW began looking for ways to achieve carbon neutrality and improve air quality in the Dallas-Fort Worth Region, the airport's active bus fleet became a primary target to further reduce impacts of airport operations. The airport transitioned its diesel bus fleet to compressed natural gas (CNG) more than 20 years ago, which helped DFW achieve carbon neutral status in 2016. But since achieving that recognition, the airport began exploring ways to further improve its carbon footprint.

"Clean Energy was already making inroads in California," says environmental program manager, Kris Russell. "In fact, some of our airport colleagues– at both San Diego International Airport and San Francisco International Airport – were already using renewable natural gas (RNG)."

In late 2016, DFW Airport approached RNG provider Clean Energy about the feasibility of delivering and supplying renewable fuel to the existing Clean Energy airport CNG stations. In August 2017, the airport started the supply of RNG in the form of landfill methane. Today, the airport's natural gas fleet runs on 55 percent renewable natural gas– an amount that has been and will continue to increase in accordance with the airport's contract with Clean Energy. The RNG contract aims for 90 percent supply by 2025."We project, based on what Clean Energy is telling us about supply, there will be more supply coming on-line soon," says Russell. "We think we'll be much closer to 100 percent supply within the next 12 to 18 months." Apart from improving local air quality, DFW Airport's

DID YOU KNOW?

You don't need any new infrastructure or vehicles to transition your compressed natural gas (CNG) fleet to renewable natural gas (RNG).

The two are the **same fuel technology, simply sourced differently.** You can think of it as transitioning from coal-sourced electricity to wind or solar generated electricity.

Contact your current natural gas fuel provider and ask them about options to transition to RNG.

transition from diesel to CNG, and then from CNG to RNG, has provided a host of other benefits and savings – starting with actual fuel cost reduction.

"The diesel gallon equivalent is $3.00 a gallon almost," says fleet manager Ron Selby. "And then our average natural gas cost, including the RNG, last year was $1.14 GGE (gasoline gallon equivalent)." In fact, adding RNG into the fuel is even cheaper than the airport's previous conventional CNG pricing. Since landfill methane is classified by the Environmental Protection Agency (EPA) as an advanced biofuel, DFW reaps savings in the form of renewable identification number (RIN) credits.

"The value in that, on the open market, helped us actually get cost-savings through the transition to renewable fuel," says Russell. Furthermore, despite high initial repowering and conversion costs, the benefits of using CNG/RNG instead of diesel are numerous – including a few that most might not think about. "The other big important thing to us as an airport and as a large user of this fuel is that we're not having to pay a company to haul diesel from a central location to here," says Russell. "So, we're not having to pay to tanker the fuel. It's being delivered via a pipeline. There's a resiliency aspect to that."

DFW International Airport Rental Car Center Shuttle Run on RNG . Photo Source: DFW Airport, 2019

Russell and Selby say that the pipeline has saved DFW Airport trouble through the occasional intense winter weather when diesel tankers couldn't access fueling stations. The pipeline has also cut tanker traffic through the airport – at such a busy airport with such an active bus fleet, diesel tankers would have to haul fuel through the airport constantly."If I can get away from diesel, period, then I don't want anything diesel," says Selby. Additionally, the airport's two RNG fueling stations are accessible to the public, allowing DFW additional opportunities to serve the community around it.

Overall, DFW Airport's RNG program has been incredibly successful – saving DFW Airport approximately a million dollars a year in operation and maintenance costs. Russell and Selby have a few ideas about how other fleets can implement RNG in their own vehicles."If they're a small fleet, partner up with some other adjacent cities or school districts," says Russell. "One of the advantages we have is the shared volumes we buy that get us some really good pricing. I could envision a group of school districts or cities getting together and partnering on creating a station that is located geographically in a way that serves their fleets."

In the future, DFW Airport will be focusing on researching the possible implementation of electric vehicles in its busy fleet while continuing to maintain sustainability and improve air quality. **To learn more about CNG and RNG, visit www.dfwcleancities.org.**

The Dallas-Fort Worth (DFW) Clean Cities Coalition is hosted within the NCTCOG. DFW was one of the first regions to be designated as part of the Department of Energy Clean Cities initiative in 1995 to reduce transportation energy use and improve air quality.

DFW Airport Fleet by the Numbers

4M
Vehicle Miles Traveled Annually

$1M+
Saved in Operation & Maintenance Costs Through CNG

55%
Currently Running on RNG

$1.14
per GGE of Natural Gas Fuel as of 2018

100%
Projected RNG in 12-18 Months