



**Dallas-Fort Worth  
CLEAN CITIES**

# Electric Vehicle and Natural Gas Vehicle Data Collection Projects

**Bailey Muller,  
Senior Air Quality Planner**

**May 2020 Public Meeting**

Driving Electrification Through the Power of Data



Electric Vehicle Widescale Analysis for  
Tomorrow's Transportation Solutions

[www.ewatts.org](http://www.ewatts.org)



**\$4M Department of Energy (DOE) Award for National Project Led by Energetics**



**Collect real-world use data from 1,600 plug-in electric vehicles (PEVs) and 10,000 charging stations nationwide**



**Validate, clean, anonymize (remove all personally identifiable information), analyze, and summarize data**



**Share aggregated data with DOE and national laboratories**



**Share public summaries throughout project; anonymized public dataset at end of 2022**



# EV WATTS PROJECT TEAM

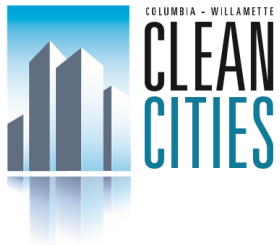


Project Lead

Clean Cities Coalition  
Admin. Lead



Implementation Partners



# DFW CLEAN CITIES ROLE



**Dallas-Fort Worth  
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## Awarded as Regional Project Partner

One of Ten Clean Cities Partnering Nationwide

### Goals:

Gather and Secure Regional Data Partner Commitments from Organizations, Fleets, and Projects Representing a Variety of Applications

Monitor and Facilitate Additional Data Collection Over Project Years

Disseminate Study Results and Individual Fleet Analysis Reports



Driving Electrification Through the Power of Data

# PEV AND CHARGING STATION DATA COLLECTED

## Vehicles

- All-electric and plug-in hybrid electric vehicles
- Light-, medium-, and heavy-duty vehicles
- Trip-level, longitudinal vehicle data (from telematics)

## Charging Infrastructure

- AC Level 2 and DC fast charge
- Various sites: corridors, workplace, multi-unit dwellings, curbside, fleet, commercial, etc.
- Session-level or interval-level data



*Variety of geographic areas, climates, and topography*



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# BECOME A REGIONAL EV WATTS DATA PARTNER

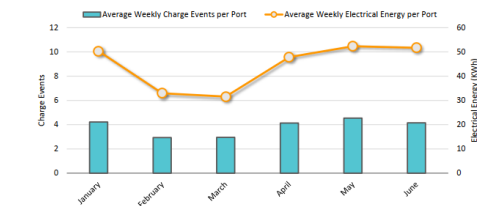
## To Become a Data Partner You Must Have One or More of the Following:

- PEVs
  - Have Telematics that Tracks Trip Level, Longitudinal Data
  - OR, Willing to Install Free Data Loggers on Your Vehicle
- Charging Stations that Track Session Level or Interval Level data

## Participating Fleets Will Receive:

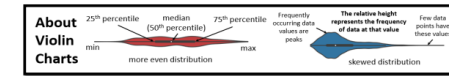
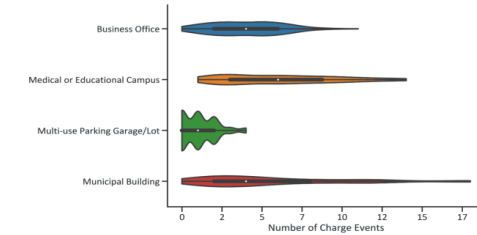
- Individualized Reports and Trend Analysis

### Level 2 Port Utilization



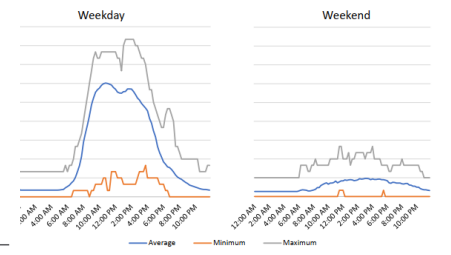
### Level 2 Weekly Charging Events by Venue Type

Stations at municipal building experience the broadest range of utilization levels, but stations at Medical or Educational Campus locations have the highest median of charging events per week.

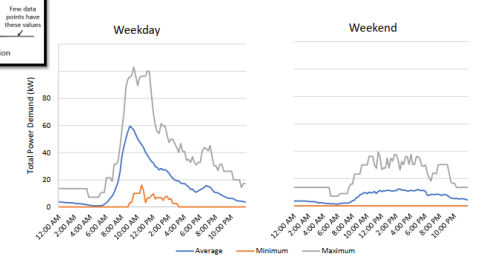


### Impacts due to Level 2 Charging Use

Percentage of active charging ports in use across the time of day for weekdays and weekends. n is considerably higher during weekdays.



**Total Charging Demand:** Total power draw (calculated using average power per charging event for the duration) from all stations in the Program across the time of day for weekdays and weekends.



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Contact [cleancities@nctcog.org](mailto:cleancities@nctcog.org) To Become a Data Partner

**ENERGETICS**

A Division of Akimeka, LLC

**EVWATTS**

Driving Electrification Through the Power of Data

# NGV UP-TIME

**Natural Gas Vehicle U.P.-T.I.M.E. Analysis**  
**U p u r u m a n c e t r a c k i n g**  
**I n t e g r a t i n g M a i n t e n a n c e E x p e n s**

<https://www.cleanfuelsohio.org/ngv-uptime>



# NATURAL GAS VEHICLE U.P.-T.I.M.E. ANALYSIS



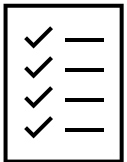
**\$500k Department of Energy (DOE) Award for National Data Collection Project Led by Clean Fuels Ohio**



**Quantify differences in maintenance costs between diesel and natural gas vehicles (NGVs)**



**Determine maintenance cost changes/improvements of newer generation NGVs compared to older generation NGVs**



**Capture impacts of different technology solutions and best practices that impact/reduce maintenance costs**

# NGV U.P- T.I.M.E PROJECT TEAM

## Project Lead



*Clean Fuels Ohio*

## Major Project Participants



Dallas-Fort Worth  
CLEAN CITIES



TULSA  
CLEAN CITIES



CLEAN CITIES  
CENTRAL OKLAHOMA  
clean fuels clean technologies clean emissions



# DFW CLEAN CITIES ROLE



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CLEAN CITIES**

## Awarded as Regional Project Partner

One of Five Clean Cities Partnering Nationwide

### Goals:

Recruit Fleet Data Partners

Facilitate Execution of Data Sharing Agreements

Disseminate Study Results and Individual Fleet Analysis Reports



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# BECOME AN NGV U.P.-T.I.M.E DATA PARTNER

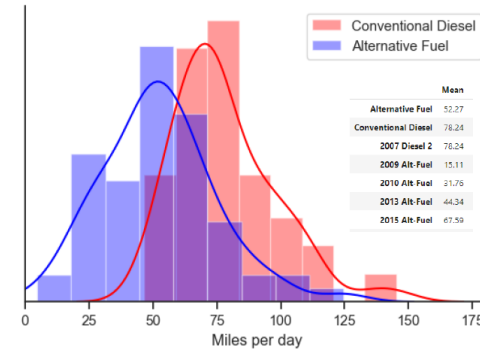
**Fleet Type:** Freight and Goods Movement

**Vehicle Types:** Medium- and Heavy-Duty  
Natural Gas and Diesel

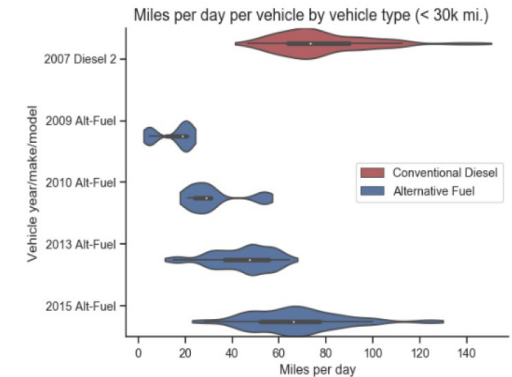
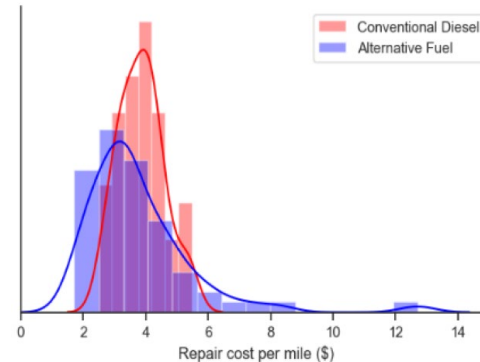
**Repair Data to Provide:** Cost, Frequency,  
and Type

**Participating Fleets Will Receive:**  
Study Analysis – Aggregate Data  
Individualized Analysis of Their  
Operation

Miles per day by vehicle type (< 30k mi.)



Repair cost per mile (\$) by vehicle type (< 30k mi.)



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Contact [Cleancities@nctcog.org](mailto:Cleancities@nctcog.org) To Participate



Clean Fuels Ohio



# FOR MORE INFORMATION



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**[www.dfwcleancities.org](http://www.dfwcleancities.org)**