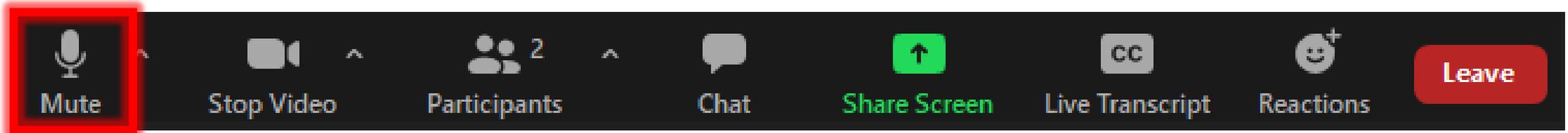


# WEBINAR REMINDERS

- Please **Mute** your microphone unless speaking.
- You can place questions in the **Chat** which will be answered in the chat and during the Question/Answer Session at the end.
- You can use the **“Raise Your Hand”** feature to ask questions or make a comment during the Question/Answer portion of the webinar.
- This meeting will be **Recorded**.





North Central Texas  
Council of Governments



Regional Transportation Council

**SMARTER**

Saving Money and Reducing Truck Emissions

## Saving Money and Reducing Truck Emissions Webinar Series Truck Parking

**Date:** Thursday, April 6, 2023

**Time:** 2:00 PM – 3:00 PM Central Time

**Hosted by the North Central Texas Council of Governments (NCTCOG)**

**Register** at <https://nctcog.zoom.us/j/89881164231>

Webinar will be presented through **ZOOM**

**Contact:** Jason Brown, [jbrown@nctcog.org](mailto:jbrown@nctcog.org)

### **Presenters:**

Chris Oliver

*Trucker Path*

Mike Johnson

*North Central Texas Council of Governments*

Dan Murray

*American Transportation Research Institute*

# OVERVIEW



Image provided by Getty

## Welcome, Introduction

Presenter: Trey Pope, Transportation Air Quality Planner, NCTCOG

## Driver Shortage and Available Parking Problem?

Presenter: Chris Oliver, Chief Marketing Officer, Trucker Path

## A Regional Truck Parking Study

Presenter: Mike Johnson, Principal Transportation Planner, NCTCOG

## Understanding the Junction of Truck Parking and Electric Trucks: Implications for Freight

Presenter: Dan Murray, Senior Vice President, American Transportation Research Institute

## QA Discussion

## Local Updates and Close



# Saving Money and Reducing Truck Emissions Program



## GOALS

Promote emissions reduction and cost saving strategies within the trucking industry



## INITIATIVES

Build relationships within the trucking industry

Share information about emission reduction strategies

Connect SmartWay verified technology to trucking owner/operators and fleet managers

# SMARTTE

Saving Money and Reducing Truck Emissions



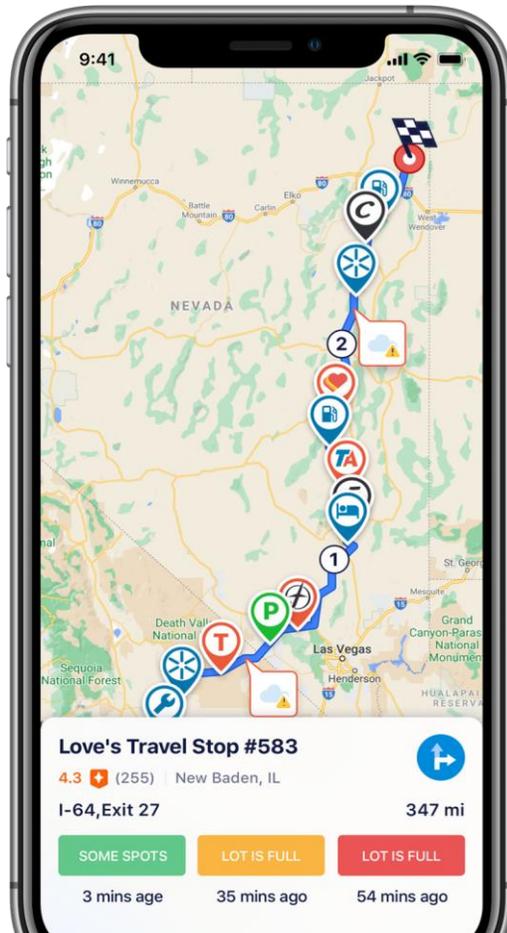
Lack of  
Available  
Parking *and*  
Driver  
Shortage?

**Chris Oliver**  
Chief Marketing Officer  
Trucker Path





The Most Popular App For Truck Drivers



9M+

app downloads  
to date

~1M

unique truckers use  
the app monthly

Many truckers  
say, "If WAZE and  
Yelp had a baby,  
it would be  
Trucker Path."



# Lack Of Available Parking is a Real Problem

---

*“With 313,000 truck parking spaces existing nationwide, according to a recent survey conducted by the Federal Highway Administration, American Trucking Associations and the Owner-Operator Independent Drivers Association estimate, **there is one parking spot for every 11 drivers.**”*

*- Transport Topics, 1/10/23*

**56  
Minutes**

Average time drivers spend looking for available parking every day\*

**\$5,500**

Average lost revenue per driver, per year looking for available parking\*

**12% Pay  
Cut**

Average per driver, per year, due to time lost searching for available parking\*

\*American Trucking Associations, 2021

# Impact of Lost Productivity

“...the American Trucking Associations estimates the US trucking sector was 78,000 drivers short last year, which is down from the record-setting **80,000 shortage of 2021.**”

- The Loadstar, 3/1/23

*12% "Pay Cut" = Lost Productivity = Need For More Drivers*

*3.5 Million Drivers*

*X*

*12% Productivity Loss*

*= 420,000*

*The number of additional units  
of capacity needed due to time  
spent looking for parking*

*25% Reduction In Time*

*Spent Looking for Parking*

*= 9% Productivity Loss*

*A 3% reduction in lost  
capacity*

*3.5 Million Drivers*

*X*

*9% Productivity Loss*

*= 315,000*

*420,000 - 315,000 = 105,000,*

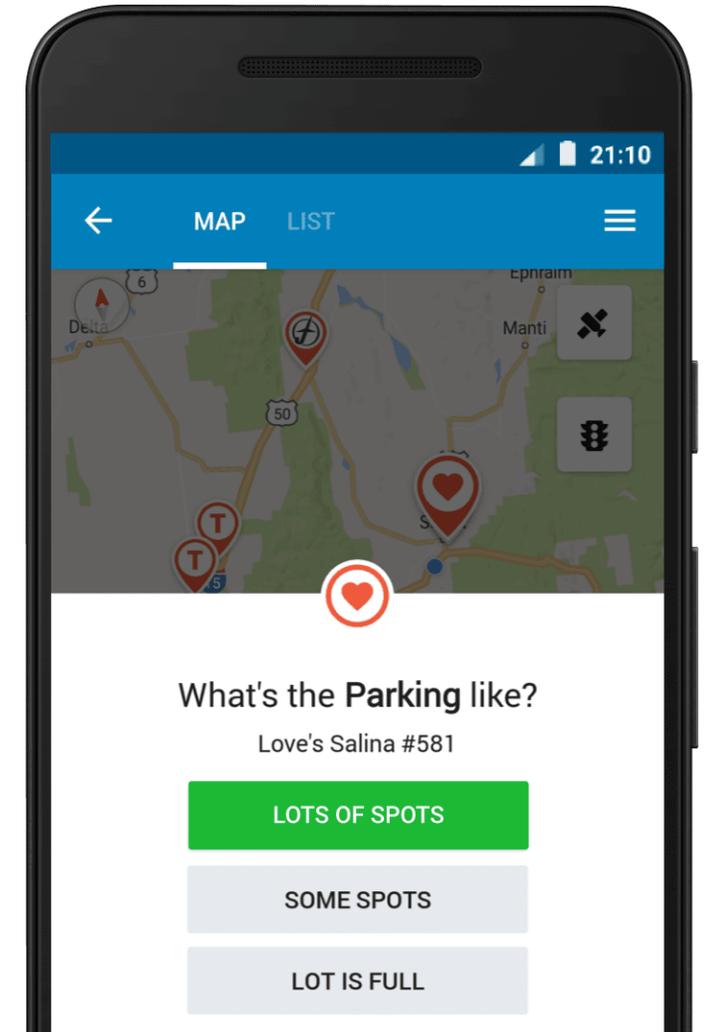
*offsetting the 80,000 driver  
shortage*

# Addressing The Problem

---

## Options

- Government infrastructure investment
- Government subsidies
- Government mandates
- Technology
  - Location-specific data feed (e.g., Joe's Truck Stop parking app)
  - Crowd-sourced, real-time data (e.g., Trucker Path)
  - Crowd-sourced, predictive data (e.g., Trucker Path)
  - App-based reservation (e.g., Texas A&M, University of Wisconsin, ParkUnload parking study ("Parking Pilot"))
  - Video monitored, automated data
  - Many others



# Winning Formula

---

- Added parking capacity
- Multiple technologies
- Private sector competition
- Simplicity, ease-of-use
- Let drivers determine which approach(es) win

**Chris Oliver**

truckerpath.com

chris.oliver@truckerpath.com



# Questions?

Chris Oliver, Trucker Path



[chris.oliver@truckerpath.com](mailto:chris.oliver@truckerpath.com)





North Central Texas Council of Governments

# Truck Parking Study Update *SMARTER Webinar*

Mike Johnson | Principal Transportation Planner

Goods Movement Program 04.06.2023

# Regional Truck Parking Study

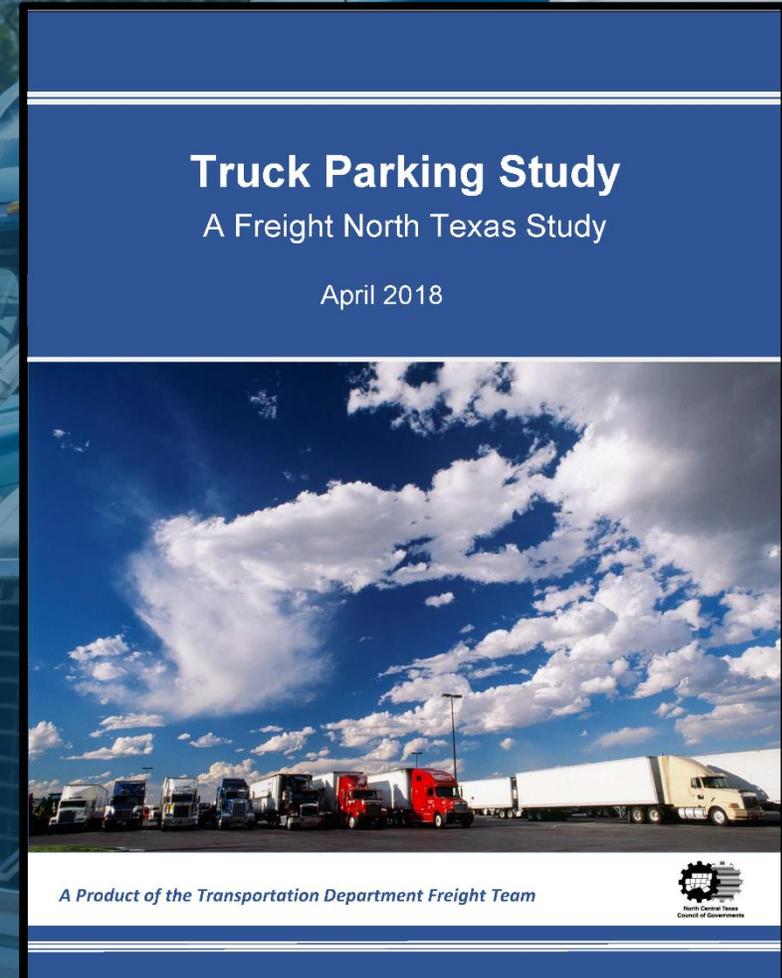
## *A Freight North Texas Study*

### Purpose:

The study was previously conducted to determine truck parking needs, locations and adequacy of both short-term and long-term truck parking in the North Central Texas region.

### Key Takeaways:

- Identified Corridors of Concern
- Recommendations for the corridors and a program framework to help meet truck parking demand



# Truck Parking Study 2023

## Purpose:

This study is an update to the 2018 Truck Parking Study. Building on the information and recommendations previously proposed. The new study has a strong focus on funding and implementation.

## Key Takeaways:

- Updated Datasets including Corridors of Concern
- Identify funding sources
- Recommendations for viable truck parking projects in identified localized zones



# Truck Parking Study Update Structure

## **Data Collection:**

An update of the truck parking data collected for the 2018 study and information on funding

## **Analysis:**

A review of the Corridors of Concern and the creation of a framework to move forward funding and implementation options

## **Recommendations:**

Framework for funding that helps implementation of truck parking projects



# Data Collection

## Literature Review:

- Private sector truck parking studies
- Federal and State truck parking studies

## Data Review:

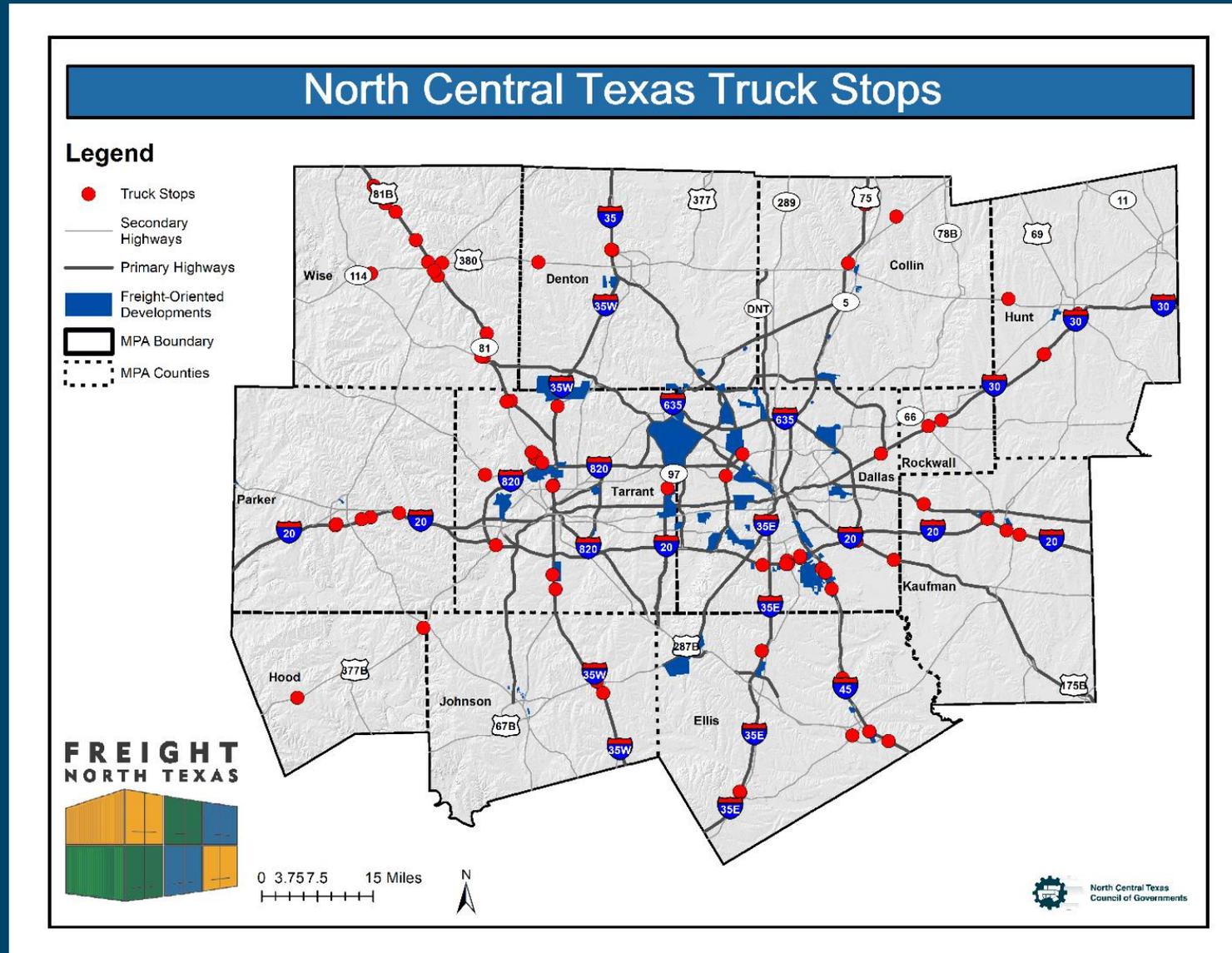
- Driver's Hours of Service (HOS)
- Corridors of Concern
- Regional Truck Stop Inventory
- Technology strategies
- Federal, State, and local laws and ordinances concerning truck parking

## Funding Review:

- Title 23 and Title 49 Federal Funds for Commercial Motor Vehicles
- Funding opportunities and strategies for truck parking



# Data Collection - Truck Stops



# Truck Parking Analysis

## Analysis of Corridors of Concern

- Review and evaluate 2018 Corridors of Concern
- Evaluate new potential Corridors of Concern
- Identify localized zones near Corridors of Concern

## Analysis for Potential Funding Sources and Implementation

- Create a framework to identify funding for projects

## Analysis of potential technological solutions

- Evaluate the different technologies available to improve access and use of the region's existing truck parking



# Analysis Funding Chart

Legend	Funding Available with Few Limitations	Funding Available with Some Limitations	Funding Not Available or Heavily Restricted							
Funding Source Name	Funding Type	Eligible Costs							Funding Available (FY 2023)	Cost Share
		Constructing Safety Rest Areas	Supplemental Truck Parking	Facility Conversion	Availability Notification Systems	Truck Stop Electrification	Access Improvements	Resilience Improvements		
Surface Transportation Block Grant (STBG)	Federal Aid Funds								\$14.112 B	IAW 23 U.S.C. 120. (80% Federal)
National Highway Freight Program (NHFP)	Federal Aid Funds								\$1.401 B	IAW 23 U.S.C. 120. (80% Federal)
Highway Safety Improvement Program (HSIP)	Federal Aid Funds								\$3.044 B	90% Federal (Except as provided in 23 U.S.C. 120 & 130)
National Highway Performance Program (NHPP)	Federal Aid Funds								\$29.008 B	IAW 23 U.S.C. 120. (80% Federal)
Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT)	Federal Aid Funds								\$1.430 B	IAW 23 U.S.C. 120. (80% Federal) (can be reduced if project is included in resilience plans or MTP)
Carbon Reduction Program (CRP)	Federal Aid Funds								\$1.258 B	IAW 23 U.S.C. 120. (80% Federal)
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Federal Aid Funds								\$2.587 B	IAW 23 U.S.C. 120. (80% Federal)
Infrastructure for Rebuilding America (INFRA)	Discretionary Grant								\$1.500 B	Federal Share may not exceed 60% (not including up to an additional 20% of Federal aid funds)
Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	Discretionary Grant								\$1.500 B (-\$800 M w/ set asides for ports)	80% Federal share (Unless in rural, HDC, or APP)
Rural Surface Transportation Grants	Discretionary Grant								\$2.000 B (FY22-FY26 total)	80% Federal Share for planning/50% for capital construction
National Infrastructure Project Assistance (Mega)	Discretionary Grant									60% Federal Share



# Recommendations

After analysis of the region's corridors, potential funding, and technological strategies:

- A framework for truck parking solutions based on funding availability and implementation opportunities.
- Recommendations for Corridors of Concern, including more localized zones of implementation.
- Recommendation of technologies that fit the region's needs.



# Timeline and Next Steps

**Data Collection** – Completed

**Analysis** – In Progress

**Recommendations** – Planned for April 2023

**Completion** – May 2023



# Questions



# CONTACT US



Kevin Hernandez

Transportation Planner

[khernandez@nctcog.org](mailto:khernandez@nctcog.org) | 817-704-5635



Michael Johnson

Principal Transportation Planner

[mjohnson@nctcog.org](mailto:mjohnson@nctcog.org) | 817-695-9160



# CONTACT US



616 Six Flags Drive  
Arlington, TX 76011



[transinfo@nctcog.org](mailto:transinfo@nctcog.org)



817-695-9240



[nctcog.org/trans](http://nctcog.org/trans)



# **Truck Parking & BETs: The View from the Road**

**Dan Murray**  
**Senior Vice President**  
**American Transportation**  
**Research Institute**

# ATRI

**Trucking industry's not-for-profit research organization**

- **Safety**
- **Mobility**
- **Economic Analysis**
- **Technology**
- **Environment**

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

# Board of Directors

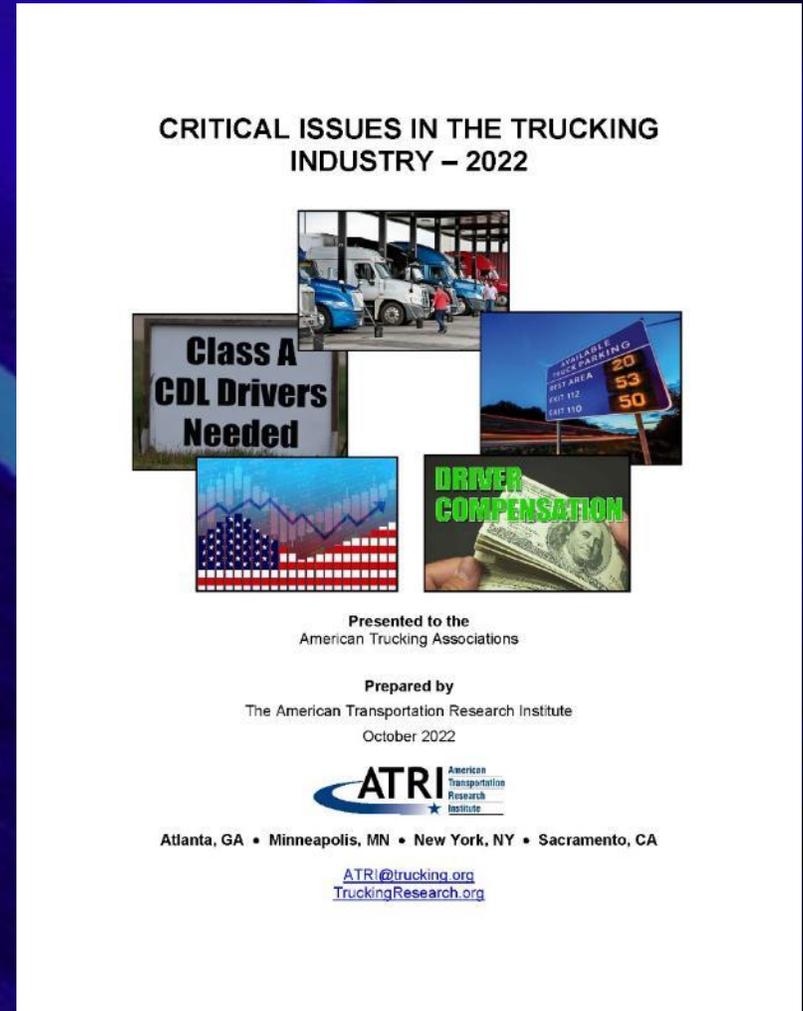


# Research Advisory Committee



# 2022 Top Industry Issues

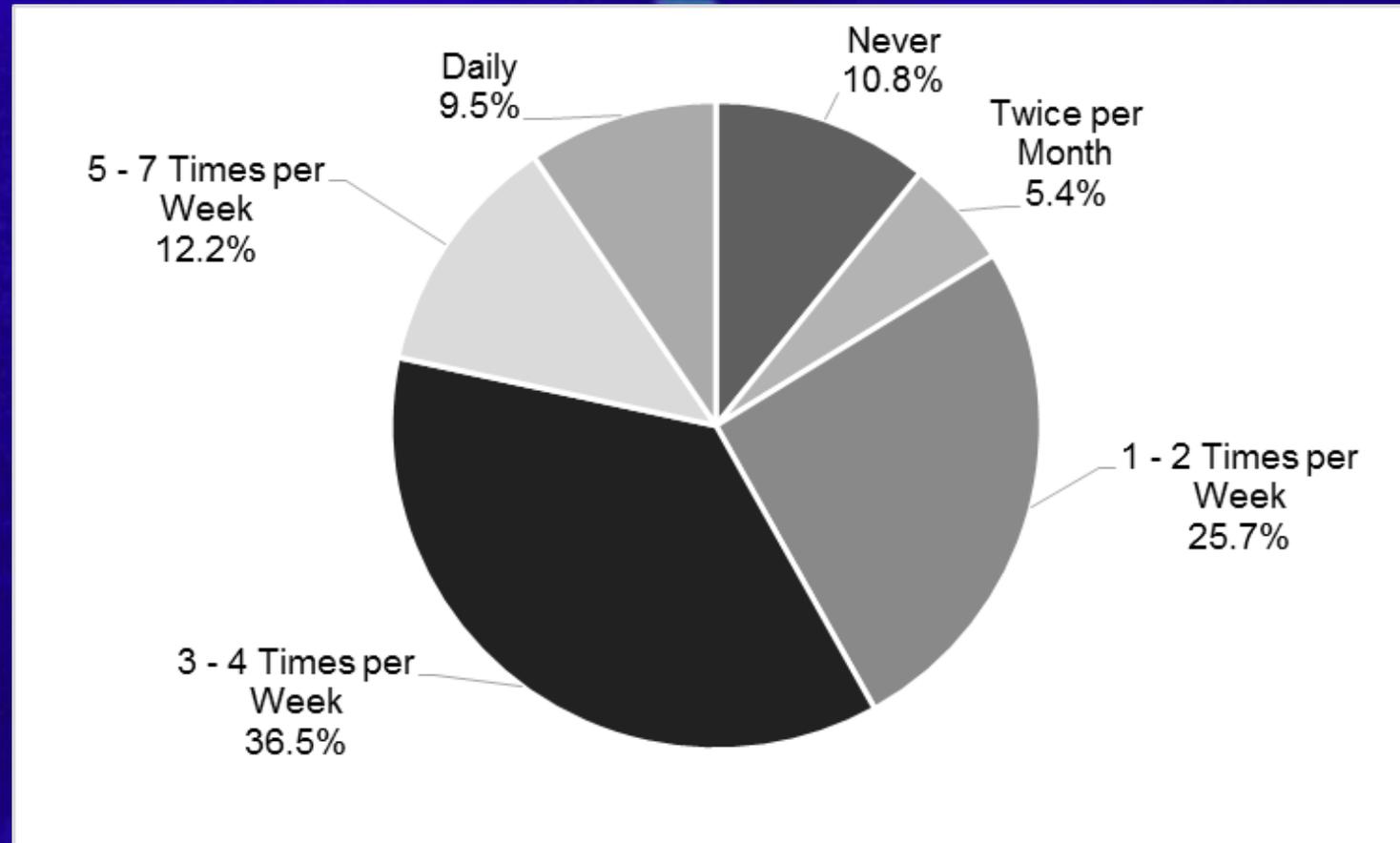
1. Fuel Prices (#8 in 2013)
2. Driver Shortage (1)
3. Truck Parking (5)
4. Driver Compensation (3)
5. Economy (#8 in 2020)
6. Detention / Delay at Customer Facilities (7)
7. Driver Retention (2)
8. Compliance, Safety, Accountability (6)
9. Speed Limiters
10. Lawsuit Abuse Reform (4)



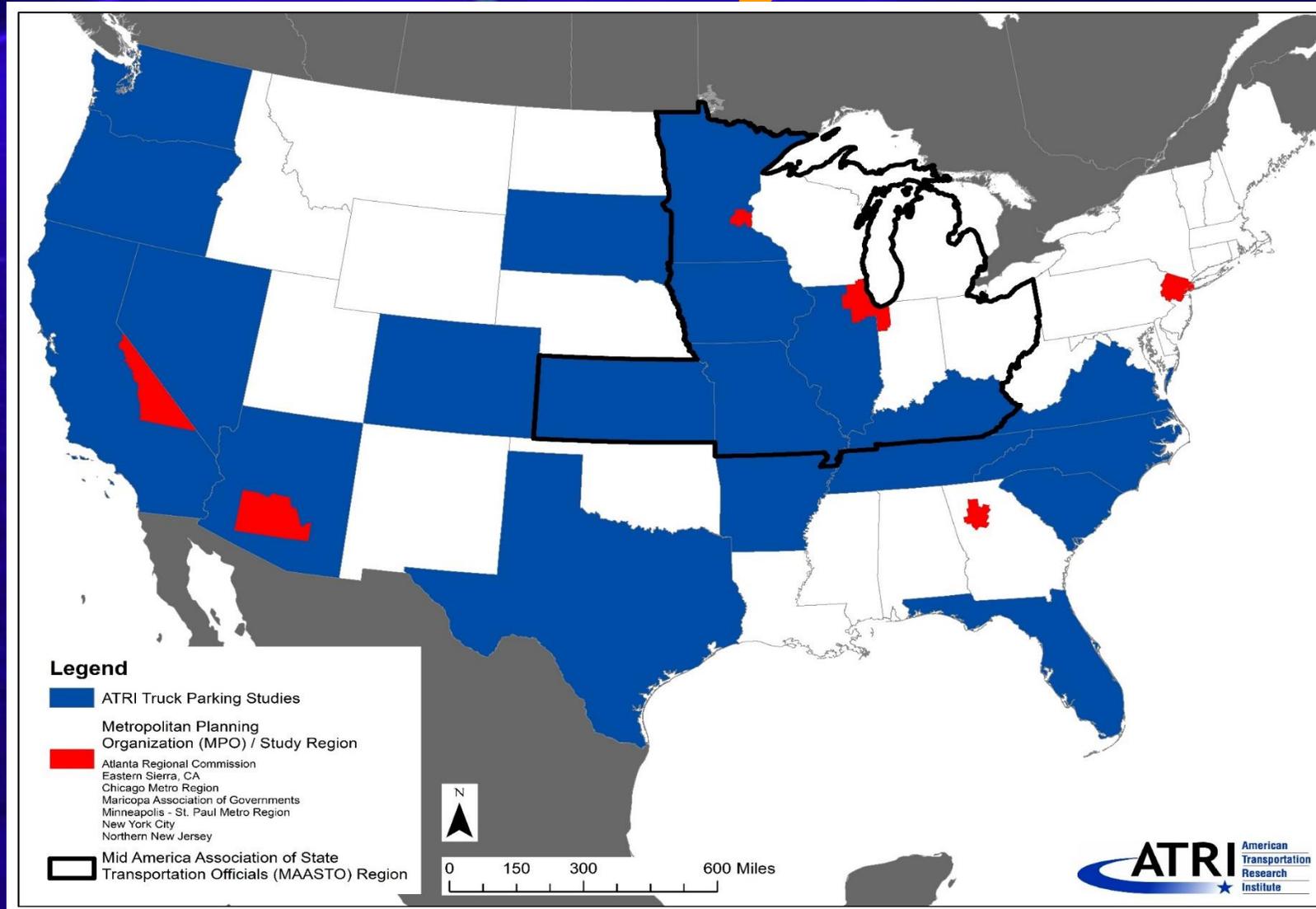
# 2022 Top Industry Issues

Rank	Commercial Drivers	Motor Carriers
1	Truck Parking	Driver Shortage
2	Fuel Prices	Driver Retention
3	Driver Compensation	Fuel Prices
4	Detention / Delay at Customer Facilities	Compliance, Safety, Accountability
5	Speed Limiters	Economy
6	Economy	Lawsuit Abuse Reform
7	HOS Rules	Insurance Cost / Availability
8	ELD Mandate	Diesel Technician Shortage
9	Driver Training Standards	Detention / Delay at Customer Facilities
10	Transportation Infrastructure / Congestion / Funding	Truck Parking

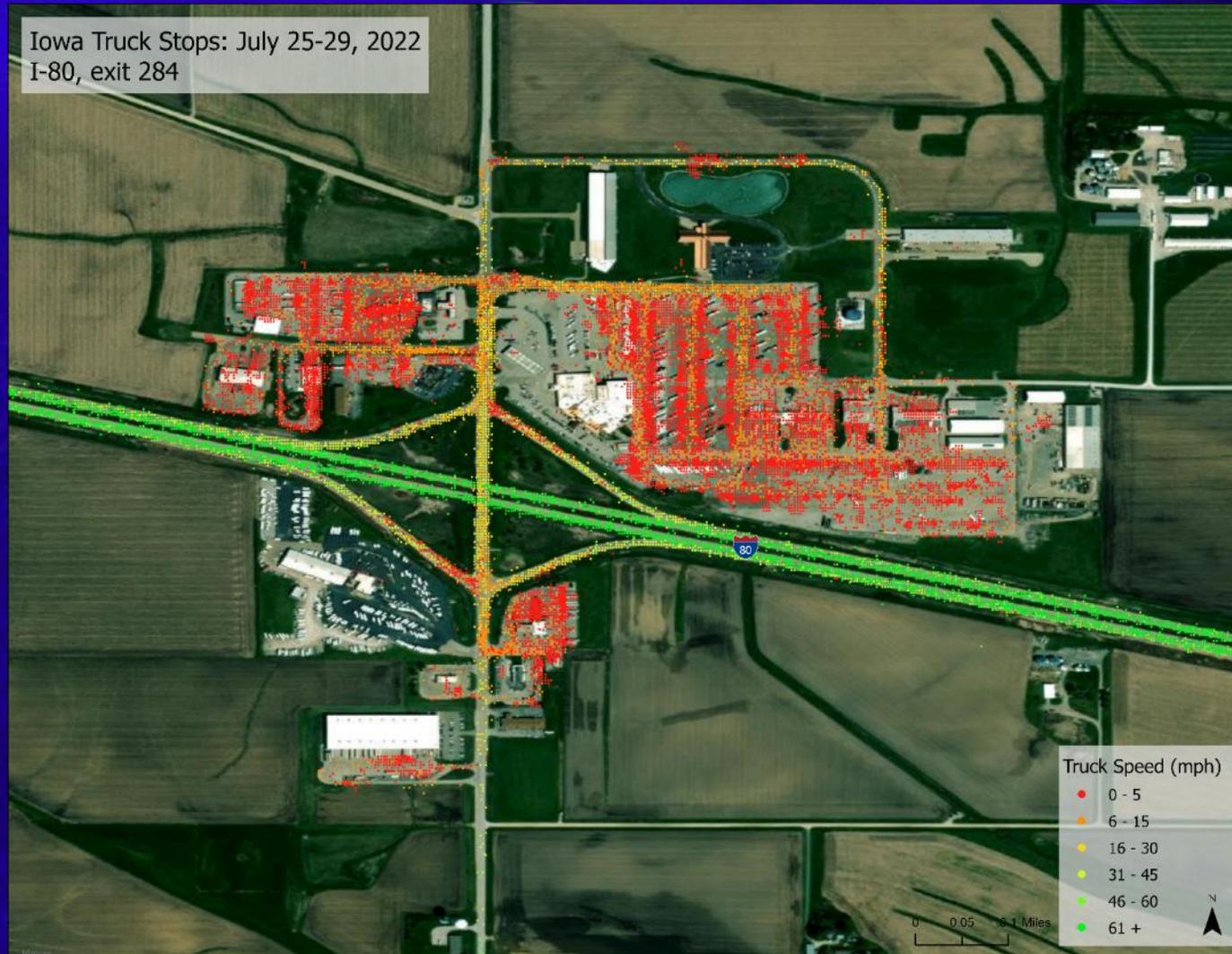
# Frequency of Unauthorized/Undesignated Parking



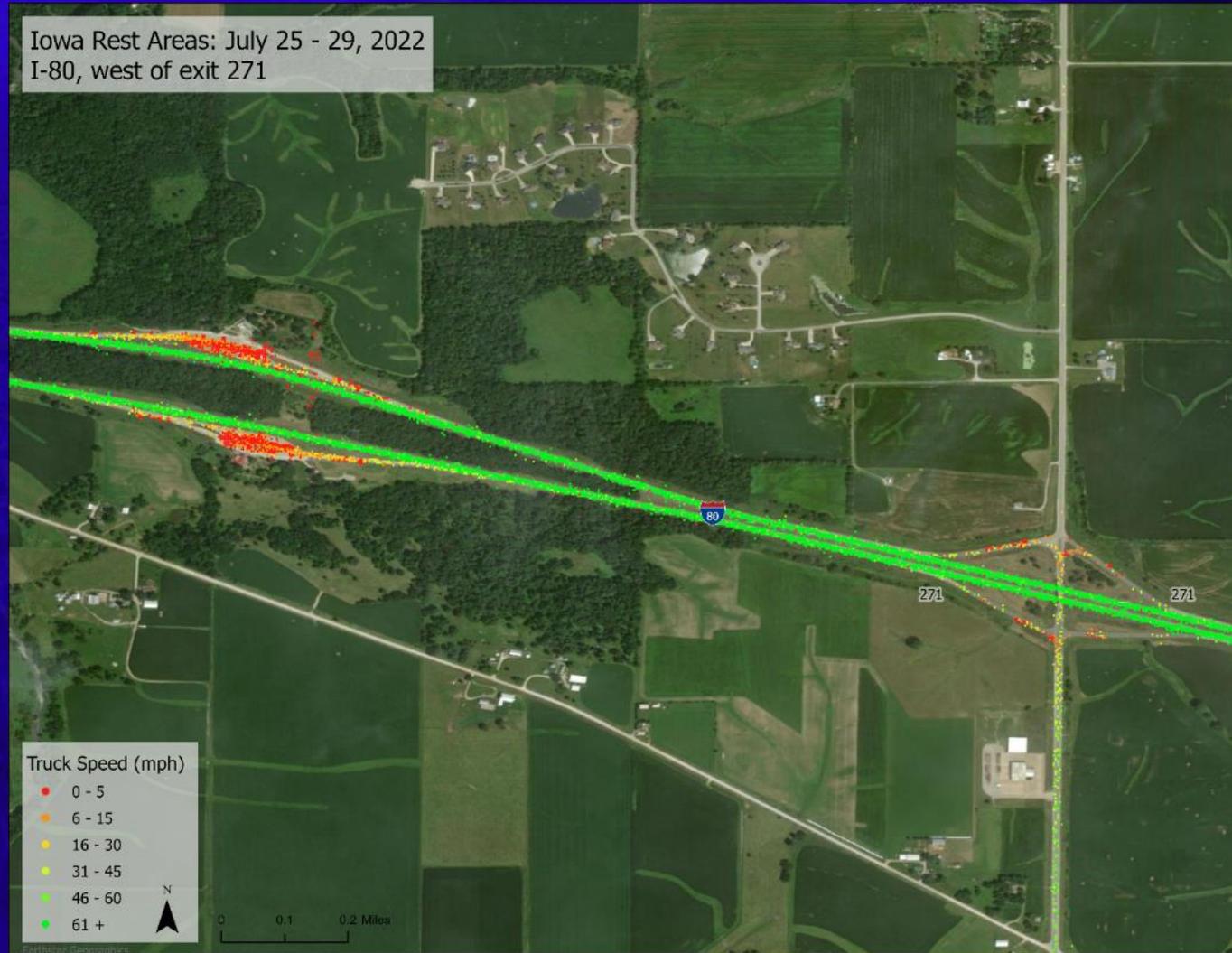
# Truck Parking Studies



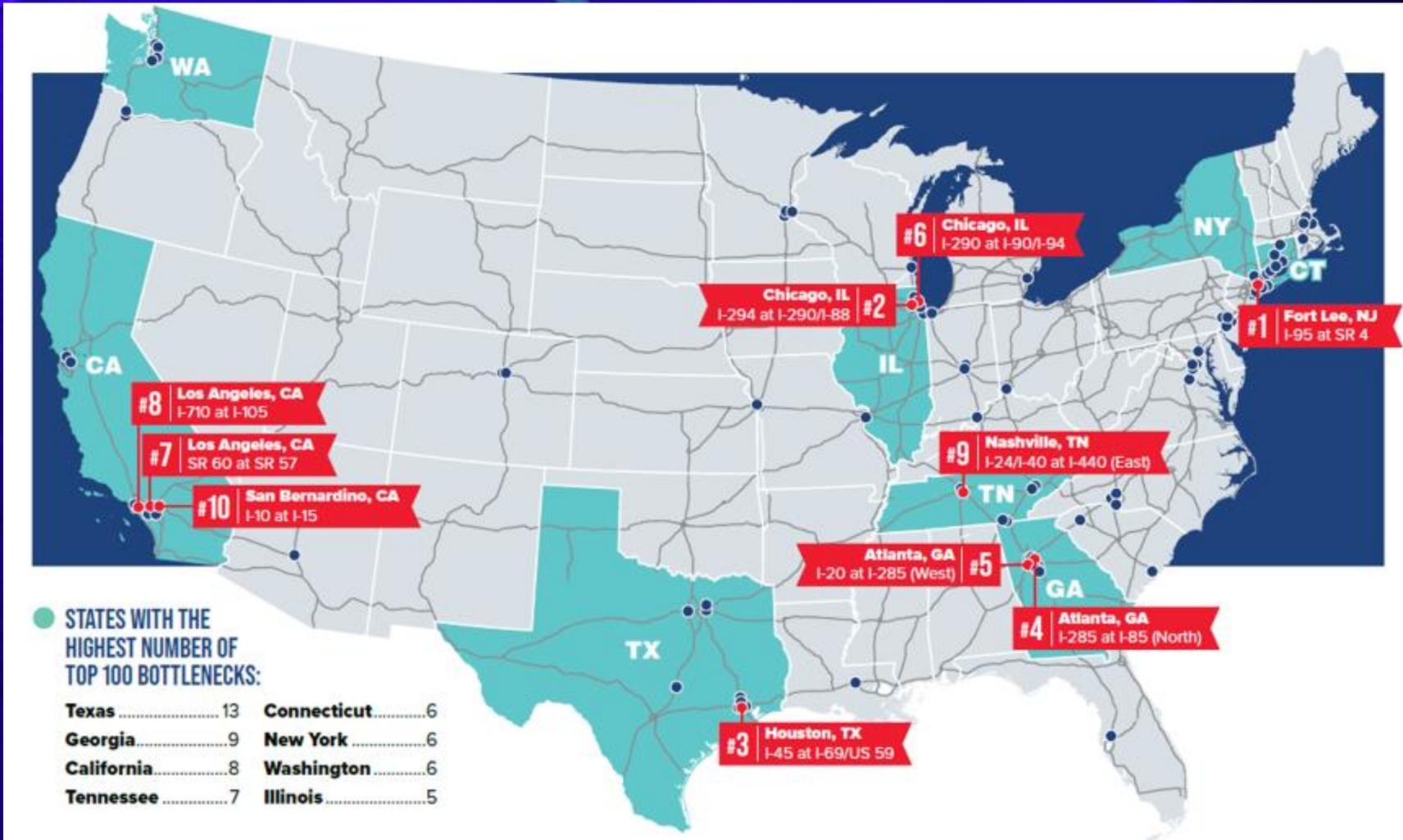
# No Vacancy



# No Vacancy

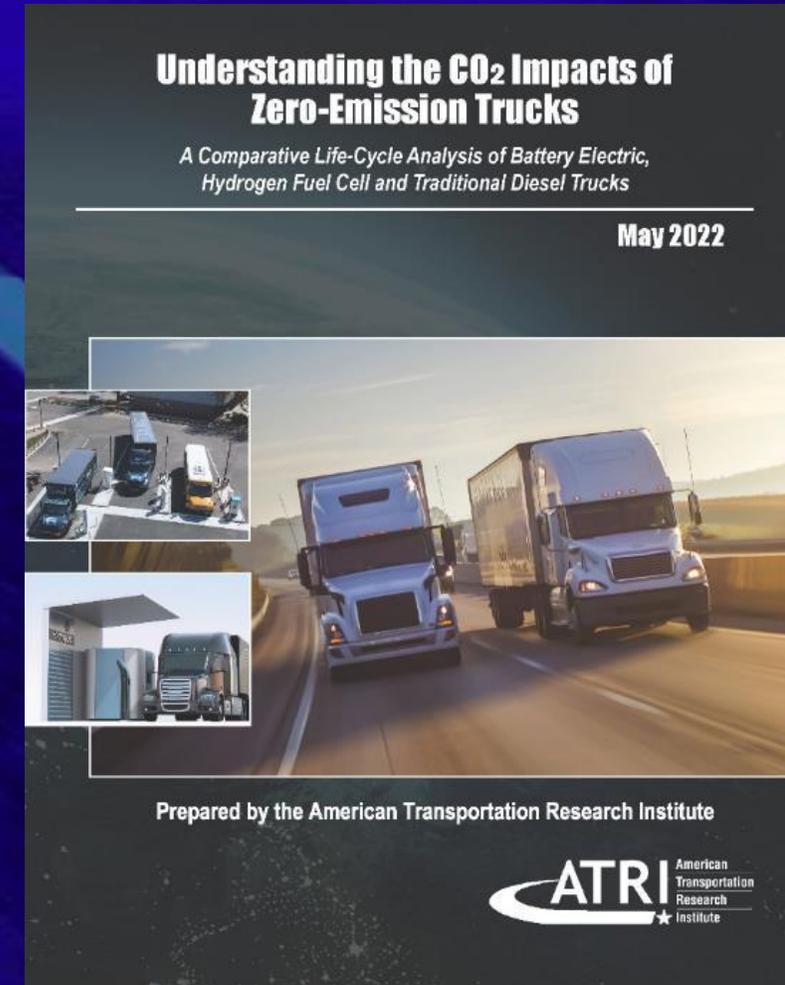


# 2023 Top Truck Bottlenecks

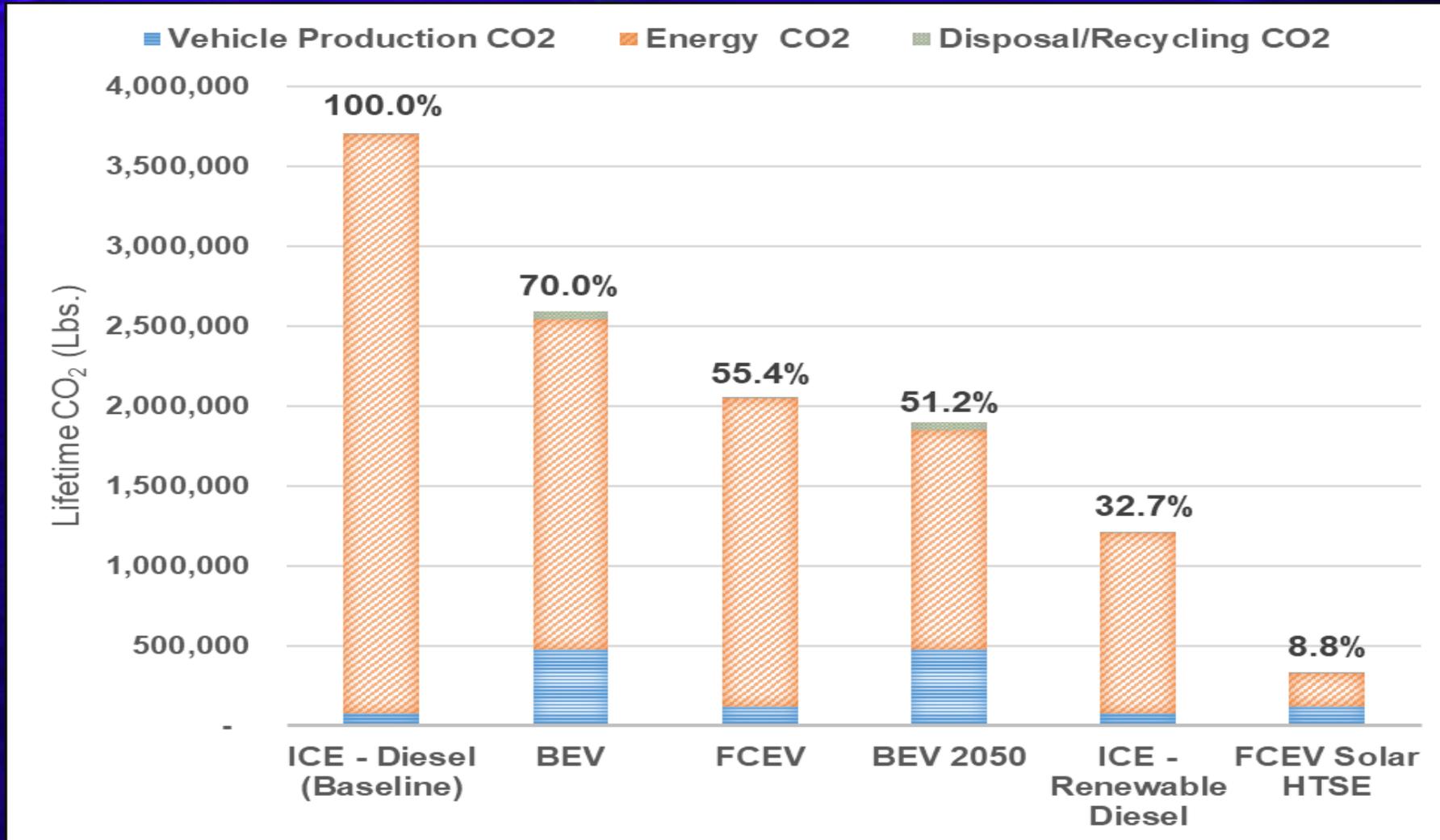


# Understanding the CO<sub>2</sub> Impacts of Zero-Emission Trucks

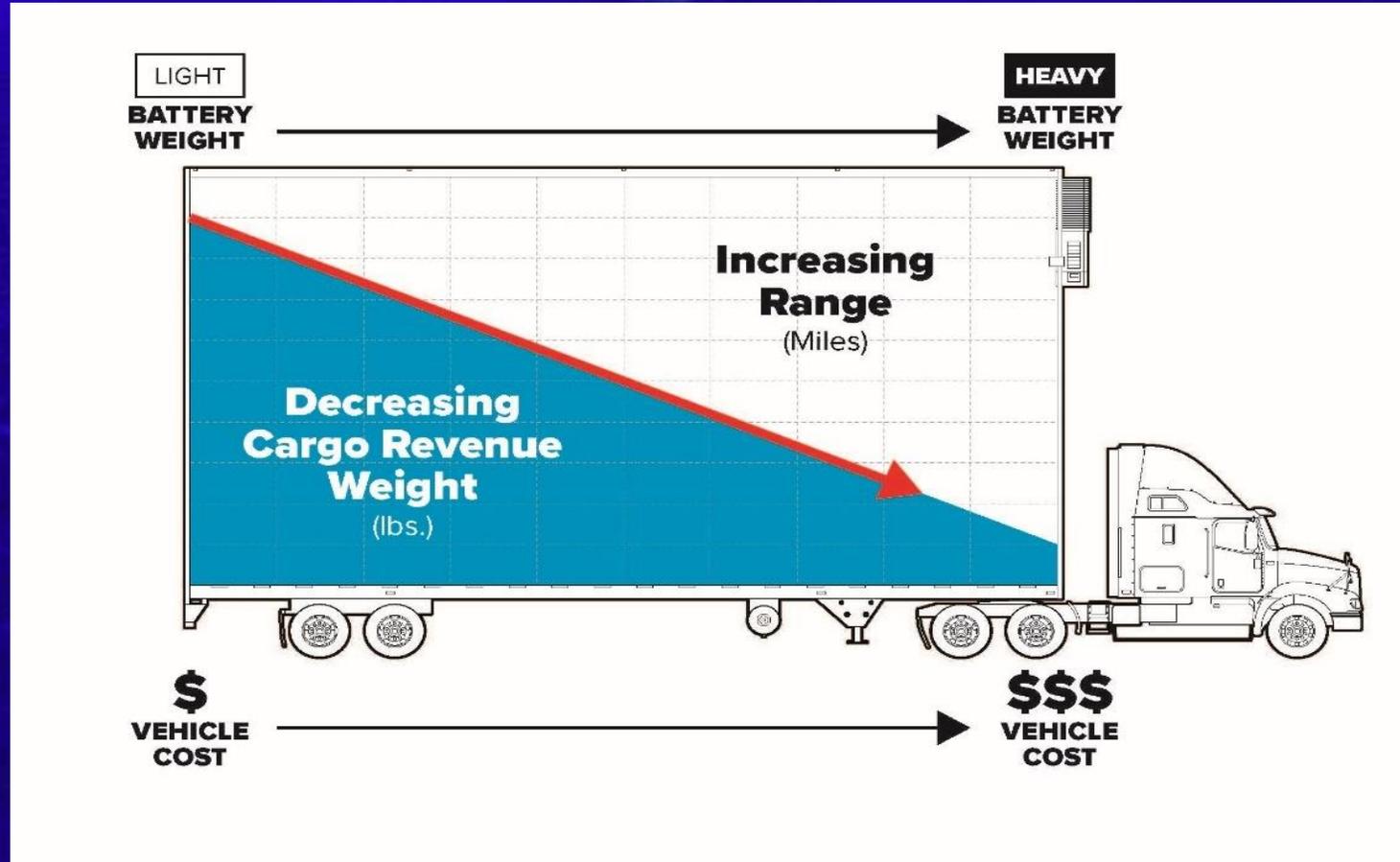
- **Life-cycle CO<sub>2</sub> emissions study for:**
  - ◆ **Internal combustion engine (ICE) trucks powered by diesel**
  - ◆ **Battery electric vehicle (BEV) trucks powered by electricity**
  - ◆ **Fuel cell electric vehicle (FCEV) trucks powered by hydrogen**
- **Compares CO<sub>2</sub> emissions across from the full vehicle life-cycle:**
  - ◆ **Vehicle production**
  - ◆ **Energy production and consumption**
  - ◆ **Vehicle disposal/recycling**



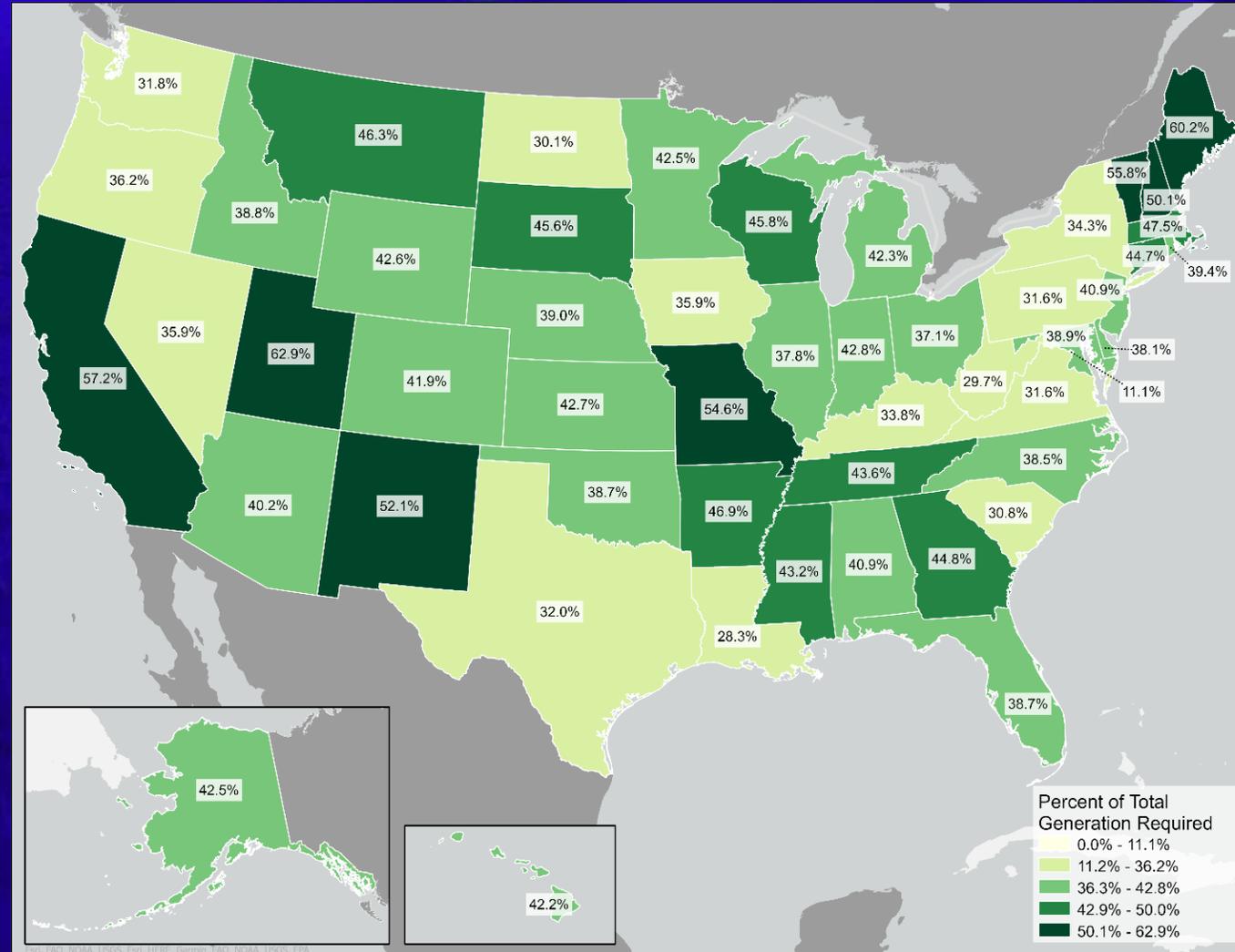
# Key Findings



# BEV Truck Conundrum



# U.S. Electricity Supply and Demand

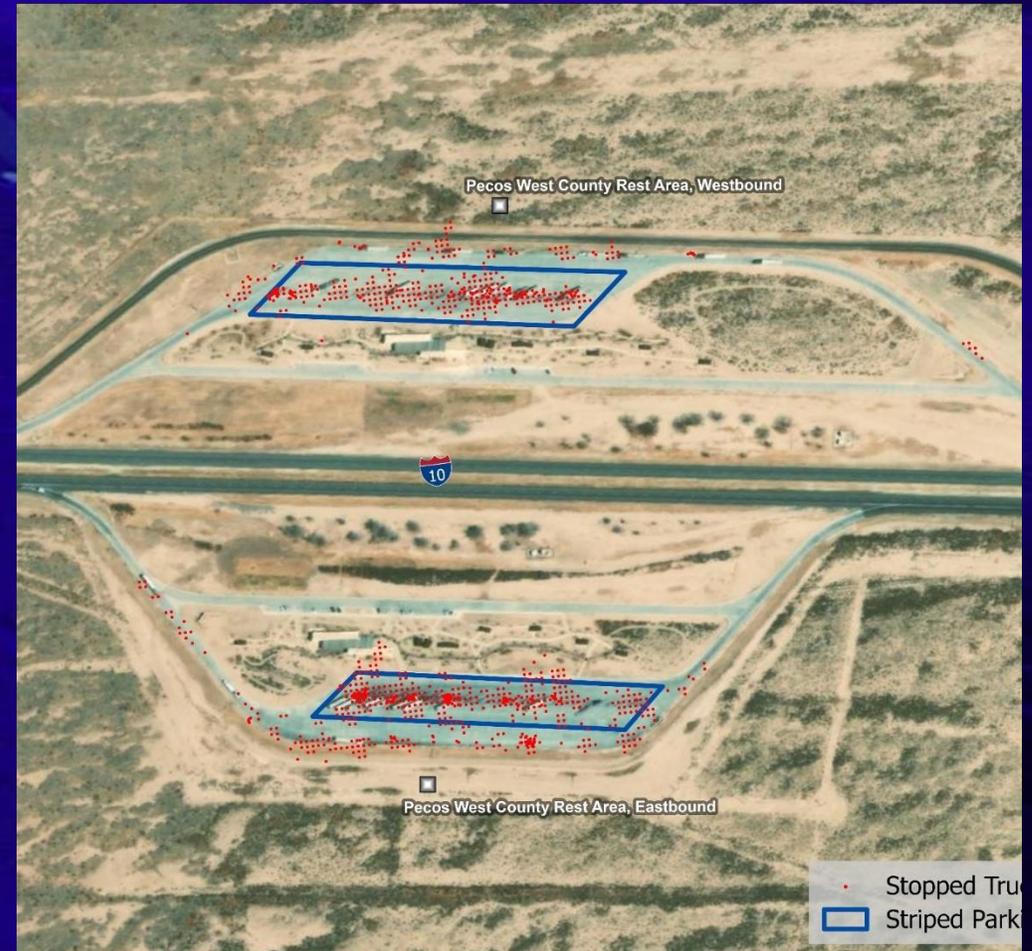


# Long-Haul Truck Charging Requirements

- **Truck Charging Availability = Truck Parking Crisis 2.0**
- **BEV charging impacted by federal hours-of-service rules and parking availability**
- **At minimum every truck parking space would need a charger – 313,000 spaces**
  - ◆ **Initial equipment, installation costs – \$35 billion**

# Parking Case Study

- Requires enough daily electricity to power more than 5,000 U.S. households for 126 truck charging events



# Realities

- **Vehicle costs – new Class 8 BEV truck could cost over \$400,000**
- **No refueling infrastructure**
- **CO<sub>2</sub> emissions are still substantial**
- **Material sourced from outside U.S.**
  - ◆ **Lithium, graphite, cobalt, manganese and nickel**

# CALIFORNIA FLEX ALERT

- SET THERMOSTATS TO 78 DEGREES OR HIGHER
- AVOID USE OF MAJOR APPLIANCES
- TURN OFF UNNECESSARY LIGHTS
- AVOID CHARGING ELECTRIC VEHICLES

**FOX 13**

6:49 90°

**Dan Murray**

**[dmurray@trucking.org](mailto:dmurray@trucking.org)**

# Questions?



# Local Updates

## SMARTe Vendor Directory

Local Vendors of SmartWay  
Verified Technology

Promoted through the  
SMARTe Program

Free to join and free to use



Image Provided By Getty



# Become a SMARTe Vendor



SELL

Sell SmartWay  
Verified Technology



LIST

Provide a list of  
SmartWay Verified  
Technology offered  
that can be made  
available



SIGN UP

Complete Vendor  
Directory Sign- Up  
Form

<https://forms.office.com/r/dfd0zsnS8v>



# DALLAS FORT-WORTH CLEAN CITIES (DFWCC)

Zoom Video

## **DFWCC** - Advance Economic, Environmental, and Energy Security

- Increase Efficiency and Reduce Emissions from Transportation
- Partner with Public and Private Fleets
- Structure
  - Fleet & Commercial Strategies
  - Consumer Initiatives
  - Local Government Policies / Community Readiness

## **Fleet Support** - Enable More Efficient, Greener Fleets

- Match Vehicles & Equipment to Funding
- Train on Tools and Resources
- Plan for Fleet Transition – Detailed Recommendations



**Dallas-Fort Worth  
CLEAN CITIES**



DFWCC Presentation

# What We Do



## Funding Support

Assist with Navigating Programs and Developing Grant Applications

Administer Funding



## Technical Assistance

Maintain and Analyze Data

Hold Webinars, Workshops, Peer Exchange

Develop Best Practices and Template Resources



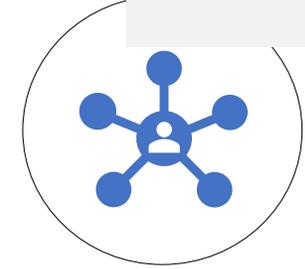
## Planning the Future

Alternative Fuel Corridors

Texas EV Charging Plan

ZEV Infrastructure

Organic Waste to RNG Feasibility Study



## Raising Awareness

Facilitating Relationships

National Drive Electric Week

Fleet Recognition

Success Stories and Community Events

# NATIONAL NETWORK OF CLEAN CITIES COALITIONS

Zoom Video

More than 75 Clean Cities coalitions with thousands of stakeholders, representing ~80% of U.S. population

Designated by the Department of Energy

Working locally to advance affordable, domestic transportation fuels, energy efficient mobility systems, and other fuel-saving technologies and practices

## Clean Cities Coalitions



# Get Involved

Zoom Video

Website - [www.dfwcleancities.org](http://www.dfwcleancities.org)

Upcoming Events- [www.dfwcleancities.org/events](http://www.dfwcleancities.org/events)

Weekly Email Blast - <https://www.nctcog.org/stay-informed>

Sponsor DFWCC- <https://www.dfwcleancities.org/sponsorships>



DFWCC Presentation

# CONTACT US



Trey Pope

Air Quality Planner

[tpope@nctcog.org](mailto:tpope@nctcog.org) | 817-695-9297



Jason Brown

Principal Air Quality Planner

[jbrown@nctcog.org](mailto:jbrown@nctcog.org) | 817-704-2514

