DALLAS-FORT WORTH CLEAN CITIES COALITION

Dallas-Fort Worth Clean Cities Stakeholder Input Session

FEBRUARY 26, 2025

Who We Are

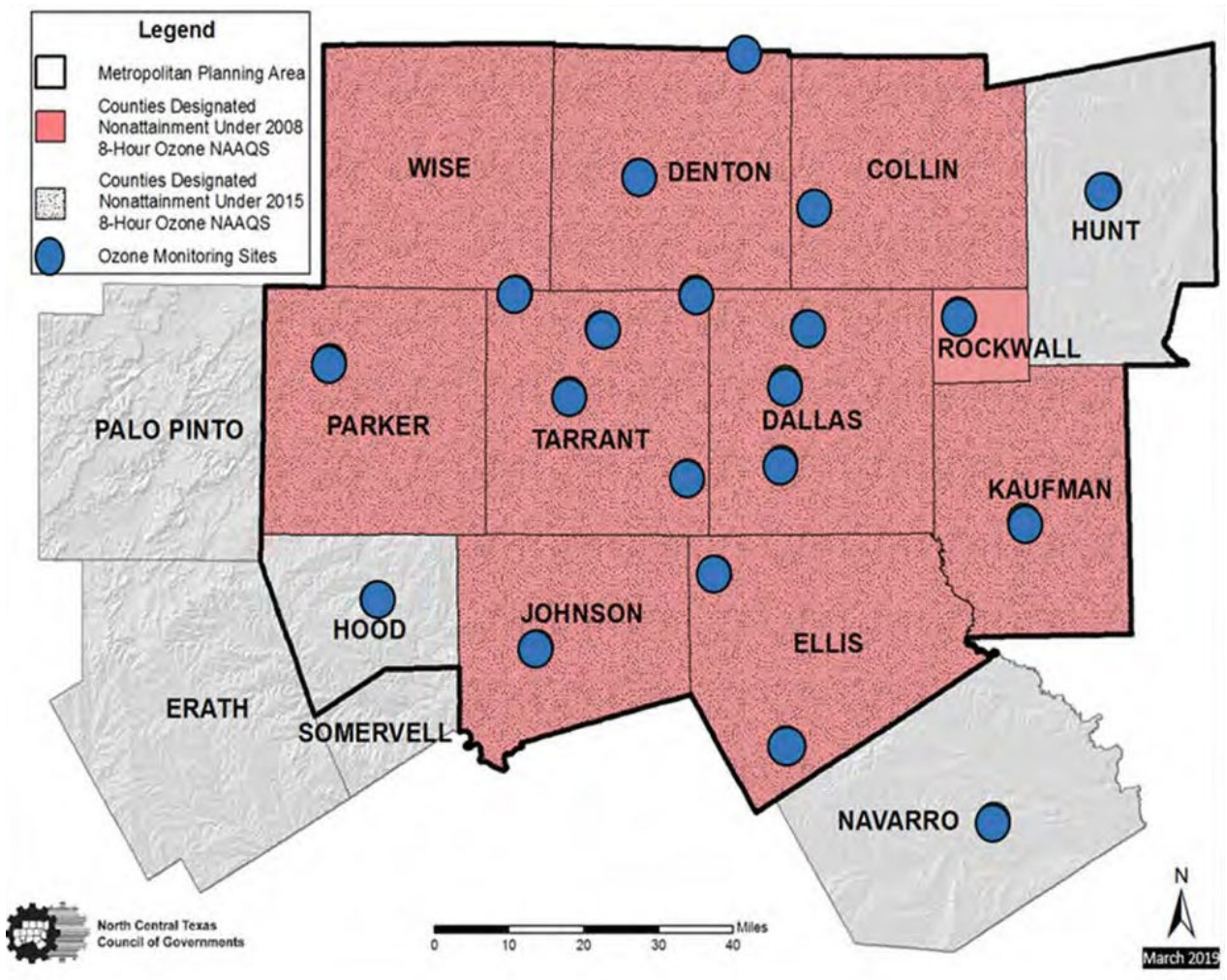


Photo Source: NCTCOG

North Central Texas Council of Governments

Regional Planning Agency

Regional Transportation Council

Metropolitan Planning Organization (MPO)

Dallas-Fort Worth CLEAN CITIES

Local Clean Cities Coalition

Clean Fuels & Energy Team

Key Focus Areas & Goals

- Clean Vehicle Initiatives
- Alternative Fuel Infrastructure Initiatives
- Energy Integration & Community Readiness

What We Do

- Funding Support
- Technical Assistance
- Planning the Future
- Raising Awareness

Agenda

North Central Texas Council of Governments (NCTCOG) Kickoff

Savana Nance, NCTCOG

Planning for Electric Vehicle Infrastructure

Regional Electric Vehicle Charging Infrastructure Projects;
Joslyn Billings, NCTCOG

Continuing EV Operations

Planning Resilient EV Charging; Hannah Thesing, NCTCOG

New Mobility Choices and Emerging Technologies

City of Arlington Multimodal Delivery; Ann Foss, City of Arlington

Additional Opportunities to Improve Air Quality

North Central Texas Reuse Marketplace; Alexa Gilbert, NCTCOG
Other Involvement Opportunities; Savana Nance, NCTCOG

Regional Electric Vehicle Charging Infrastructure Projects

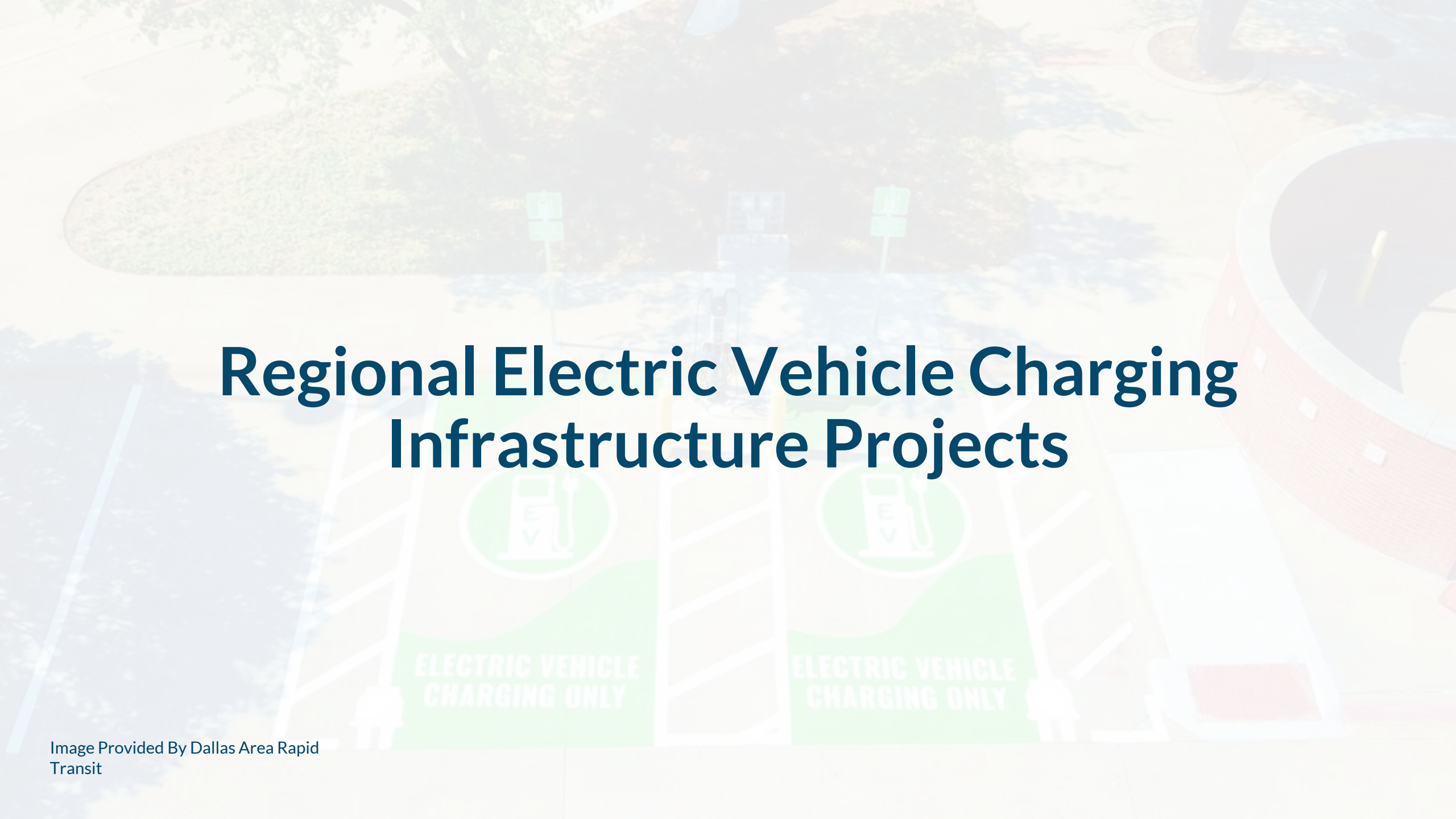
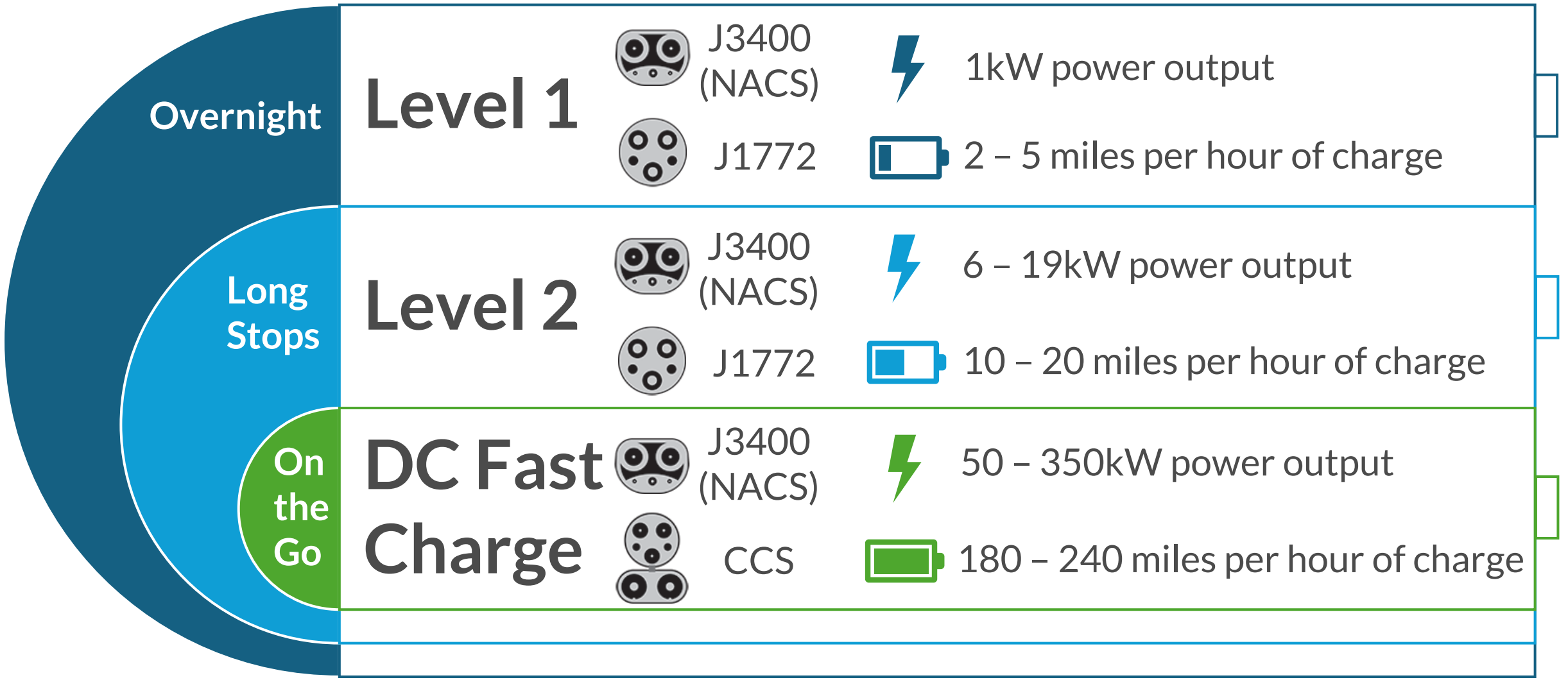
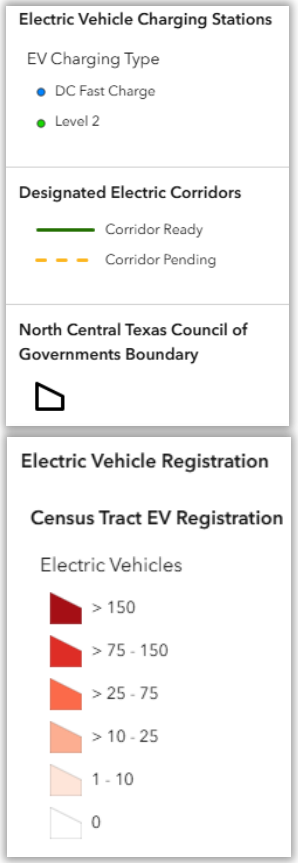


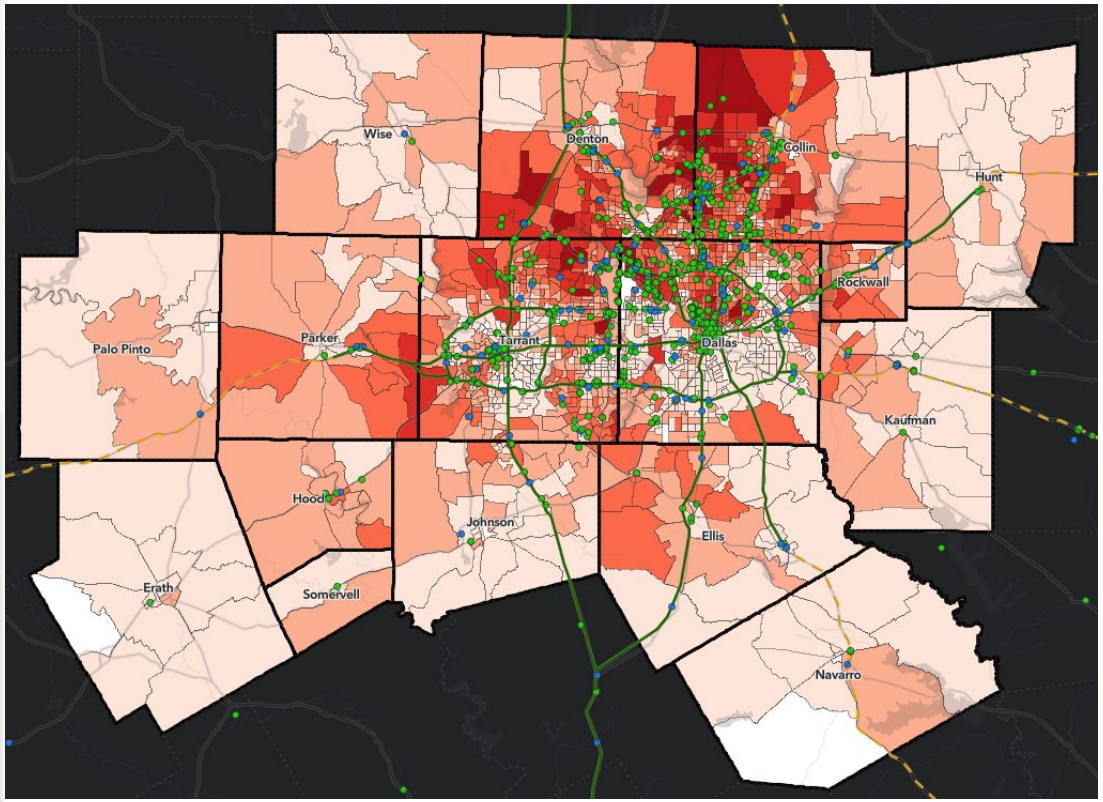
Image Provided By Dallas Area Rapid Transit

Types of EV Charging and Infrastructure



Texas Data and Trends





Data as of February 4, 2025

Electric Vehicle (EV) Registration Data

dfwcleancities.org/evnt -> EVs and Texas

Region	February 2024	February 2025	Increase
Texas	254,836	351,906	38%
Dallas-Fort Worth (DFW)	94,748	128,745	36%
Austin	50,080	69,224	38%
San Antonio	23,245	30,397	31%
Houston	63,015	88,598	41%

1.40% of registered vehicles in Texas are EVs

Charging Ports Statewide (includes Tesla):

- 7,460 Level 2
- 3,249 DC Fast

afdc.energy.gov/stations

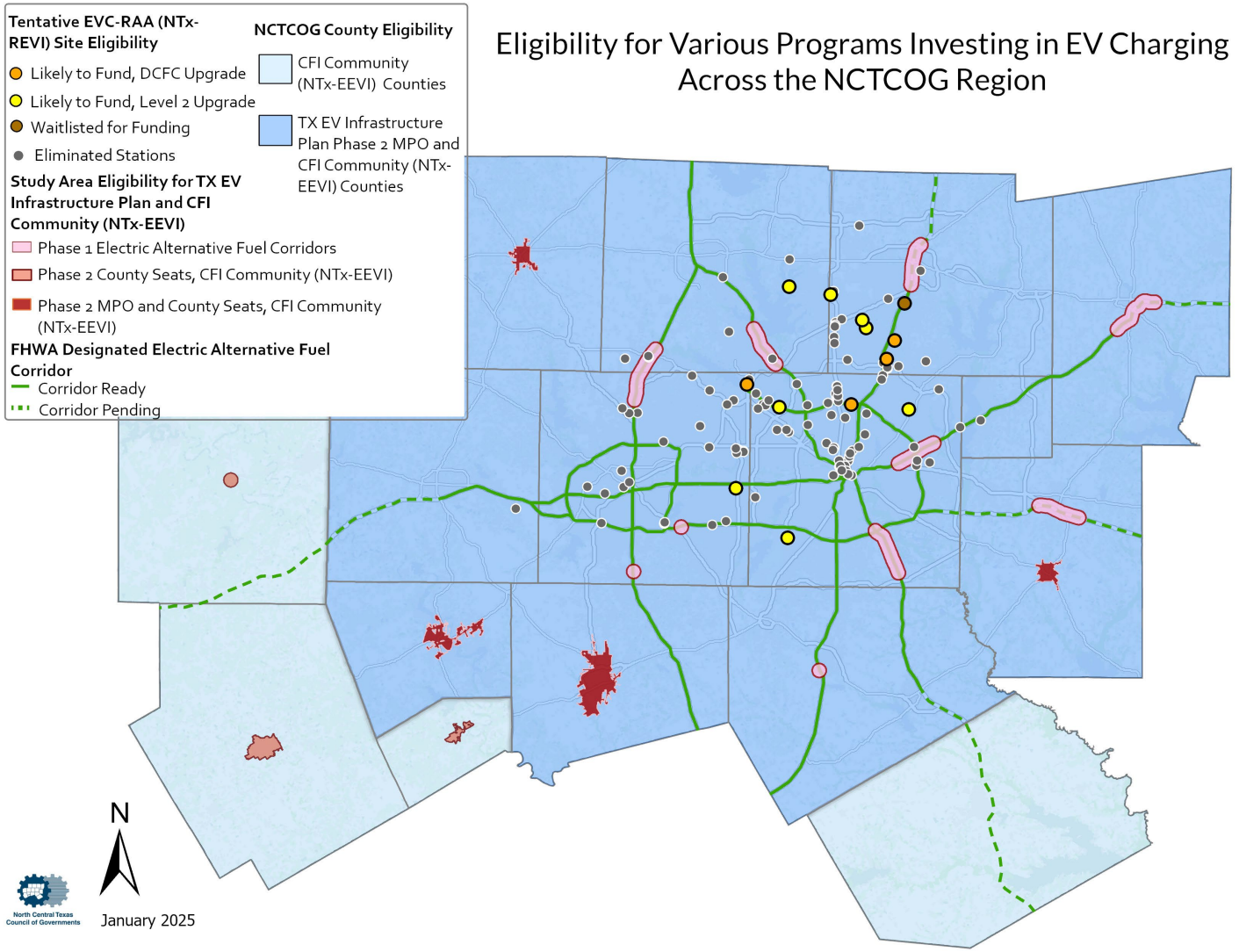
Regional Investments in EV Infrastructure

Electric Vehicle Charger Reliability and Accessibility Accelerator
$3.6 million award to repair and replace non-operational chargers in the DFW region

Charging and Fueling Infrastructure (CFI) Community Award*
$15M to build up to 100 new EV charging ports in the 16-county NCTCOG region

Texas EV Infrastructure Plan*
~$60 million to build new L2, DCFC, or MHD chargers in the 12-County Metropolitan Planning Area and ~$10M for 7 county seat sites (Managed by TxDOT)

Eligibility for Various Programs Investing in EV Charging Across the NCTCOG Region



*NCTCOG seeking feedback

Project Goals

Electric Vehicle Charger Reliability and Accessibility Accelerator

Increase reliability of electric vehicle (EV) charging infrastructure connecting the NCTCOG region

Charging and Fueling Infrastructure Community Award

Develop community-based EV charging using public sector properties as host sites to fill gaps in EV charging station access across the NCTCOG region

Texas EV Infrastructure Plan

Enable EV travel across the state and give EV drivers confidence and flexibility when traveling for work, recreation, or exploration regardless of distance

Federal Highway Administration Charging and Fueling Infrastructure Program: Community Project

Image Provided by Getty

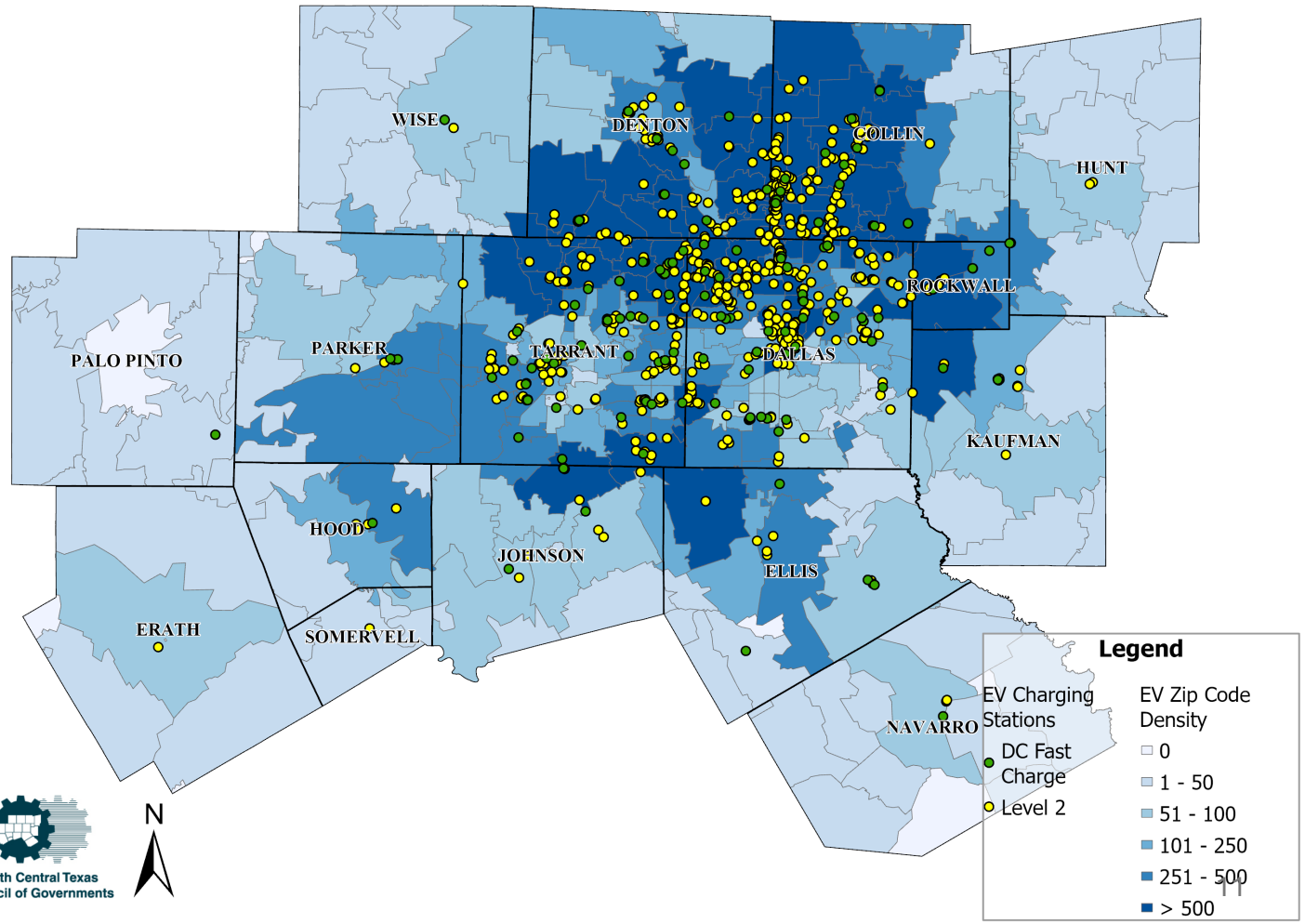
Charging and Fueling Infrastructure Community Program

Awarded $15 million to build EV charging stations to provide up to 100 public charging ports on public sector property regionwide

Will create specialized technical teams to streamline implementation

Input from residents and public agencies will inform site locations

Currently Available Electric Vehicle Chargers in the NCTCOG Region



North Central Texas Council of Governments

February 2025

Project Related Procurements

Released an open, competitive Request for Proposals to select private sector firm(s) for Deployment Dream Team in November 2024

- Selecting a team of experts in site selection, design, engineering, permitting, inspection, safety, utility coordination, NEPA, Buy America, etc.
- Goal is to expedite the “cradle to grave” process of siting and deploying chargers
- Will have regular coordination meetings with Authorities Having Jurisdiction to help them through the process and troubleshoot when necessary
- Plan to seek Executive Board approval in April

Project Related Procurements

Anticipate issuing a cooperative Request for Proposals (RFP) for EV Charging Station Providers on behalf of local governments

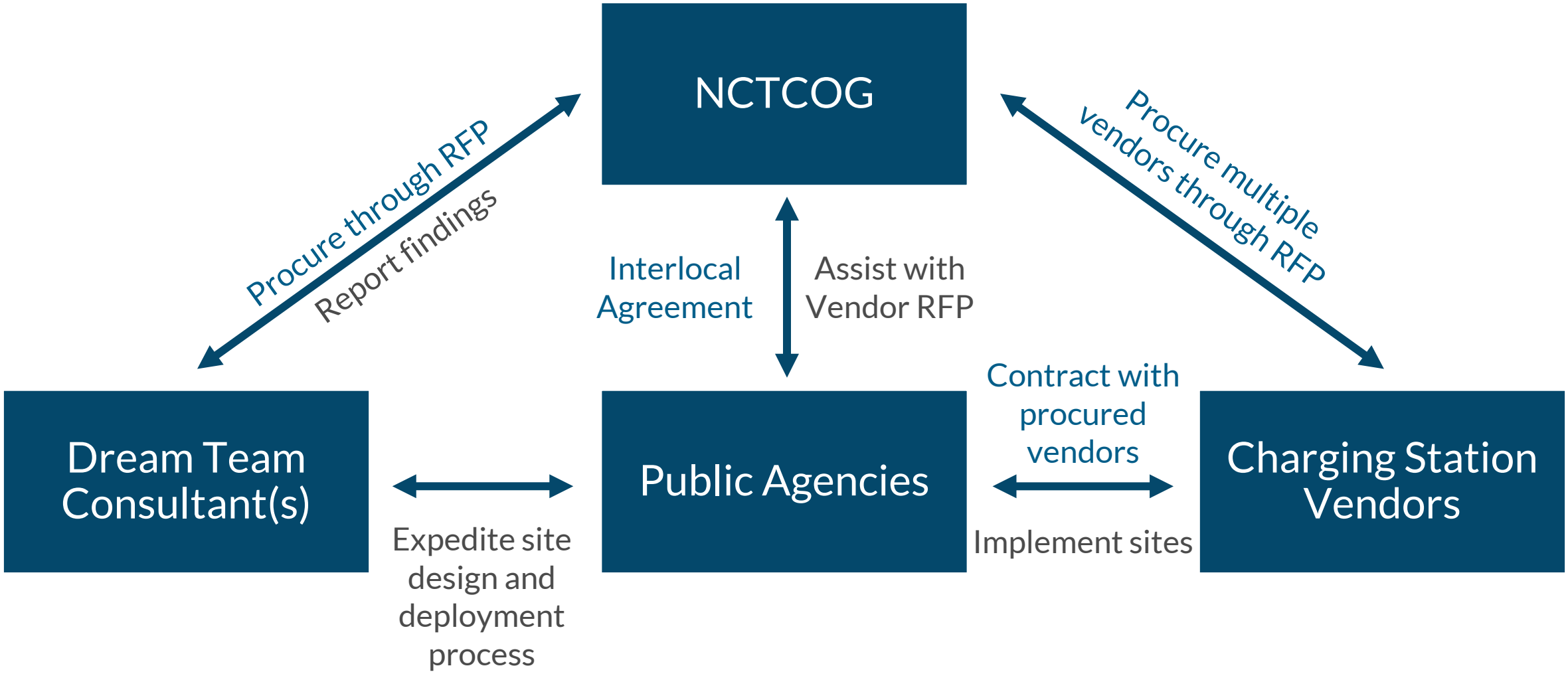
Procurement Considerations:

- Station technicians must be EVITP certified or equivalent
- NCTCOG may select one or multiple providers for 'turnkey' installation
- Will incorporate input from local governments

Site Considerations:

- Project sites determined through site selection
- Must be located on publicly owned property
- Will likely be a mix of L2 and DCFC and incorporate multiport locations
- All stations must comply with federal NEVI standards (23 CFR Part 680)

Project Structure



Questions

Image Provided by Prateek Joshi / NREL Image Gallery

Image Provided by Texas Department of Transportation, Gainsville, TX

Texas EV Infrastructure Plan

Funded by the National EV Infrastructure Program

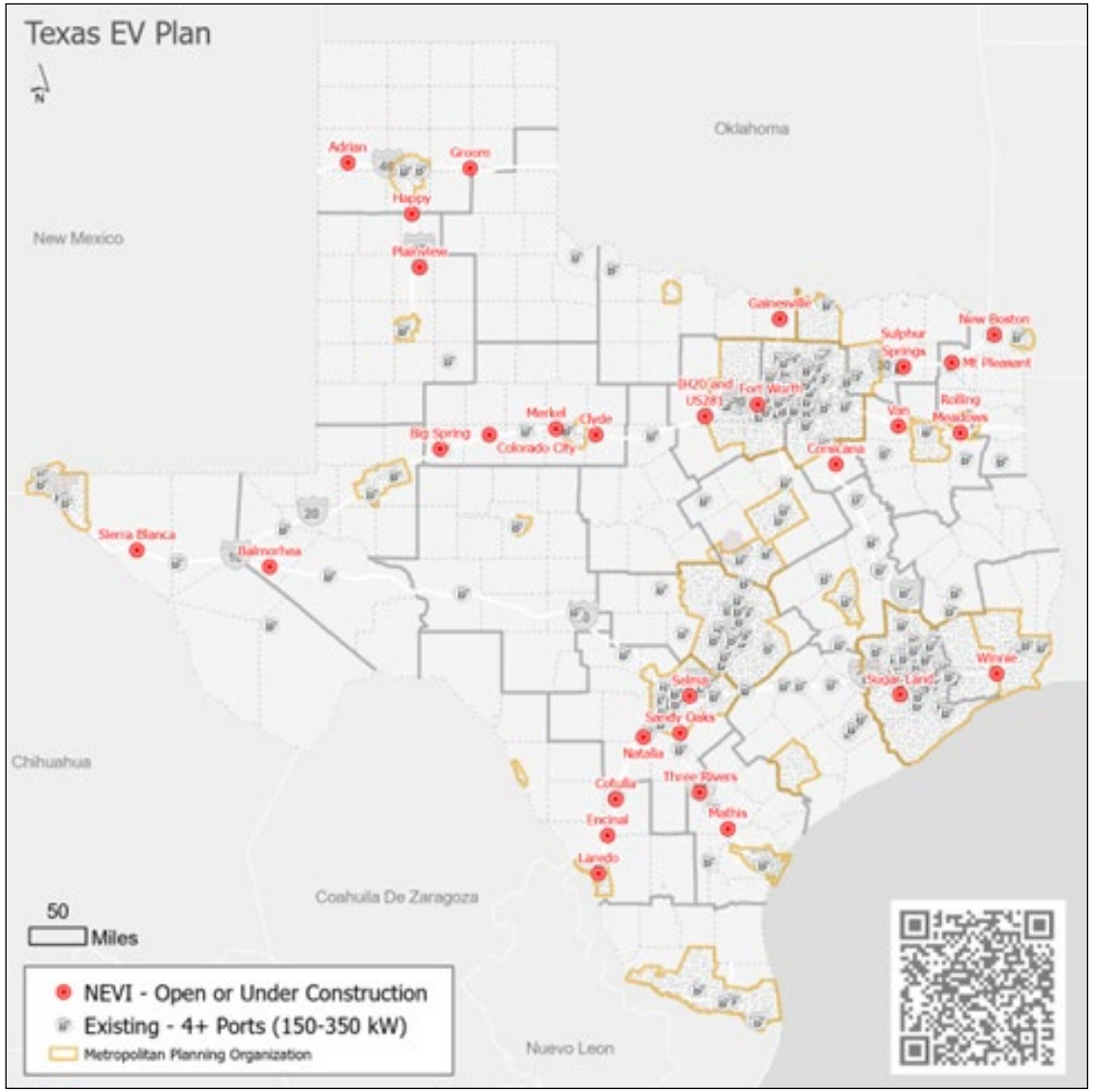
Texas EV Infrastructure Plan

Phase 1: Along Alternative Fuel Corridors

Phase 2: Two parallel approaches

1. Rural county seats
   - NCTCOG counties impacted: Erath, Hood, Johnson, Kaufman, Palo Pinto, Somervell, and Wise
2. Urbanized areas, advised by Metropolitan Planning Organizations (MPOs)
   - NCTCOG allocation: ~$60 Million

Plan documents and materials posted at publicinput.com/nctcogEVcharging -> Project Details



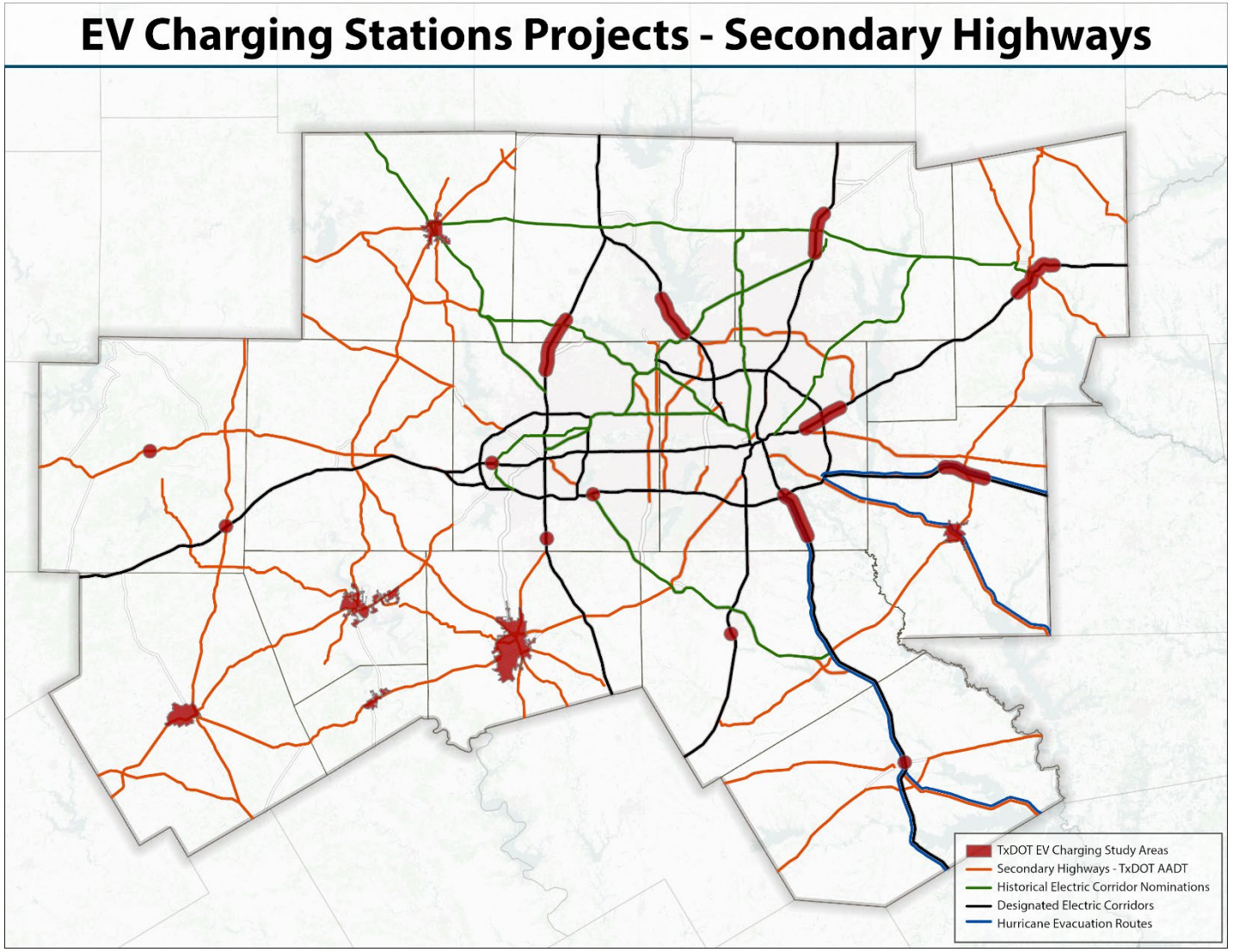
Source: TxDOT Texas EV Charging Plan Story Map: Texas Electric Vehicle Infrastructure Plan (arcgis.com)

Priority Secondary Highways

Preliminary Identification includes:

- Identified urban and rural secondary highways above specific traffic thresholds
- Electric alternative fuel corridor nominations previously submitted by NCTCOG
- Hurricane evacuation routes
- Freight corridors

If a station was built every 50 miles along these roadways, **35** charging sites would be needed



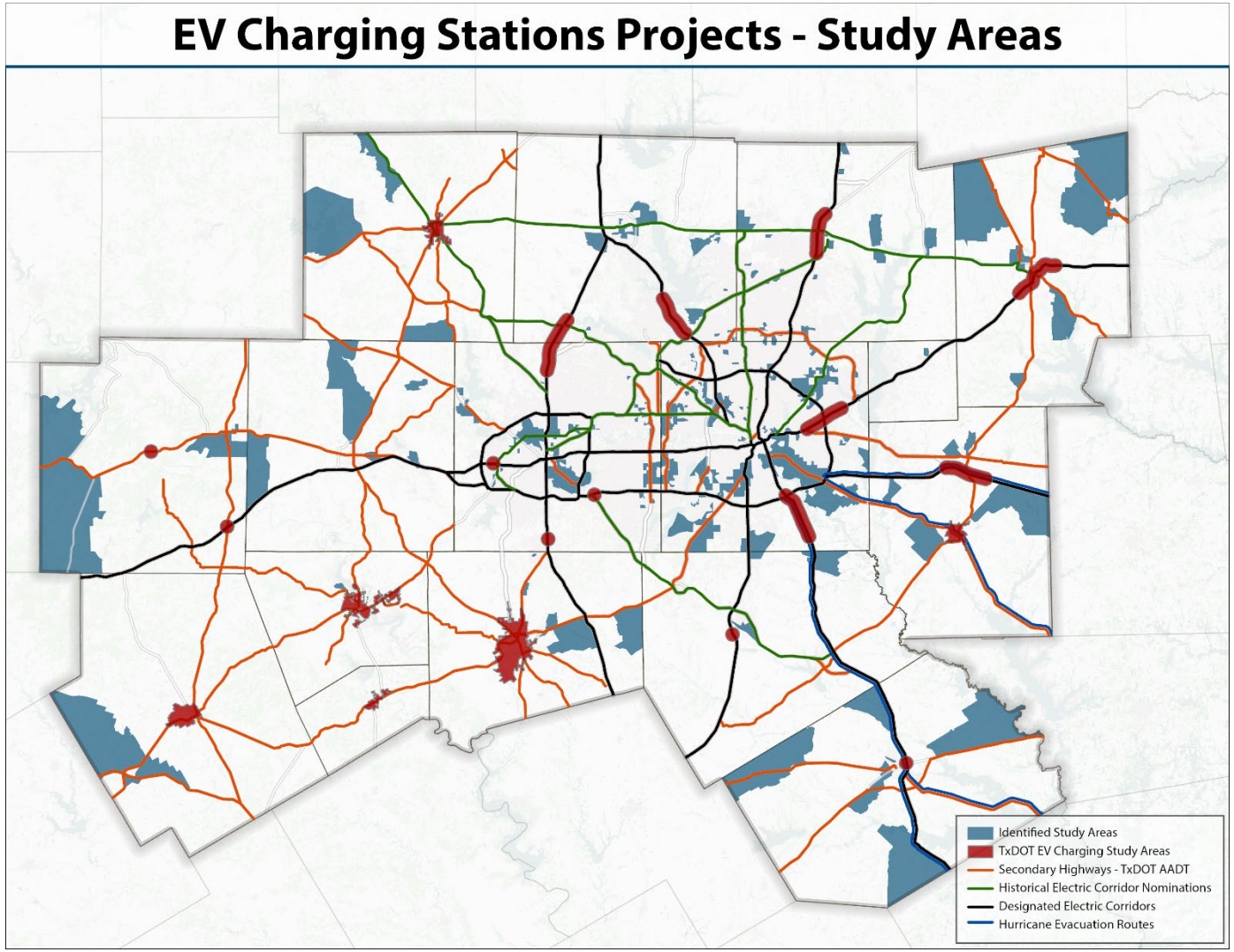
Possible Preliminary Study Areas

Census Block groups are filtered to be:

- < 1 mile away from identified secondary highways
- > 1 mile from an existing or planned DCFC station
- Outside of a Texas EV Charging Plan study area
- Within the top quartile of percent of minority or below poverty

Will be further refined and filtered based on feedback

Freight traffic will be considered for heavy-duty charging hub locations



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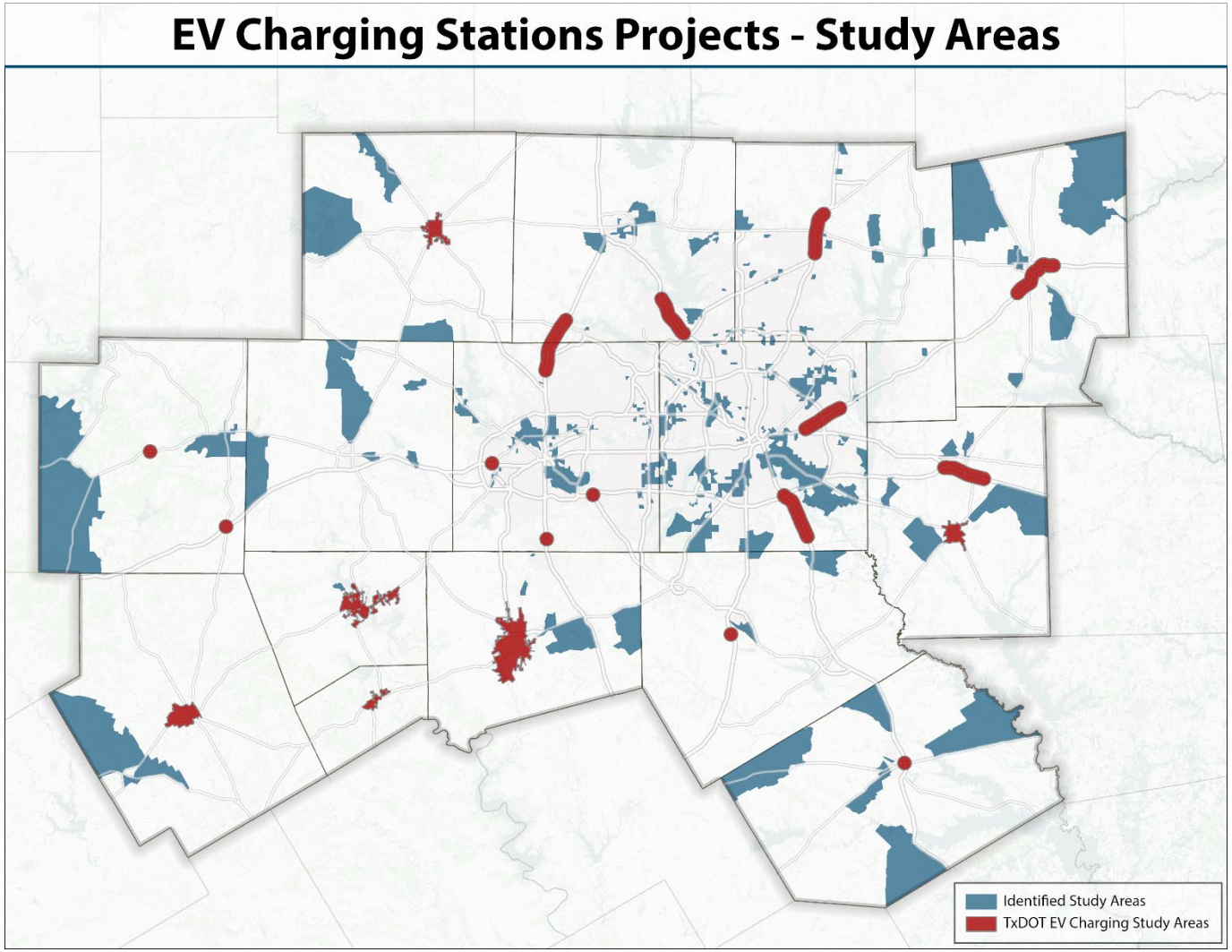
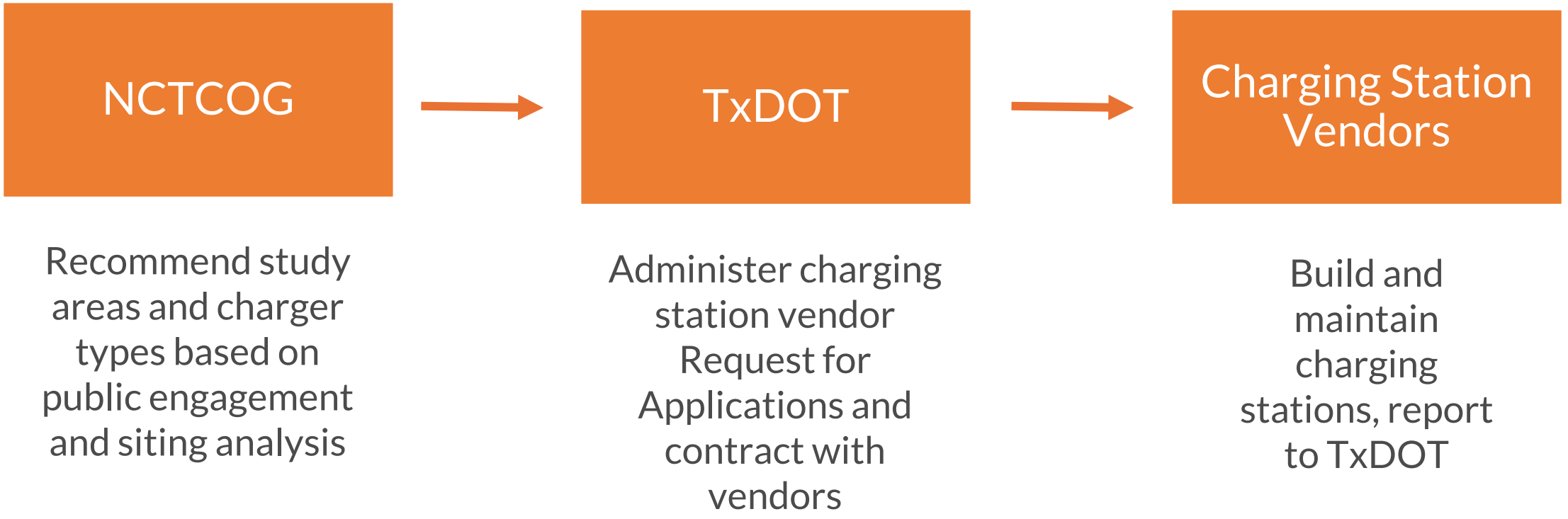


Project Structure



Questions

Image Provided by Prateek Joshi / NREL Image Gallery

Additional EV Infrastructure Work

EMPOWER EV FRIENDLY WORKPLACES

Assistance for employers to offer charging as an amenity

Recruiting and providing resources

Learn more at dfwcleancities.org/empower

CHARGING SMART
NATIONALLY DISTINGUISHED. LOCALLY POWERED.

Designation program to identify EV-friendly municipalities

Technical assistance and designation guidance

- Goal: 10 local designees
- In process: 4

Learn more at dfwcleancities.org/charging-smart

Building Codes and Standards

2024 International Code Council Appendices

- Commercial: Appendix CG
- Residential: Appendix RE

Drafted Support Statement for Regional Codes Coordinating Committee Consideration

Referenced in Mobility 2045 as part of Air Quality Initiatives: Communities project

EV Charger Project Involvement

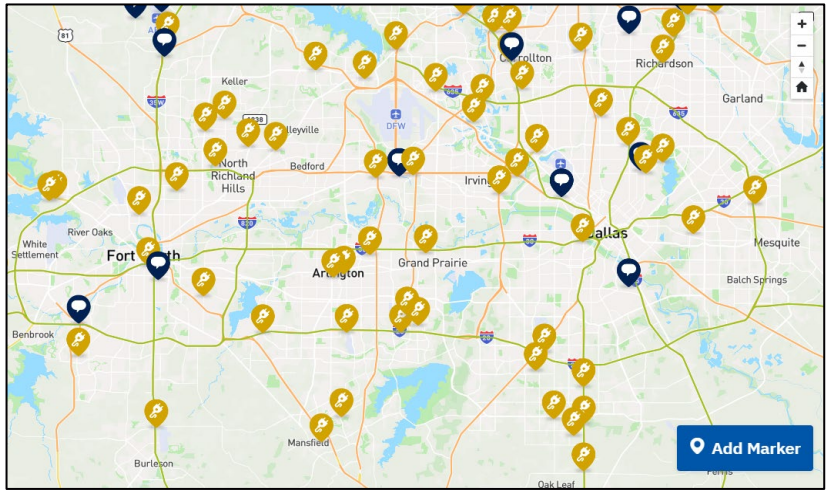
Visit the Regional EV Charging Station Projects page: publicinput.com/nctcogevcharging

Residents/Businesses:

- Sign up for email updates for future public engagement events in the NCTCOG region
- Submit comments and site suggestions on TxDOT Interactive Map
- Sign up on the Transportation Department Vendor Database
- Attend public engagement events
- Spread the word!

Public Agencies:

- Take the Local EV Interest Survey
- Share opportunities with residents
- Identify and share potential EV charging locations with NCTCOG



Texas EV Infrastructure Plan Interactive Map

Interactive Input

Ping Pong Balls -

Should priority be placed on many Level 2 chargers or few DC Fast Chargers?

Option 1 – as many L2 as possible

Option 2 – split the funds between L2 and DCFC

Option 3 – as many DCFC as possible

Poster -

Please add stickers on the poster to let us know where you want chargers!

Contact Us

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linkedin.com/showcase/dfwcleancities/

North Central Texas Council of Governments

Dallas-Fort Worth CLEAN CITIES

Planning Resilient EV Charging

Hannah Thesing

NCTCOG Transportation Department

DFWCC Stakeholder Showcase

February 26, 2025

The Need for Resilient Electric Vehicle Charging

There is an increasing power demand on the Texas Grid due to:

- Weather events
- Population growth
- Economic growth
- Aging infrastructure

ERCOT projects 998,000 light-duty and 103,000 medium- and heavy-duty EV by 2029

With more electric vehicles (EV) assigned to critical operations, resilient and reliable charging is needed.

- Emergency services/first responders
- Refuse collection
- Public works
- Dump trucks
- Freight transport

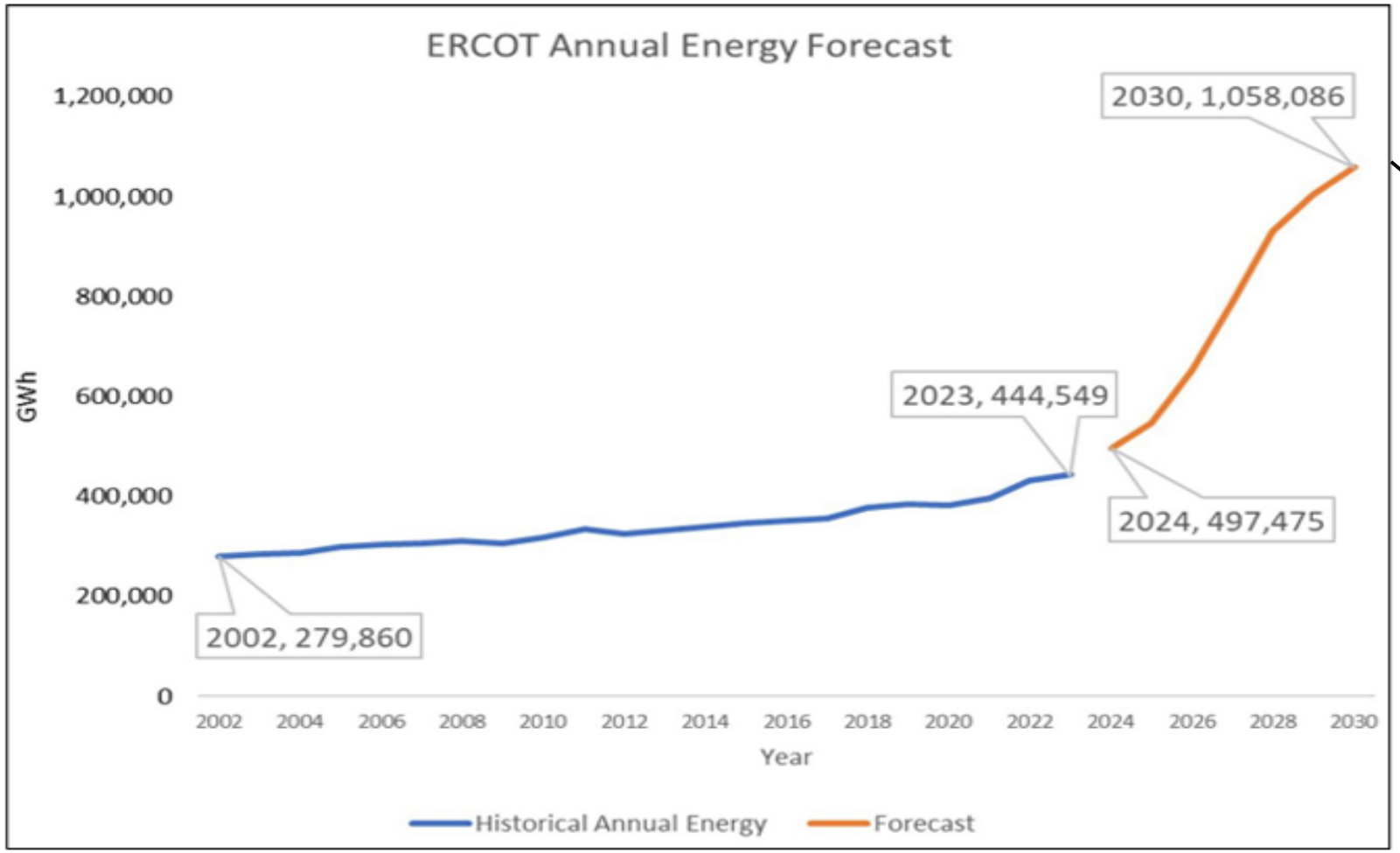
Texas Grid Outages

- More outages in last 5 years than any other state
- Outages lasted an average of 160 minutes impacting an est. 172,000 Texans
- Most outages caused by severe weather and failure of systems operations
- **Other possible causes:** Vandalism/Suspicious Activity, Transmissions Operations, Natural Disaster, Physical Attack, or Other/Unknown

Cause of Outage	Outages Last 5 Years (2019-2023)	Outages Last 20 Years (2003-2023)	Percent of Outages in Last 20 Years Occurring in Last 5 Years
Severe Weather	111	193	58%
Systems Operations	45	62	73%
All Causes	263	435	60%

Source: Payless Power

ERCOT Annual Energy Forecast



Source: www.ercot.com/gridinfo/load/forecast ->Long-Term Hourly Peak Demand and Energy Forecast

High Annual Growth from 2024-2027 Expected Due to Large Load Growth (17.1%)

Slow Annual Growth from 2014-2022 (3.1%)

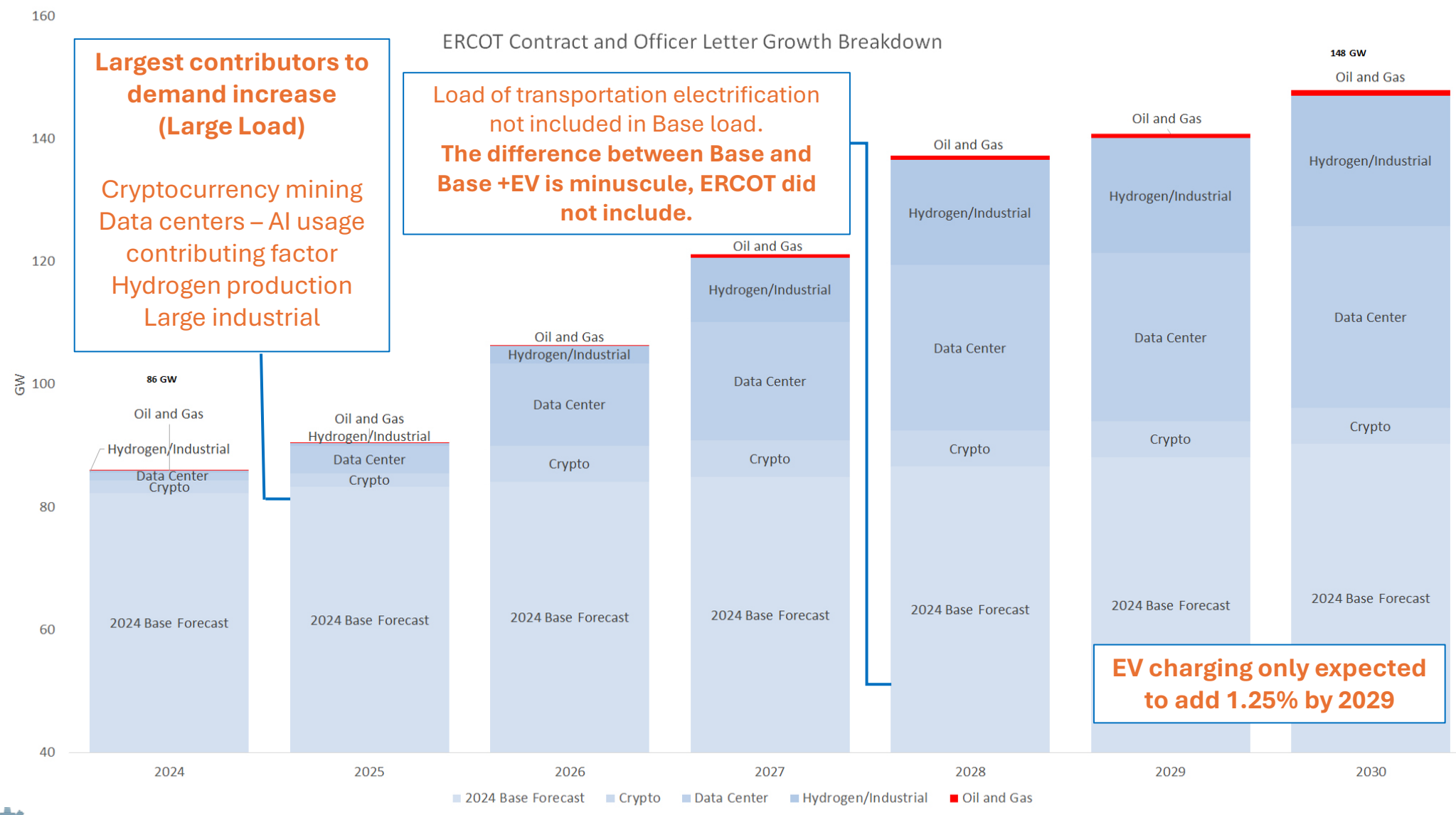
<u>Historical Annual Energy:</u>
Overall energy consumption over a period of time

ERCOT's 2024 expected peak demand capacity: 103,609 MW

Total demand of ~27,000 planned NEVI *ports at maximum rate simultaneously: 667 MW

<u>Peak Demand:</u>
Highest level of electricity demand in a given period, usually a day, a month, or a year.

ERCOT Large Load Growth



Source: Load Forecast (ercot.com)


Source: Getty

Project Overview

Objectives:

- Create North Texas Resilient Electric Vehicle (NTX-REV) plan for region

Impacts:

- Provide recommendations for resilient EV infrastructure
- Ensure critical EV travel continuity

Funding:

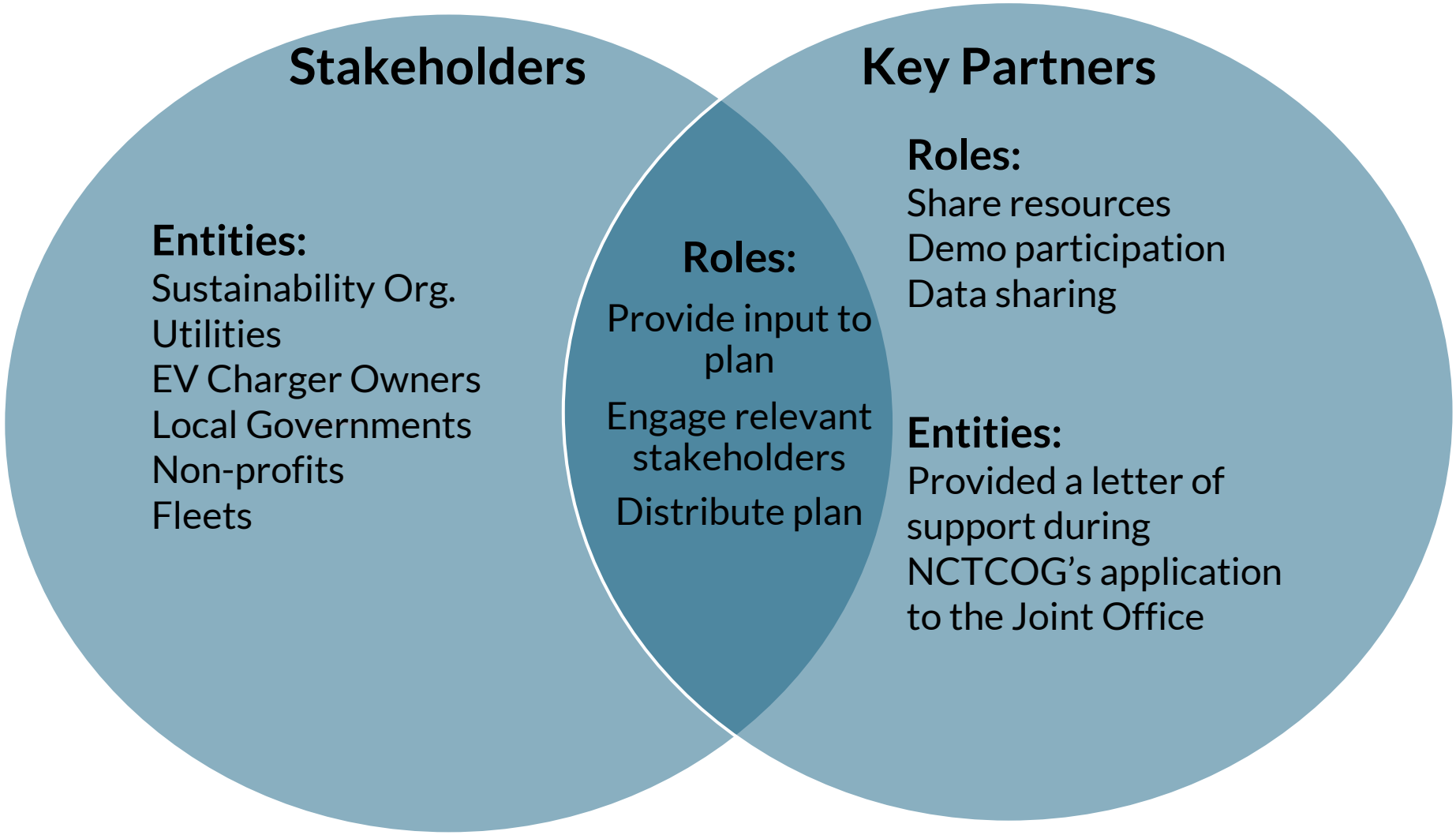
- Funded by $1.5 million award from Bipartisan Infrastructure Law, Department of Energy (DOE) Joint Office of Energy & Transportation

Timeline:

- 30-month project expected to finish early 2027*
  - Budget Period (BP) 1: October 2024 to July 2025
  - BP 2: August 2025 to September 2026
  - BP3: October 2026 to March 2027

*Timeline may be adjusted pending DOE approval

NTX-REV Project Team



Project Manager

NCTCOG
Transportation Department
Emergency Preparedness Department

Role:
Coordinate Meetings
Create Plan
Manage/Project and Budget

Budget Period 1 Activities

October 2024- July 2025*

Research and Engagement

- Establish stakeholder group and hold regular meetings
- Assess existing resilience plans and projects
- Inventory resilience strategies

NTX-REV Plan Drafting

- Identify key electrified transportation assets and operations
- Conduct a SWOT analysis
- Conduct a gap analysis

Source: Getty Images

BP 1 Activities Cont.

SWOT Analysis

- Measure current ability of region to maintain critical operations during grid failure
  - **S**trengths- What assets do we currently have to support our resiliency?
  - **W**eaknesses- Where are current risks?
  - **O**pportunities- What areas could we improve to better support resiliency?
  - **T**hreats- Obstacles that would preclude us from implementing the plan?

Gap Analysis

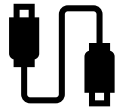
- Identify difference between resilient charging infrastructure **currently** in the region vs what infrastructure is **needed**

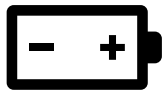
Resilience Strategies to Investigate

Off-grid charging which operates regardless of grid conditions

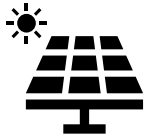
Managing charging to ensure it occurs outside of peak demand hours

Technology options:

Smart Charging Management 

Energy Storage Systems/Batteries/Generators Mobile Charging 

Bidirectional Charging 

Microgrids 

Hydrogen Fuel Cell 

Solar 

Wind 

See Whitepaper titled, "Planning for Resilient EV Charging Infrastructure". Developed by NCTCOG The Texas State Energy Conservation Office (SECO). Highlights key strategies for achieving resilient EV charging

Future Activities

Budget Period 2: August 2025 – September 2026*

Demo Project Development & Implementation

- Identify and complete demonstration projects
  - Tabletop Planner Exercise
  - Technology and Equipment Field Demo

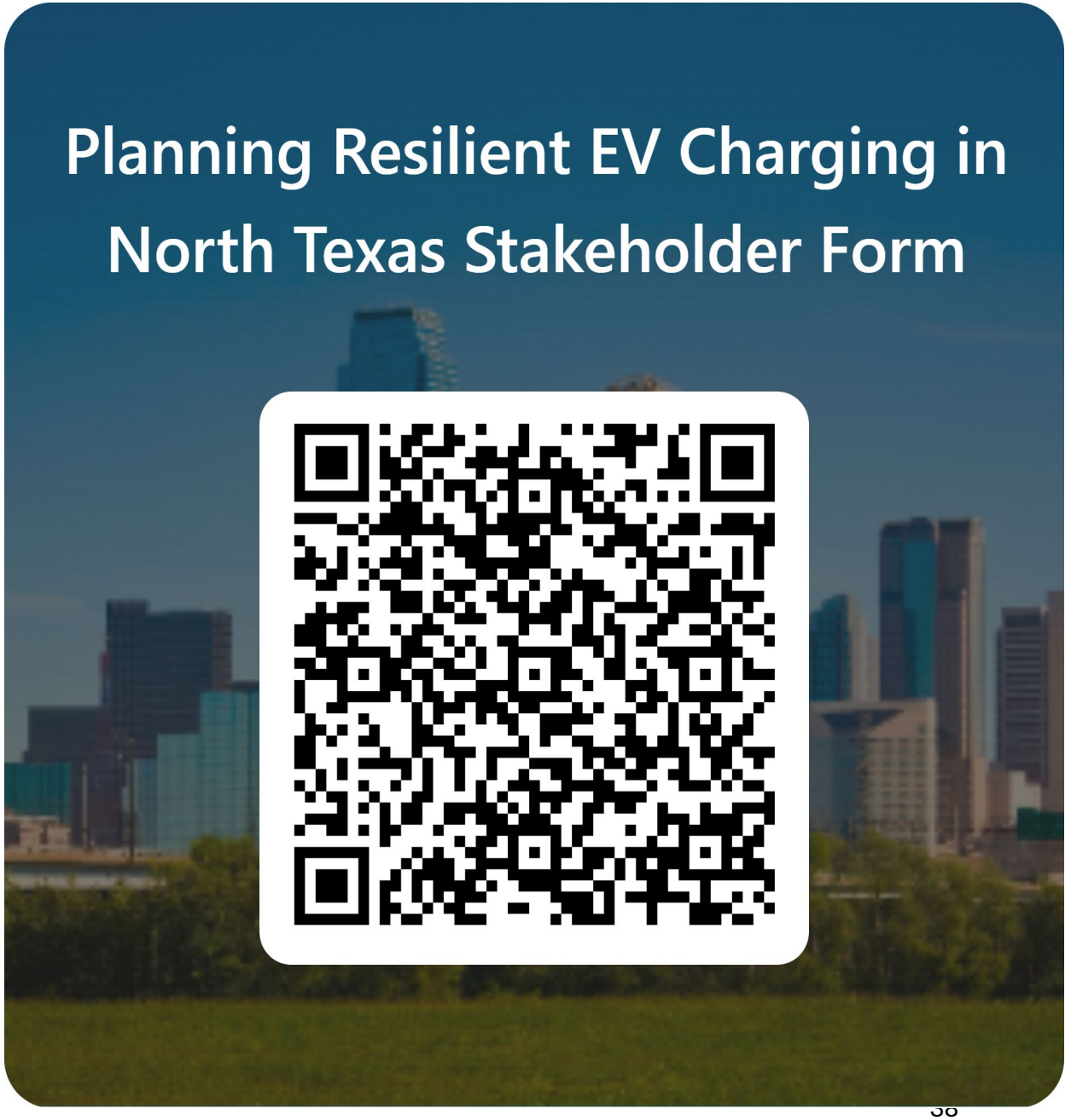
Budget Period 3: October 2026 – March 2027*

Plan Finalization and Distribution

- Summarize findings from research and demonstration projects to finalize NTX-REV plan
- Compile materials for stakeholder distribution
- Disseminate and promote NTX-REV

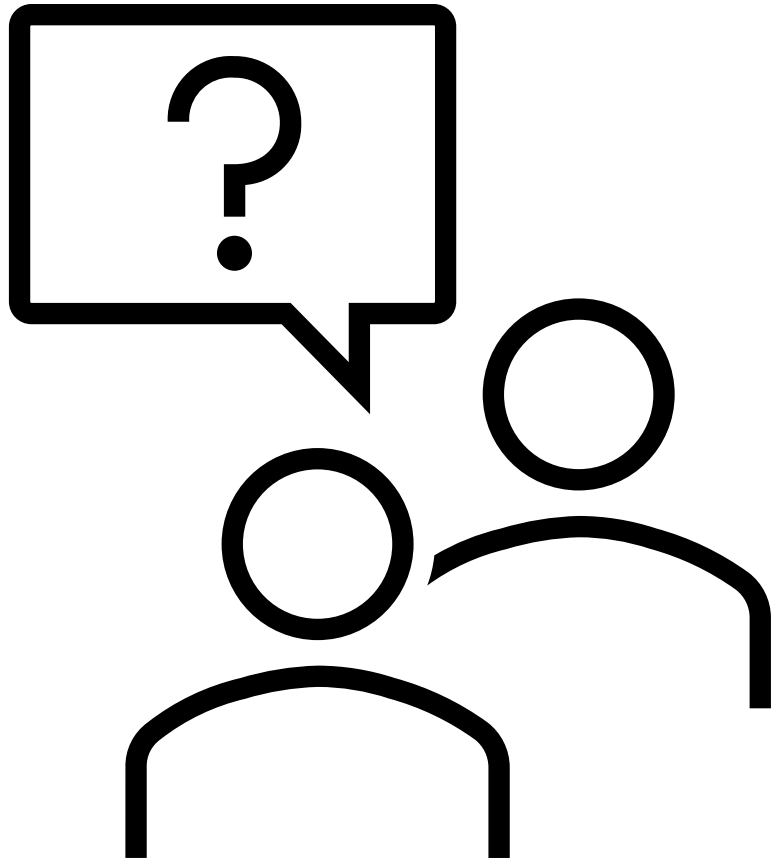
Next Steps

- Complete Stakeholder Form
  - Send form to any relevant potential stakeholders
  - An informational one-pager on this project will be provided as a follow-up
- Join our Microsoft Teams channel
- Stay tuned for our upcoming regional stakeholder engagement meeting (expected March 26, 2025)
- Contact us at cleancities@nctcog.org with any additional questions



Q/A and Feedback

- **Submit your feedback to the following:**
  - What transportation assets in the region, or in your organization, should we plan to make resilient in the case of a grid outage?
  - What resilient EV charging technologies/strategies are of the most interest to your entity?



Contact Us

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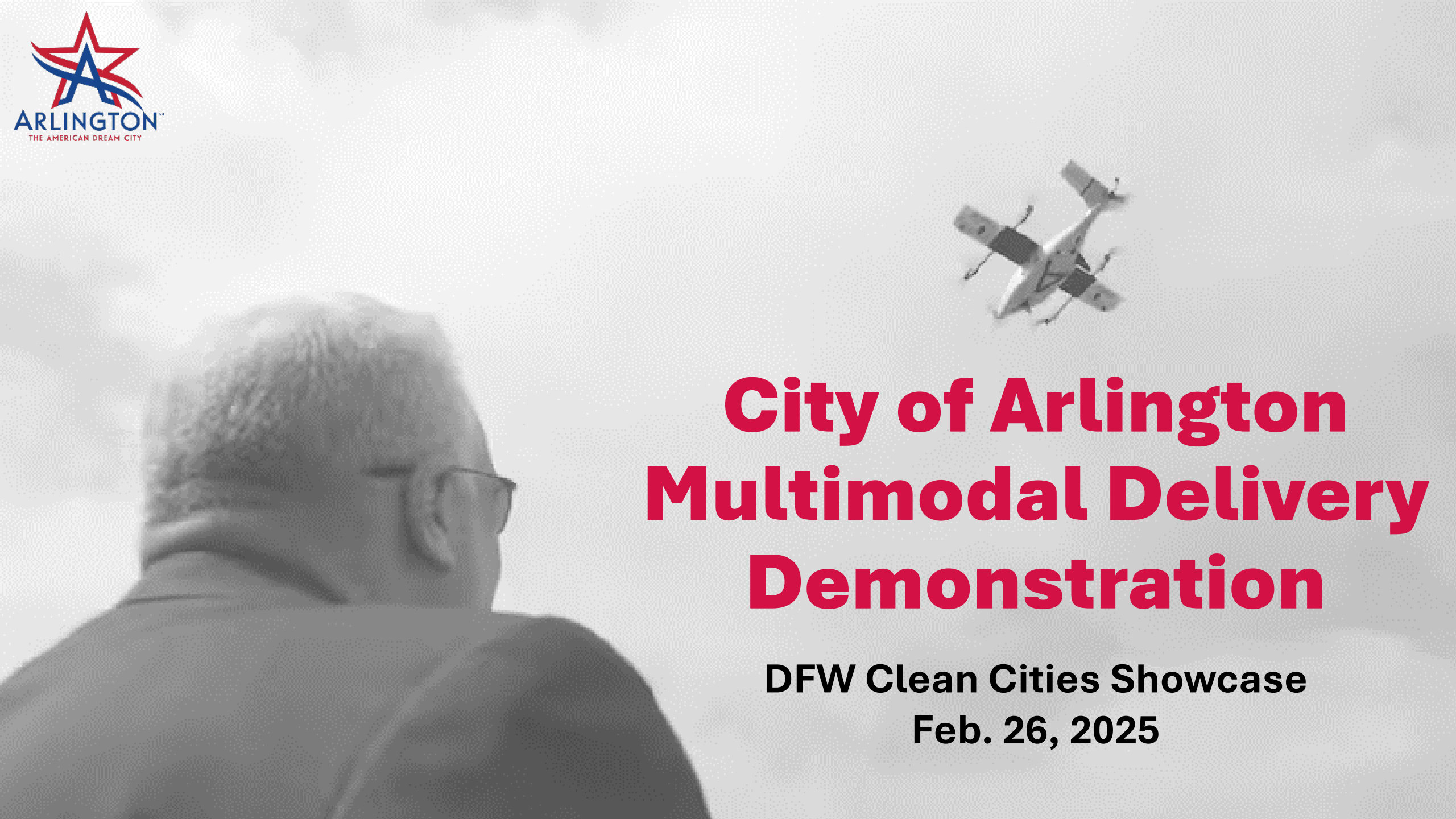
Planning Resilient EV Charging in Texas | DFWCC

Dallas-Fort Worth Clean Cities: LinkedIn



City of Arlington Multimodal Delivery Demonstration

DFW Clean Cities Showcase

Feb. 26, 2025

Project Overview

- Project Description:
  - Test and evaluate innovative, autonomous food delivery
  - Using electric, autonomous air and ground robots for deliveries
  - Study public adoption trends and energy benefits
- Two year project, with funding from the US Department of Energy
  - Promote innovation in transportation to deploy clean energy technologies
- Project Team:

ARLINGTON
THE AMERICAN DREAM CITY

North Central Texas Council of Governments

TARRANT AREA FOOD BANK

UNIVERSITY OF TEXAS ARLINGTON

airspacelink™

CLEVON

AERIALOOP
DRONE DELIVERY AIRLINES

Community Engagement

Survey (Spring 2024)
Stakeholder Input (Spring 2024):

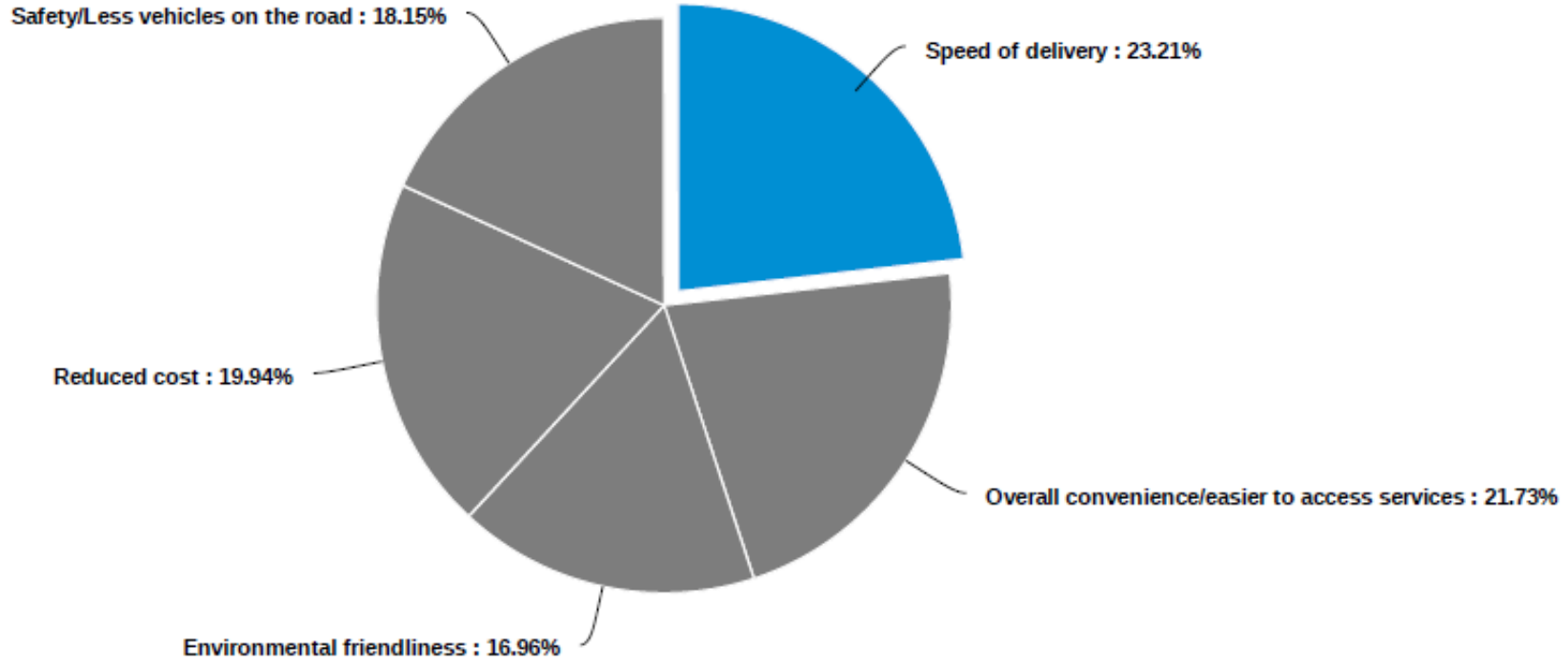
- DFW Clean Cities Coalition
- North Texas Uncrewed Aircraft Systems Task Force

Community Workshop (May 2024)
Neighborhood Presentations (Summer 2024)
Mailers, Website, Social Media posts (Summer 2024)

Survey Results

Survey conducted in May and June 2024; ~200 responses
76% of responders have ordered food or groceries online for home delivery
60% have some familiarity with uncrewed air or ground vehicles
11% have ever interacted with an uncrewed air or ground vehicle

Benefits of Uncrewed Air and Ground Delivery Vehicles



Survey Results

How much do you support the use of UAS (Uncrewed Aircraft System) or ground robot system for following purposes?

Statement	Stongly Object	Object	Neutral	Support	Strongly Support	Overall
Military Activities	19 10.27%	11 5.95%	31 16.76%	42 22.7%	82 44.32%	185 100%
Search and Rescue Operations in Remote or Rugged areas	5 2.7%	2 1.08%	8 4.32%	34 18.38%	136 73.51%	185 100%
Aerial Mapping/ Surveying	6 3.28%	6 3.28%	25 13.66%	42 22.95%	104 56.83%	183 100%
Traffic Monitoring	14 7.57%	10 5.41%	27 14.59%	60 32.43%	74 40%	185 100%
Small Package Delivery	28 15.3%	25 13.66%	34 18.58%	44 24.04%	52 28.42%	183 100%
Recreational Use	17 9.29%	20 10.93%	66 36.07%	37 20.22%	43 23.5%	183 100%
Other	14 8.7%	10 6.21%	106 65.84%	14 8.7%	17 10.56%	161 100%

Survey Results

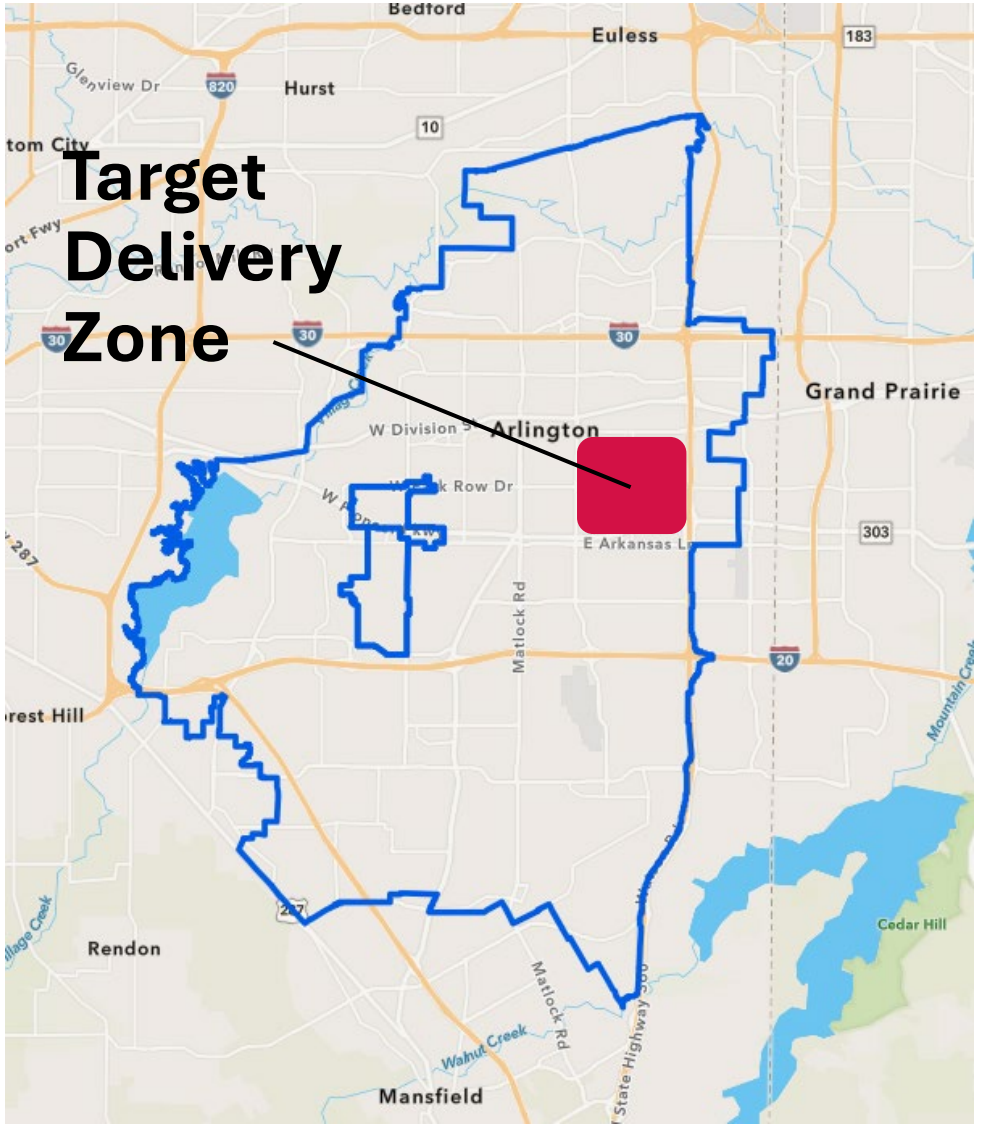
What are some concerns you might have around UAS (Uncrewed Aircraft System) or ground robot delivery system?

Statement	No Concern	Somewhat Concerned	Extremely Concerned	Overall
Accidents and injury	35 19.77%	80 45.2%	62 35.03%	177 100%
Noise level	89 51.45%	63 36.42%	21 12.14%	173 100%
Loss of privacy	53 31.36%	55 32.54%	61 36.09%	169 100%
Theft of packages	32 18.93%	74 43.79%	63 37.28%	169 100%
Legal liability	43 25.6%	76 45.24%	49 29.17%	168 100%
Other	64 60.95%	21 20%	20 19.05%	105 100%

First Delivery Demonstration

Dates: September 9 to 13, 2024
Location: East Arlington neighborhoods
Target Participants: Food Bank clients, other residents
Goal: 150 grocery box deliveries

1. Food Bank packs grocery boxes
2. Aircraft transports grocery box from hub to distribution point
3. Grocery box transferred to ground robot
4. Ground robot transports boxes to participant home



Vehicle: Aerialoop ALT6-4 VTOL

- Speed: 50 mph
- Payload: 9 pounds
- Range: 25 miles
- Redundant rotors
- Built-in ballistic parachute
- Vertical take-off and landing, transitions to forward flight

Dimensions:

- Wingspan: 8½ feet
- Length: 6 feet

Aircraft Route

Air Robot Route (~0.45 miles)

Within City-owned park land

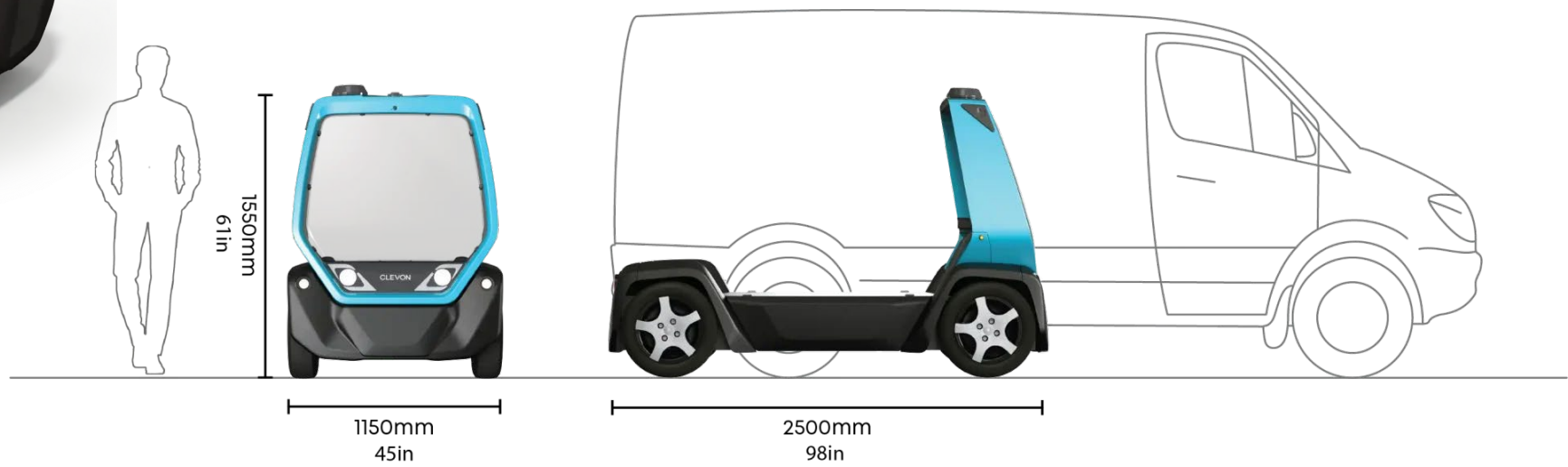
One street crossing, monitored

Pilot on each end of route,
maintained visual line of site

No FAA waiver required

Vehicle: Clevon Autonomous Robot Carrier*

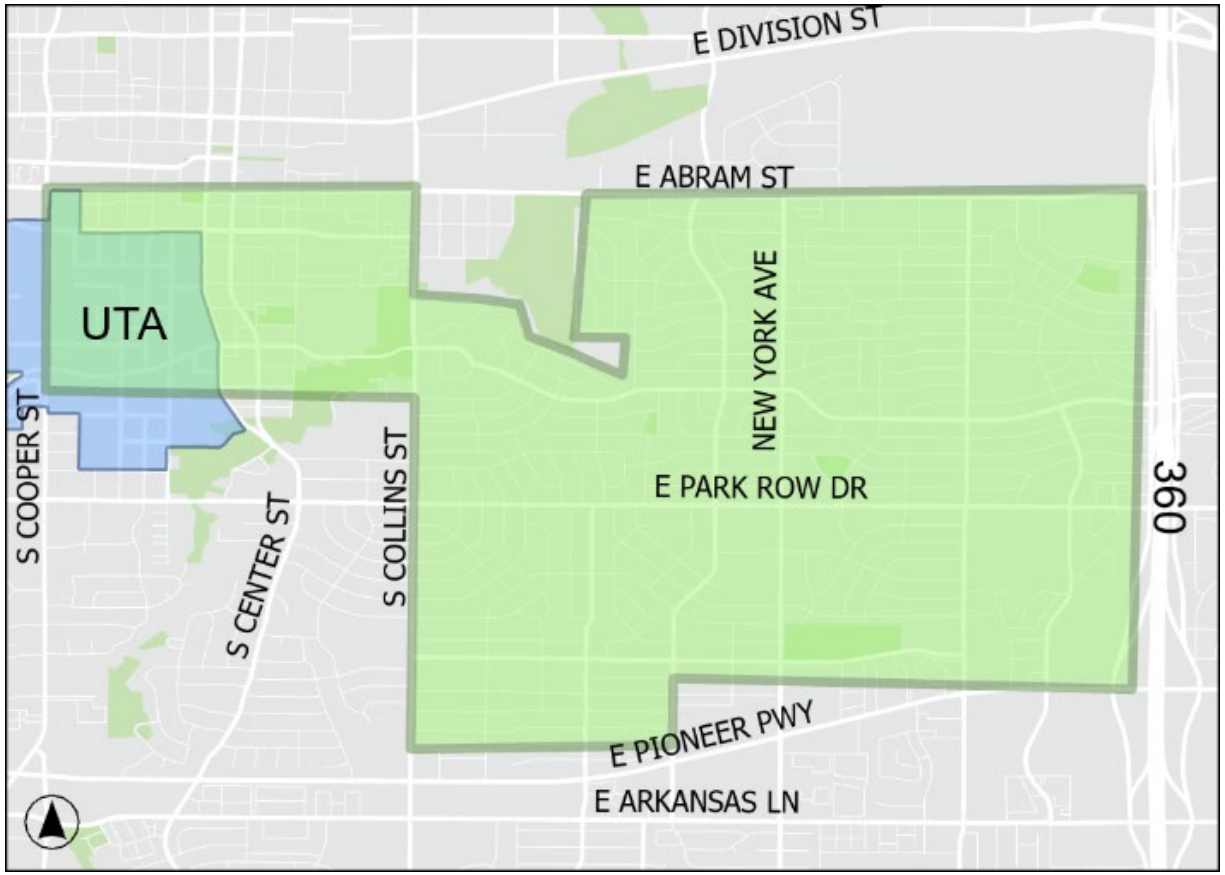
- Speed: 15 mph max on 40 mph roads
- Sensors: 360 degree view
- Power: fully electric
- Range: 50 miles per charge
- Charging: ~1 hour



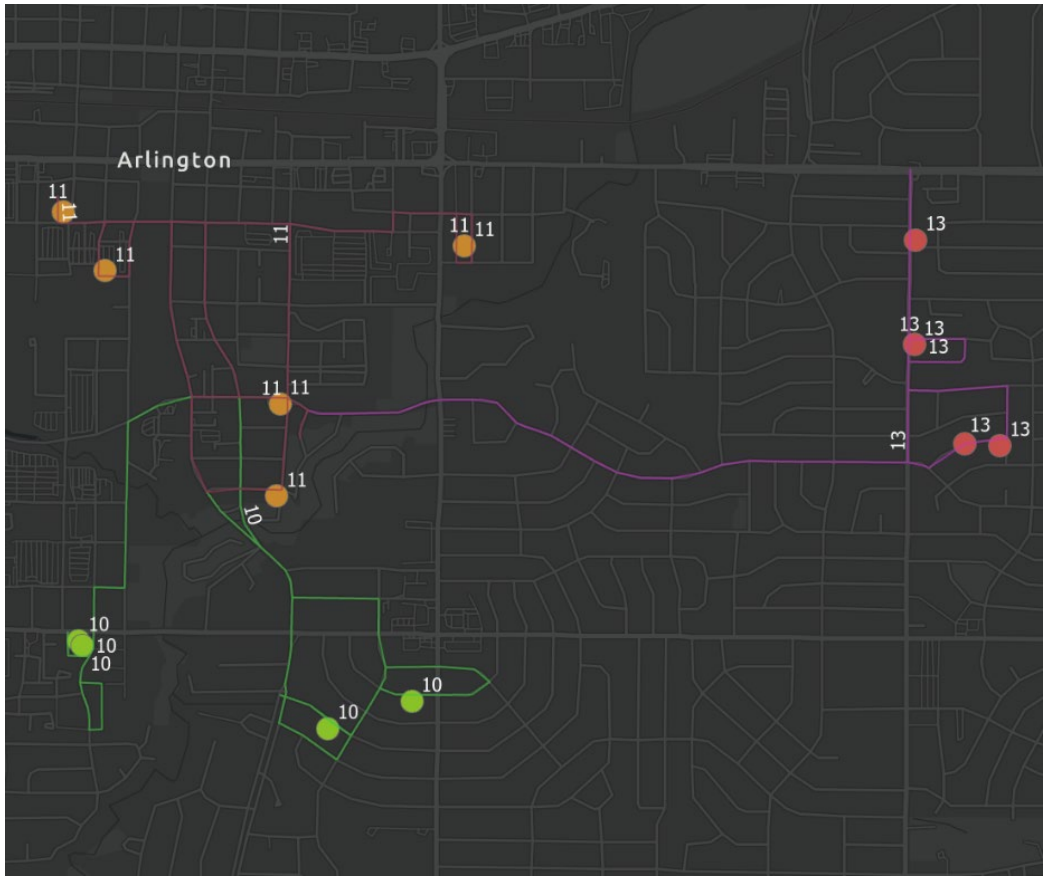
*Clevon is only participating in Demonstration 1

Ground Routes

Eligible Delivery Zone (3.5 sq miles)

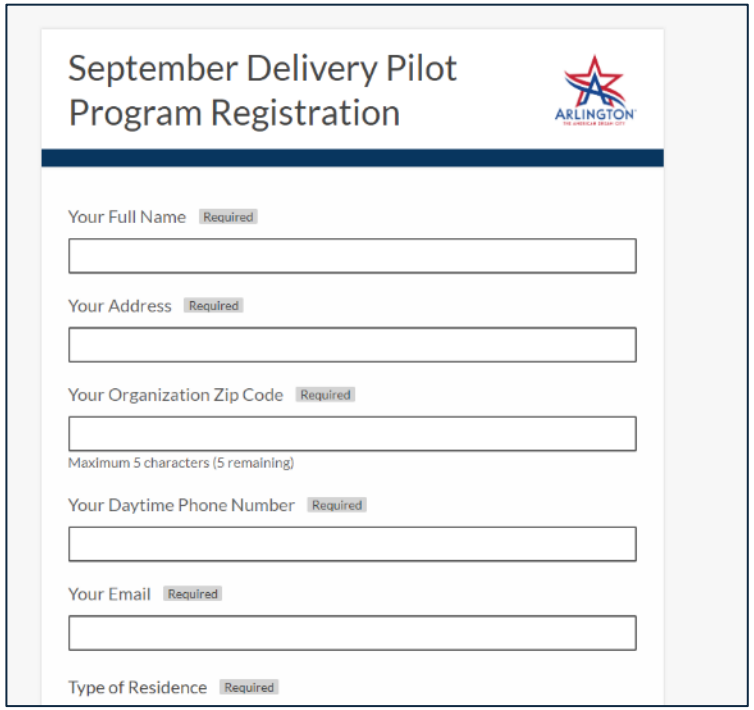


Ground Robot Example Routing



Participant Experience

1. Participants sign up online or by calling the City.
2. City verifies address and adds delivery to the route plan; participants notified of delivery date, time window, and code to open delivery bay.
3. On delivery date and time, participants wait for the ground robot to roll up to their residence.
4. Type in unique code to receive grocery delivery.
5. Fill out a quick survey about the experience.



Results – Flight Operations

81 grocery boxes transferred

162 flights total

Date	Time Range	Total Flights	Total Grocery Boxes	Battery Charges
Mon, Sept. 9, 2024	10:33 – 16:26	28	14	7
Tue, Sept. 10, 2024	8:34 – 16:40	38	19	10
Wed, Sept. 11, 2024	8:41 – 13:33	24	12	6
Thurs, Sept. 12, 2024	8:30 – 17:08	60	30	15
Fri, Sept. 13, 2024	8:42 – 11:04	12	6	3

Results – Ground Operations

139 grocery boxes delivered

26 routes total

Date	Time Range	Routes Completed	Total Grocery Boxes	Hand Delivered
Mon, Sept. 9, 2024	9:57 – 15:26	5	25	4
Tue, Sept. 10, 2024	10:00 – 14:59	6	33	9
Wed, Sept. 11, 2024	9:10 – 13:16	5	27	6
Thurs, Sept. 12, 2024	8:53 – 13:36	5	27	15
Fri, Sept. 13, 2024	10:14 – 14:32	5	27	13

Results - Participant Survey

Satisfied with delivery service?

94% very satisfied and satisfied

Easy to access groceries?

98% very easy and easy

Delivery process feel secure?

96% very secure and secure

Likely to use service again?

94% very likely and likely

Demonstration 2 Plans

Goals:

- Complete >150 deliveries
- Onboard new ground robot provider
- Expand flight path for aerial robot
- Allow participants more control over deliver times
- Gather more post-delivery survey responses
- Streamline food packaging process

Next Steps

- Preparing for Spring 2025 demonstration
  - Finalize operational area and air robot routing
  - Participant recruitment
  - Apply lessons learned from Demonstration #1
- Final reporting and deliverables
  - Cost Model
  - Energy and Emissions Analysis
  - Scalability and Replication Guide

Stakeholder Feedback: Clean Cities Coalition

Questions about the project?

Priority cargo for delivery in North Texas? (medication, food, other, etc.)

Technology opportunities for food delivery in North Texas?

Any concerns about safety and/or regulatory environment?

Any concerns about community acceptance?

Other feedback?

Discussion

Ann Foss, Ph.D., AICP
City of Arlington
Ann.Foss@arlingtontx.gov

ARLINGTON
THE AMERICAN DREAM CITY

North Central Texas Council of Governments

TARRANT AREA FOOD BANK

UNIVERSITY OF TEXAS ARLINGTON

airspacelink™

CLEVON

AERIALOOP
DRONE DELIVERY AIRLINES

Images Source: https://www.gettyimages.com/

Other Opportunities to Improve Air Quality

North Central Texas Council of Governments|2.26.2025

North Central Texas Reuse Marketplace

North Central Texas Council of Governments
Department of Environment and Development

February 26, 2025

North Central Texas Reuse Marketplace

NCTCOG: Department of Environment and Development

- Work with a diverse set of stakeholders to address regional challenges
- Facilitate committees that work to find solutions to regional challenges
- Funded through grants and local partners

North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG

- NCTCOG is the state-designated planning agency for municipal solid waste in the 16-county region
  - Regional Solid Waste Management Plan 2022-2042

Goal #1	Goal #2	Goal #3	Goal #4	Goal #5
Support Materials Management Education and Training	Promote Creation and Expansion of Waste Management Programs	Measure Regional Waste Reduction Efforts	Support and Encourage Innovative Technologies for Other Waste	Promote Public and Private Sector Partnerships

- Regional Solid Waste Implementation Project, FY24-25


Introducing the North Central
Texas Reuse Marketplace
Rheaply
North Central Texas
Council of Governments

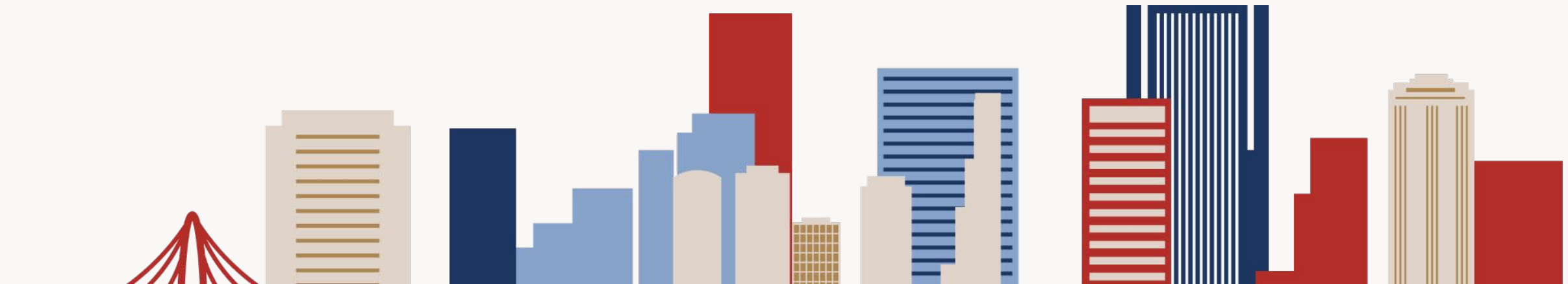
North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG

- NCTRM is a **free-to-use** resource exchange platform:

Introducing the NCT Reuse Marketplace

The NCT Reuse Marketplace connects businesses and organizations to develop and scale new reuse and recycling market opportunities.



Do you know if you are eligible for an account on NCTRM? Are you...

- A government entity
- A regional business and/or organization, including, but not limited to, school districts and other educational institutions
- A non-profit organization

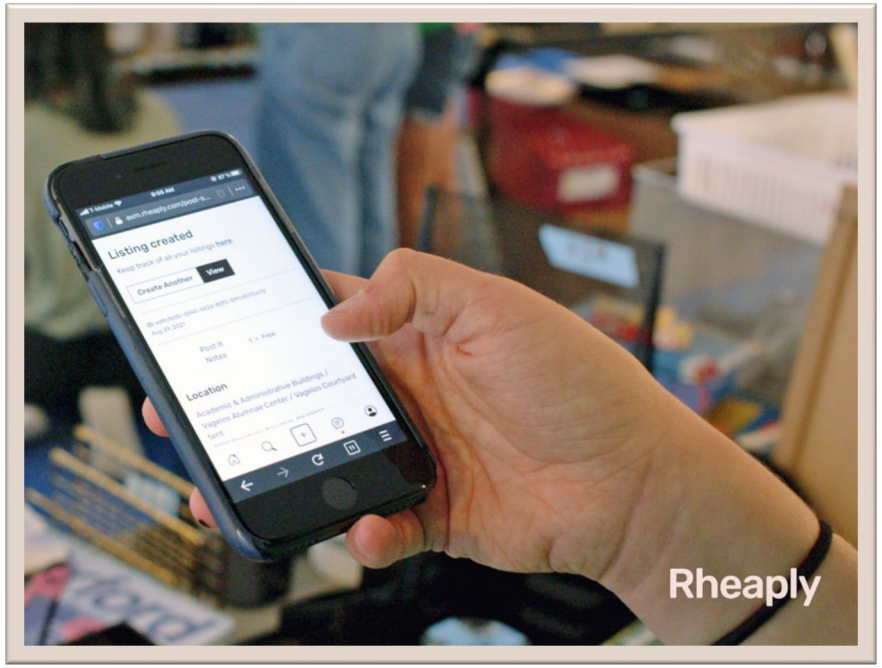
If so, you're eligible!

It's free! Any business or organization in North Central Texas can register to take a look at Rheaply's **dashboard**, donate or sell things no longer needed, or make offers on items already available.

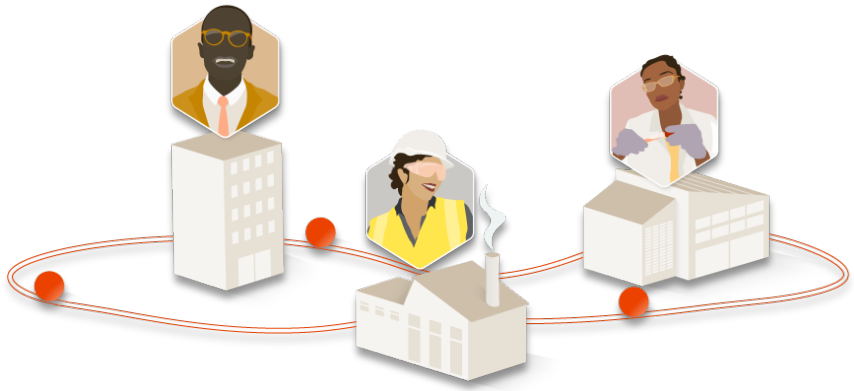
North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG

- A digital platform that allows your organization to buy, sell, and donate reclaimed office assets and building materials



- Know what you already have
- Use what you already have
- Sell what you no longer need



North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG

- Know what you have
- Use what you already have
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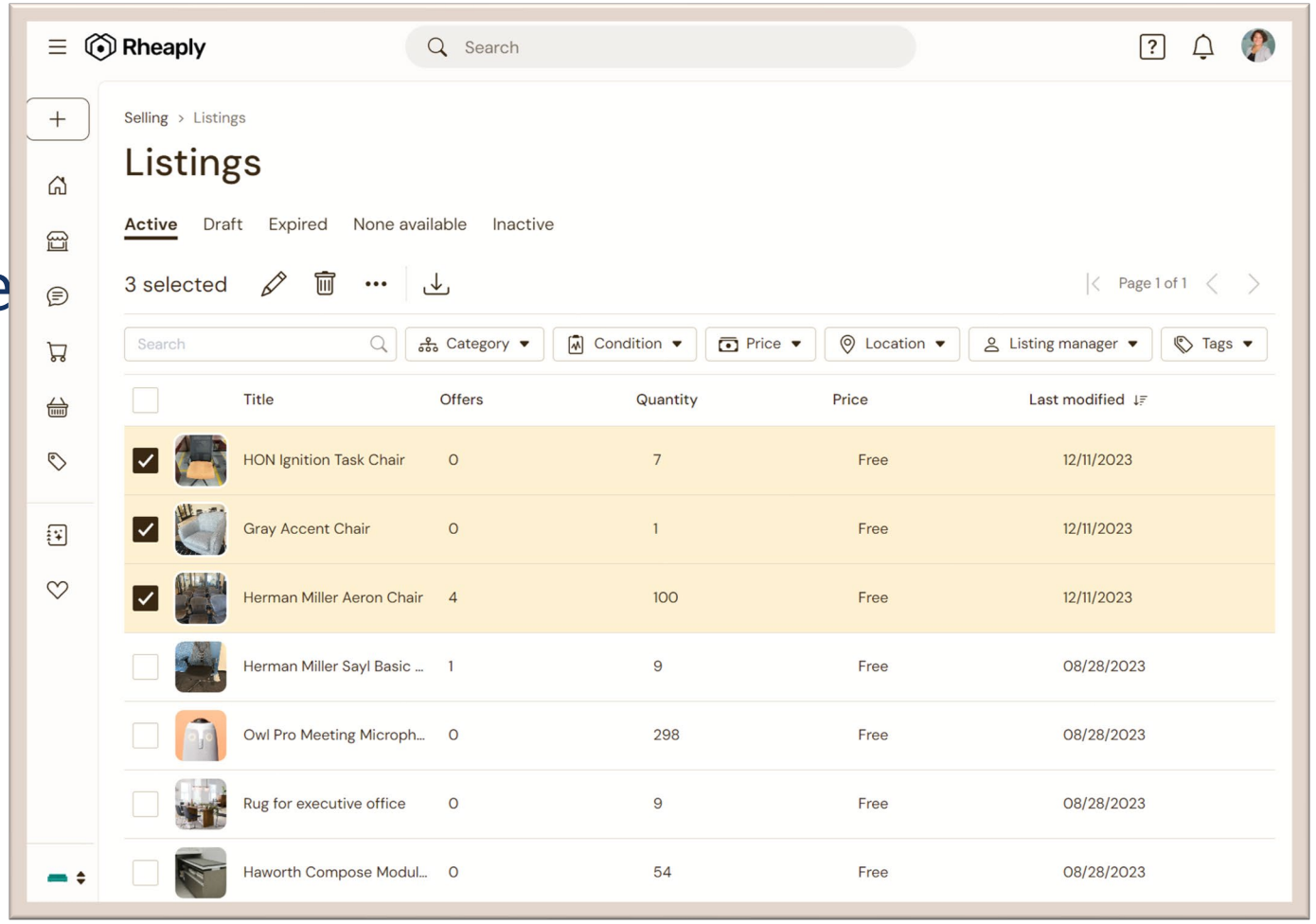
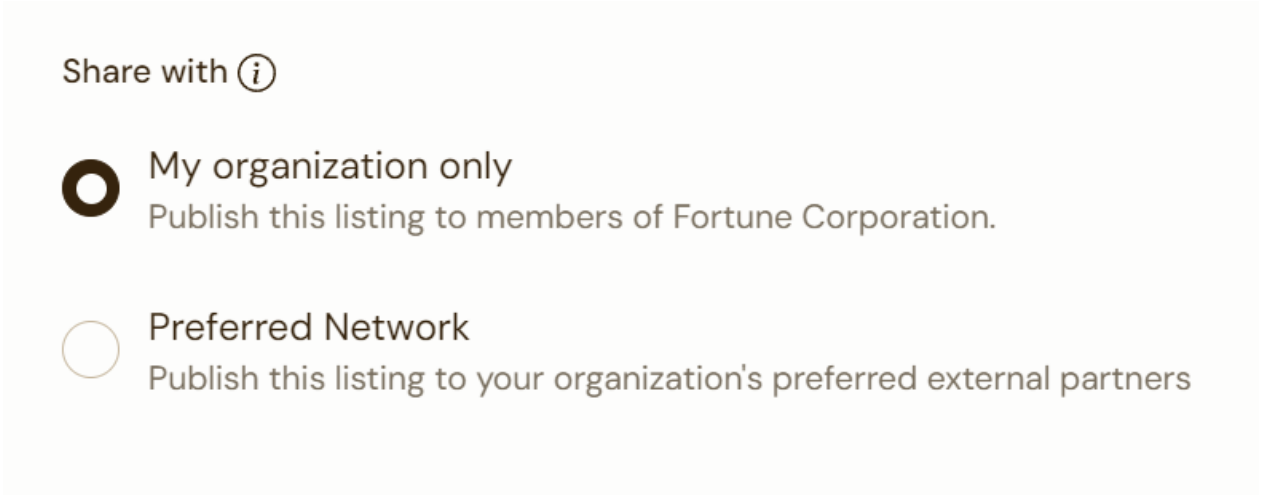


North Central Texas Reuse Marketplace

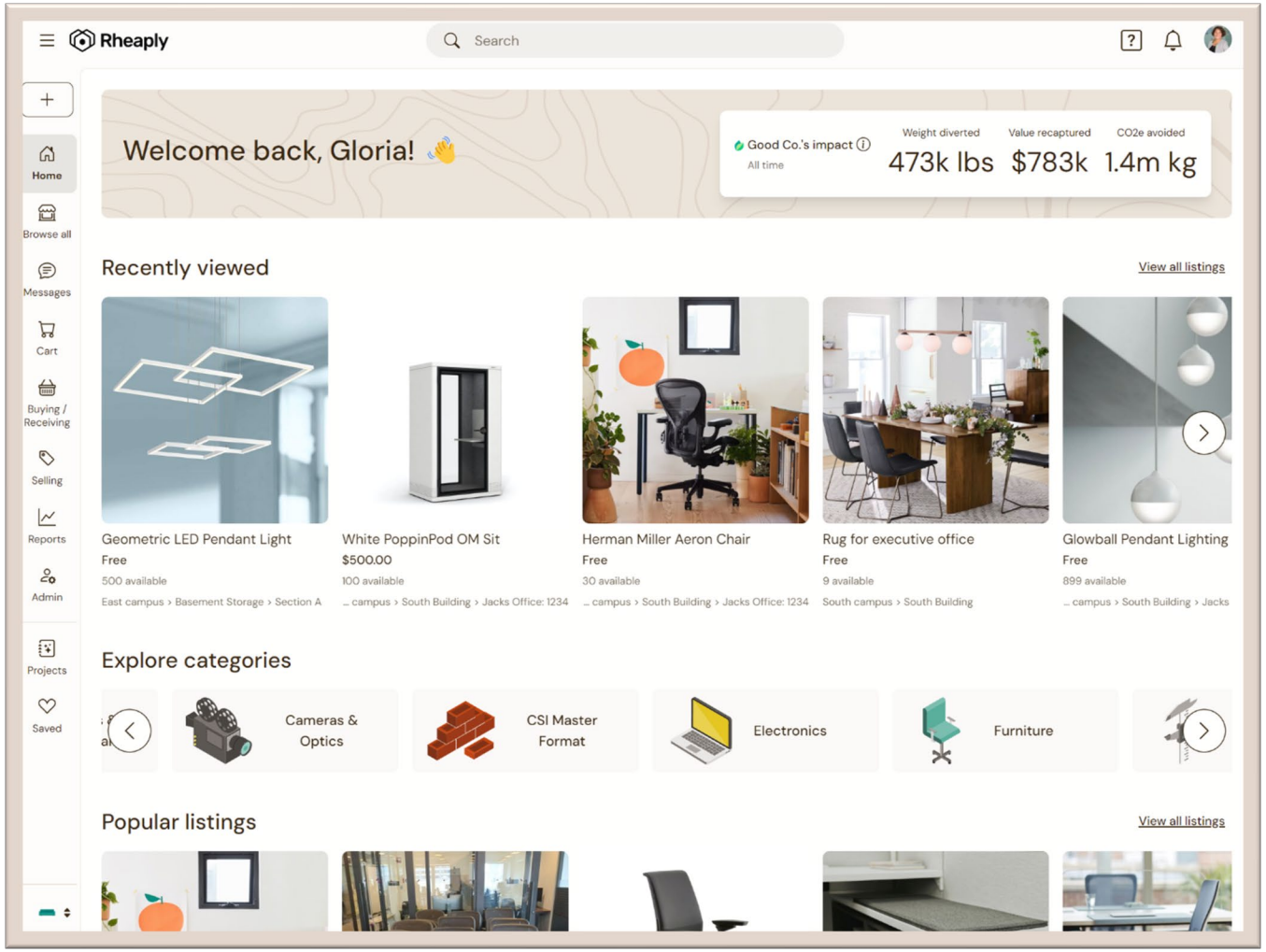
Partnership between Rheaply, Inc. and NCTCOG



North Central Texas Reuse Marketplace

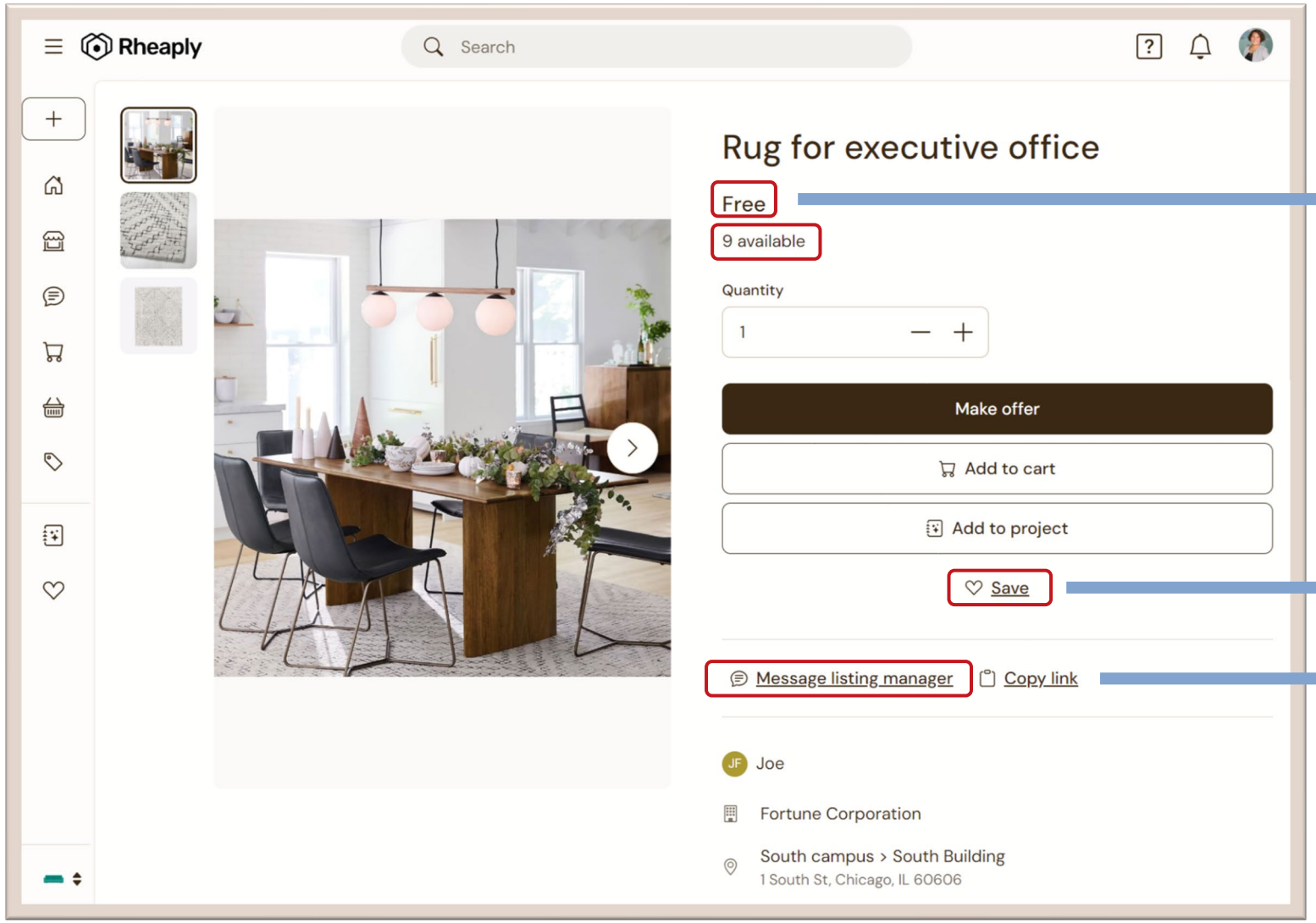
Partnership between Rheaply, Inc. and NCTCOG

- Know what you have
- Use what you already have
- Sell what you no longer need



North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG



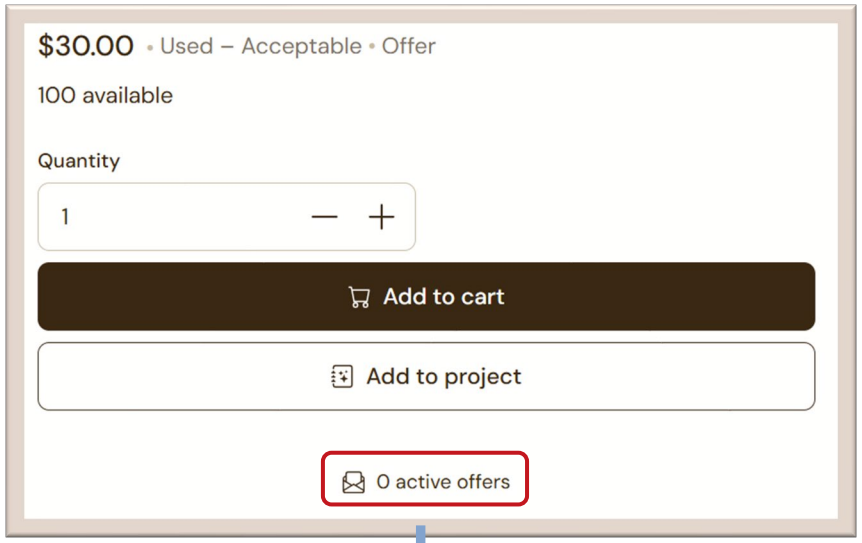
Price or Make an Offer

Save for Later

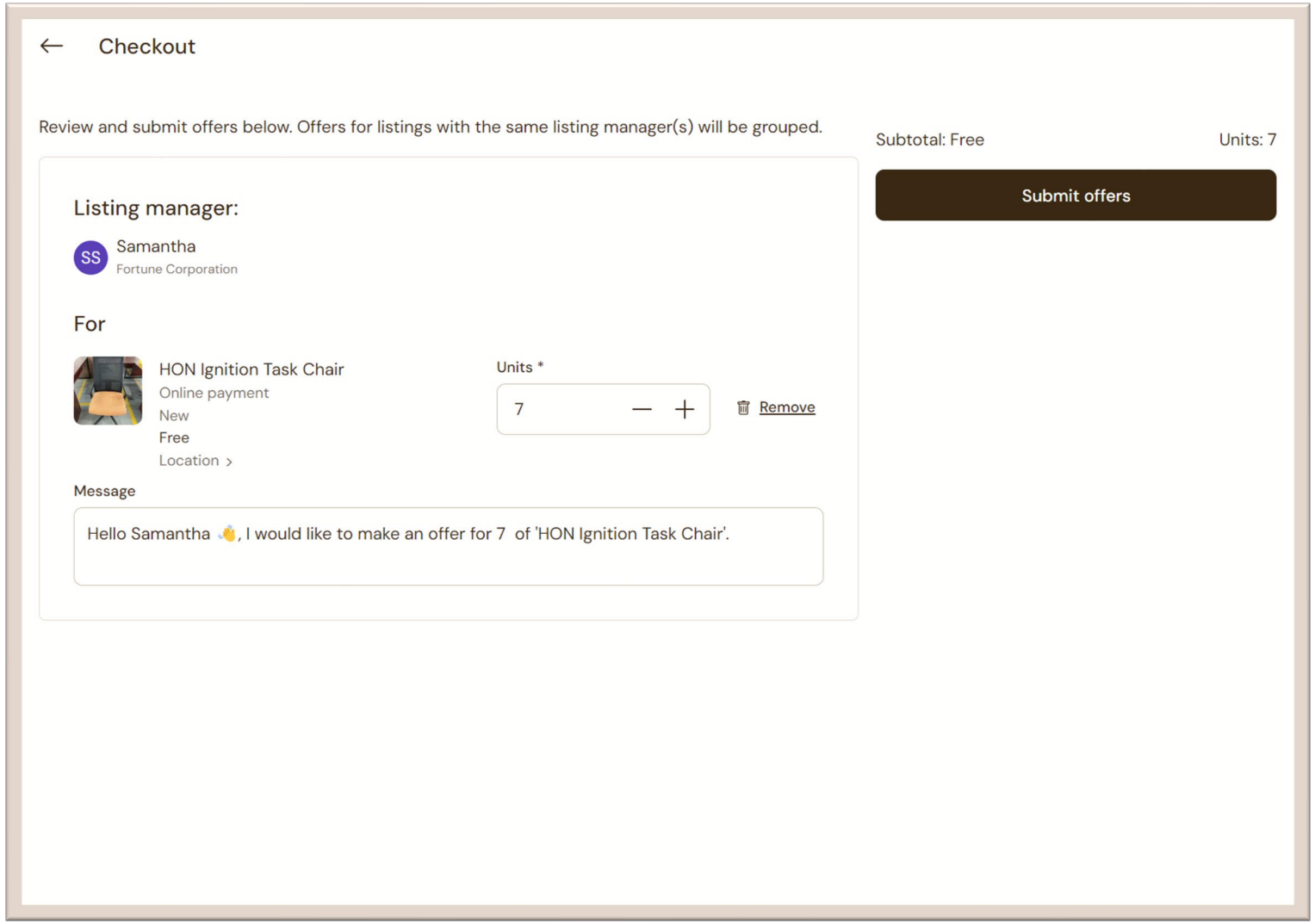
Send a Message or Link

North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG

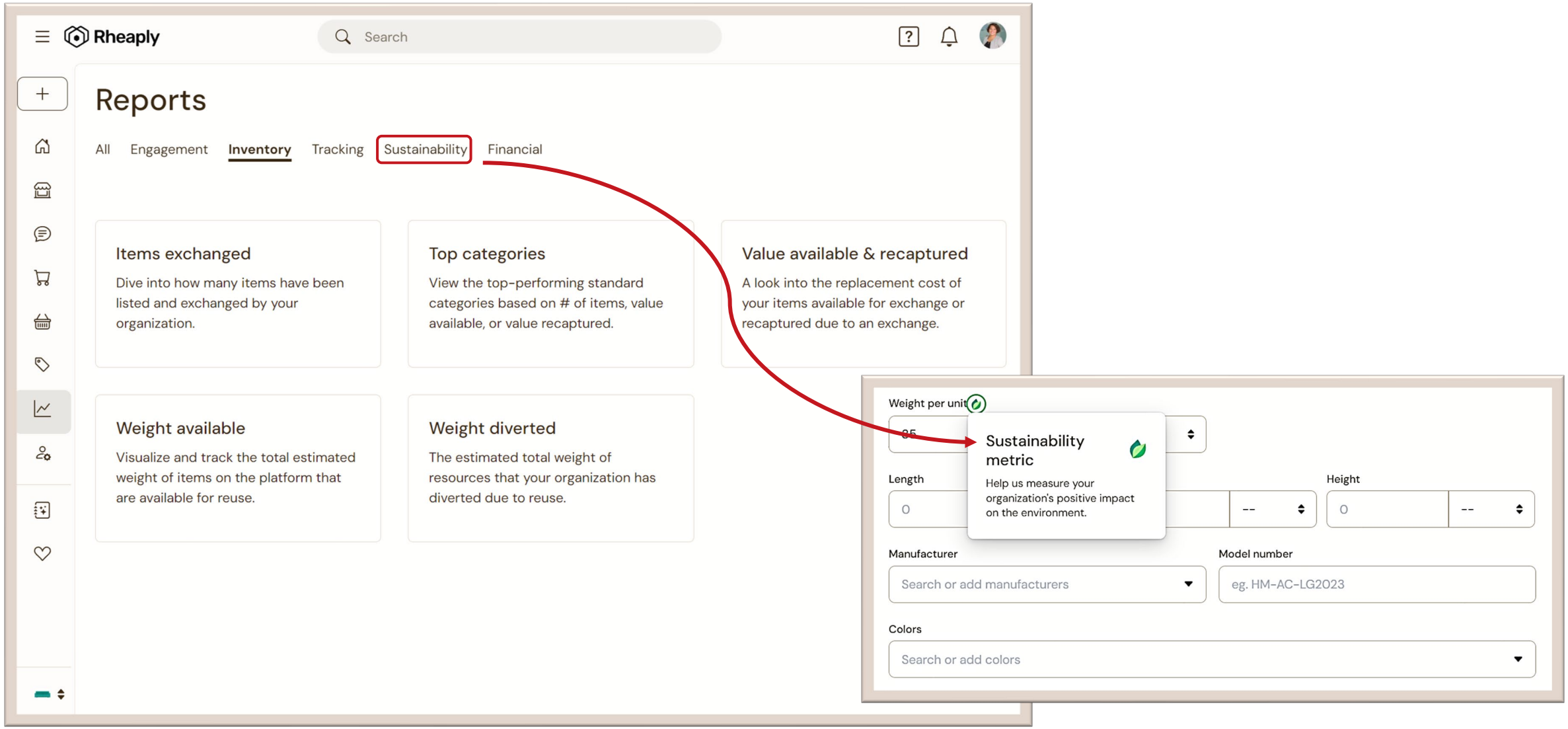


See Other



North Central Texas Reuse Marketplace

Partnership between Rheaply, Inc. and NCTCOG



Contact

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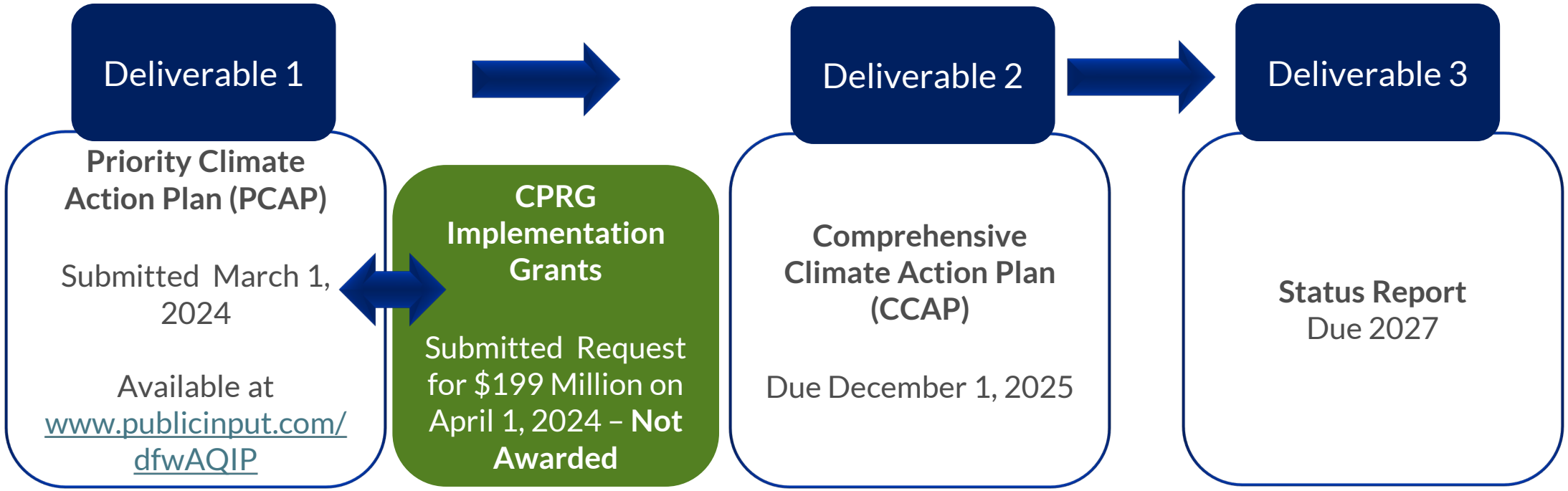
nctcog.org/envir

Dallas-Fort Worth Air Quality Improvement Plan



The DFW AQIP-Priority Climate Action Plan development is supported by funding from the Environmental Protection Agency's (EPA) Climate Pollution Reduction Grants (CPRG): Planning Grants

Air Pollution and the Atmosphere

Greenhouse Gases:

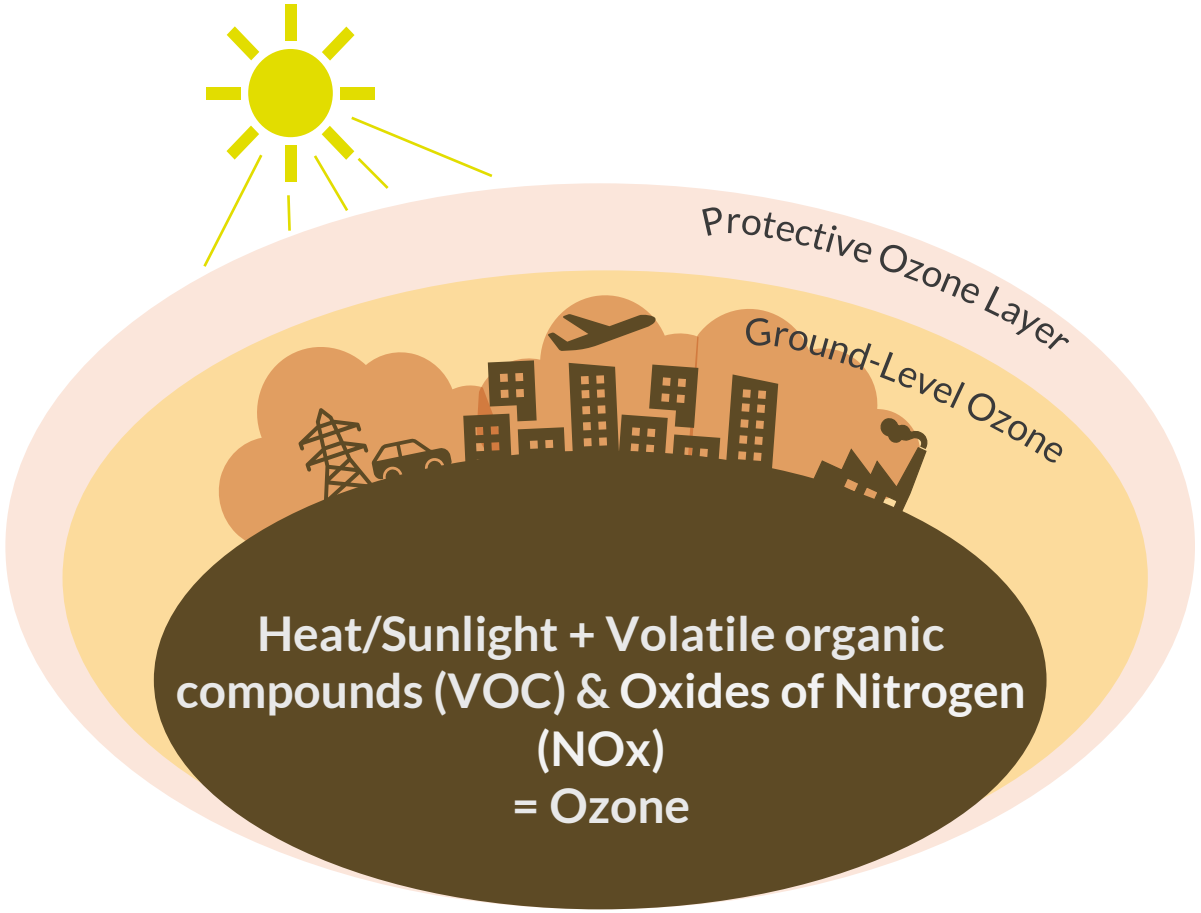
Trap heat in the atmosphere/ozone layer, resulting in the warming on the surface

Most common greenhouse gases (GHG):
carbon dioxide and methane

Criteria Air Pollutants :

Reduce air quality and can lead to various health and environmental impacts

National Ambient Air Quality Standards (NAAQS)	
Ground- Level Ozone	X
Lead	✓
Carbon Monoxide	✓
Nitrogen Dioxide	✓
Particulate Matter	?
Sulfur Dioxide	✓



Impacts of Air Pollution

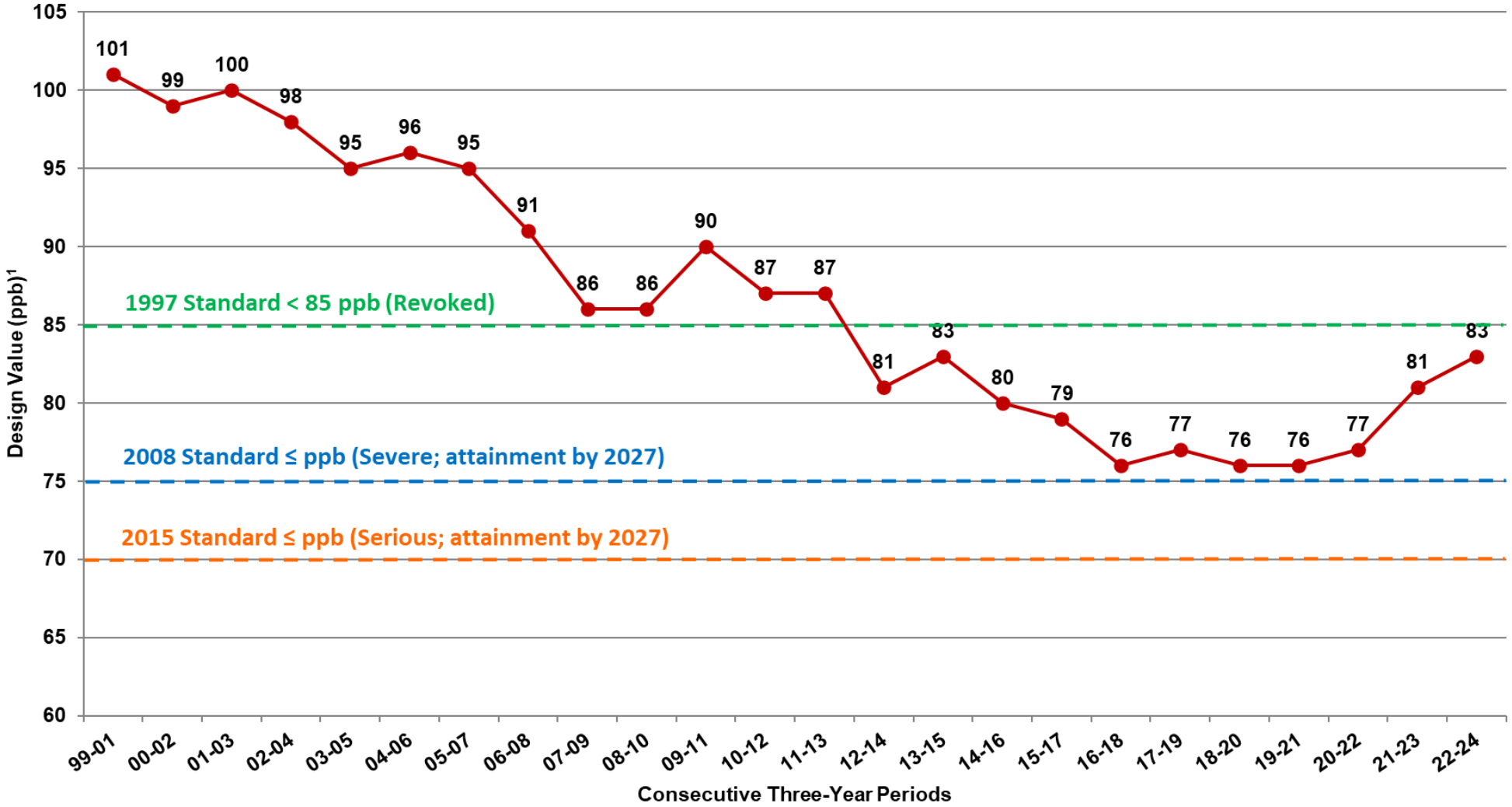
Impacts of Air Pollution

- Irregular heartbeat
- Decreased lung function, respiratory symptoms, coughing and sore throat
- Premature death in people with heart or lung disease
- Environmental impacts (acid rain, water quality, crop growth, etc.)
- Economic Impacts through Section 185 Fees

Impacts of Increasing GHGs

- Global system impacts such as:
  - Increasing risk of drought and flooding
  - Increasing severe weather events
- Heat related health issues, especially in cities
- Increase in ground-level ozone formation
- **Secondary impacts** such as changing migration patterns

Ground- Level Ozone Design Value

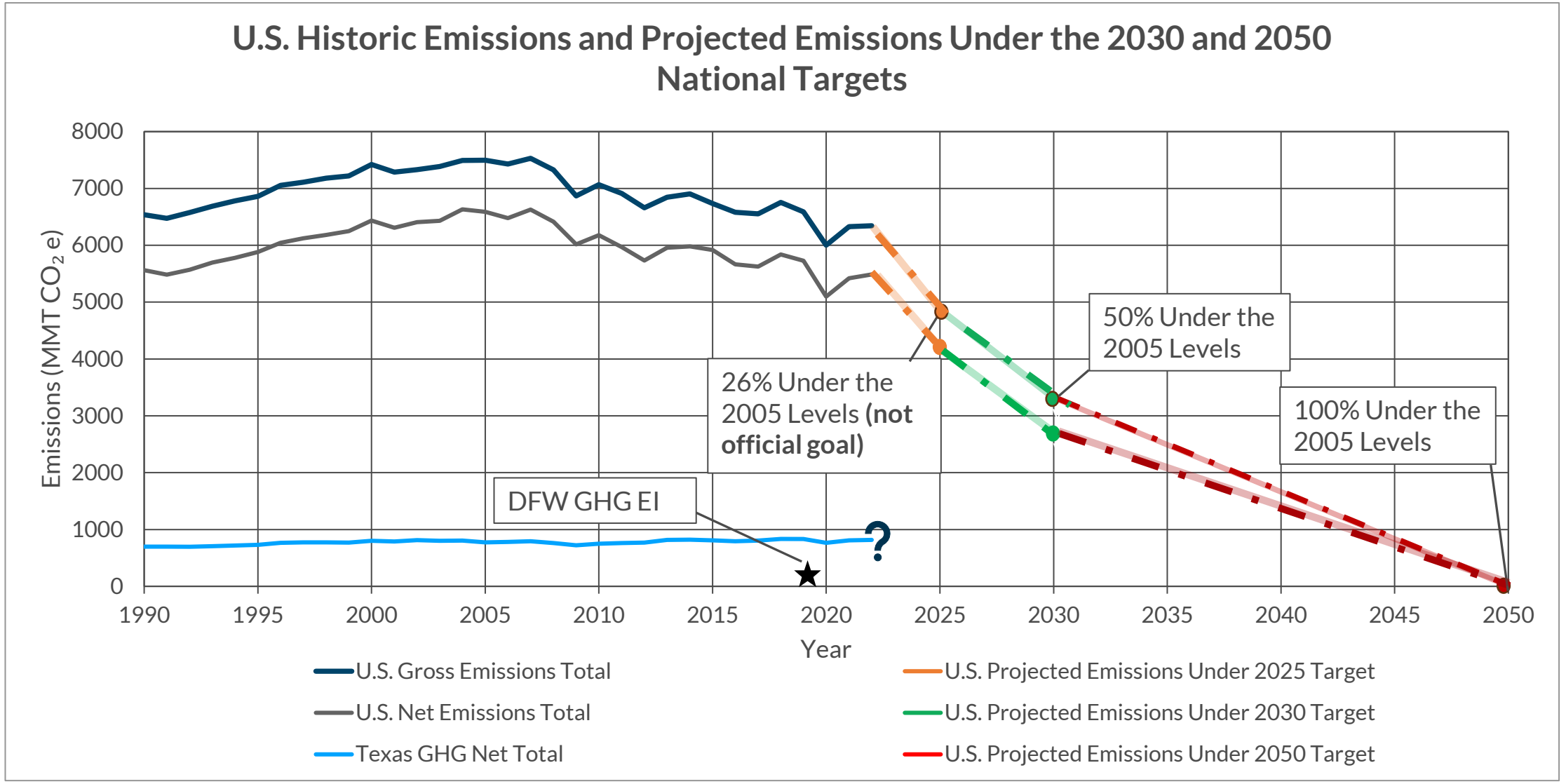


*

[1]Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the *Design Value* (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

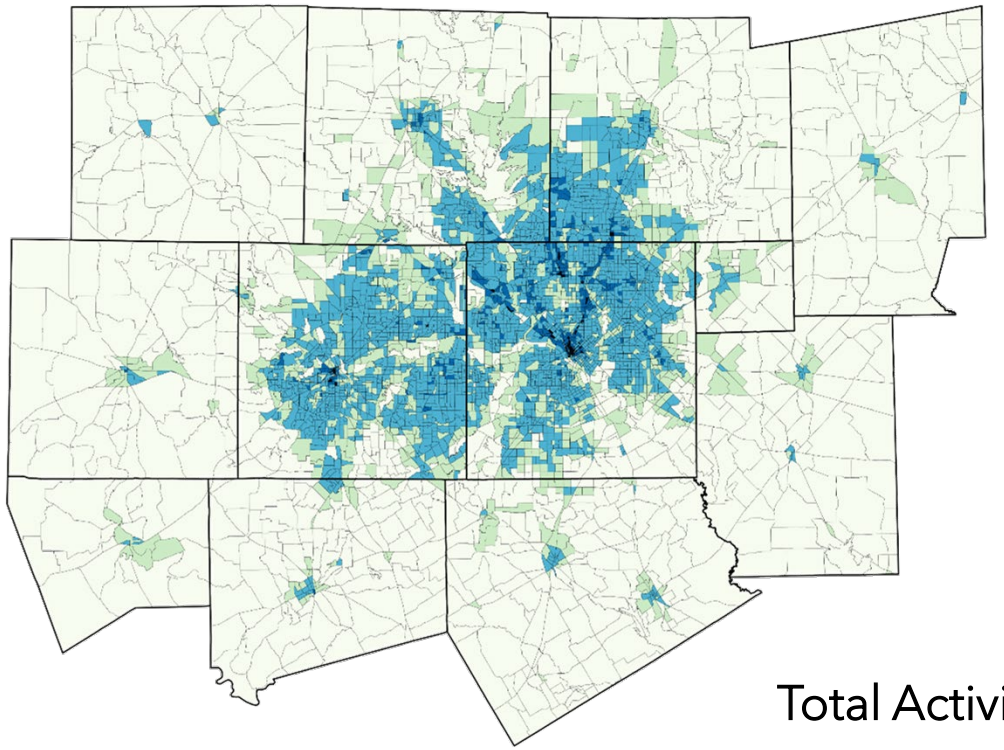
As of the end of the Ozone Season 2024
***Data Not Confirmed by EPA yet**

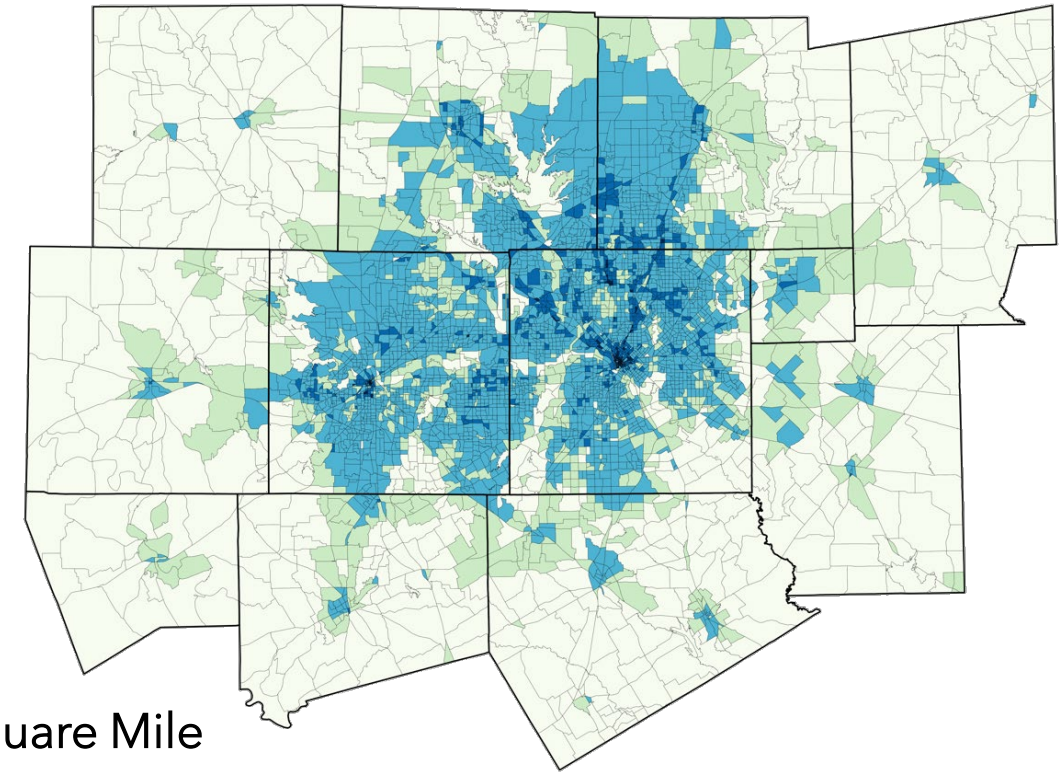
Greenhouse Gases



EPA (2024) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2022. U.S. Environmental Protection Agency, EPA 430-R-24-004. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-andsinks-1990-2022.

2050 Population Forecast for DFW MPA





Total Activity Per Square Mile

- 0 - 1,152
- 1,152 - 4,116
- 4,116 - 19,244
- 19,244 - 76,000
- 76,000+

2019 Population Estimate: 7,528,004

2050 Population Estimate: 12,297,156

Source: www.nctcog.org/executive-director/nctcog-executive-board – November 2024 Item 15

DFW AQIP –PCAP Measure Sectors

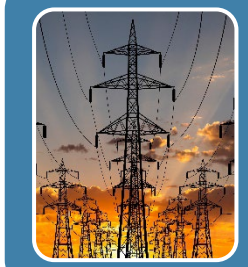
Measure can be a policy, project, or program

Transportation

13 Measures

Waste Management

6 Measures



Energy

6 Measures

Agriculture, Forestry, and Land-Use

5 Measures

Water, Wastewater, and Watershed Management

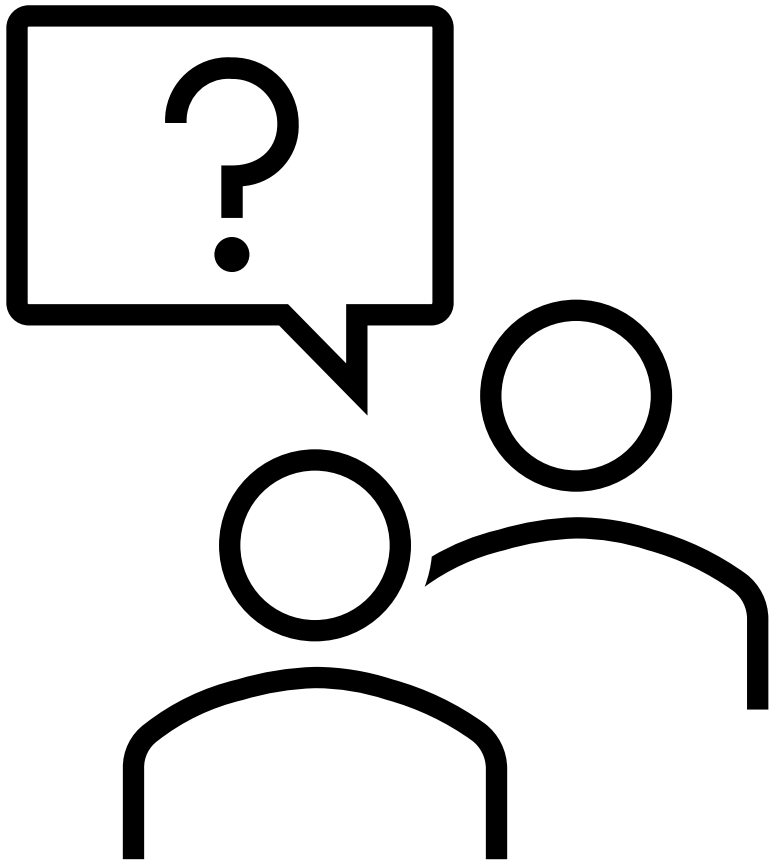
9 Measures

Cross-Sector

5 Measures

Image Source: https://www.gettyimages.com/

Q&A + Engagement



How can your organization improve air quality?

Tell us what you are interested in by adding stickers next to the measures on the table!

Get Involved with DFWCC

Contact us at cleancities@nctcog.org for any questions on fleet transition planning, funding opportunities, or other inquiries

Upcoming webinars and events posted regularly at dfwcleancities.org/events

- March 25-27 : Heavy-Duty Zero-Emission Vehicle Webinar Series

Complete the **DFWCC Annual Survey** by March 21, 2025 to report your fleets efforts to improve air quality help measure regional efforts to reduce emissions at www.dfwcleancities.org/annualreport

Sign up for DFWCC weekly email list and follow DFWCC LinkedIn at:dfwcleancities.org/getinvolved

North Central Texas Council of Governments

Dallas-Fort Worth CLEAN CITIES