



North Central Texas
Council of Governments



Dallas-Fort Worth
CLEAN CITIES

REGIONAL EV INFRASTRUCTURE WORKING GROUP

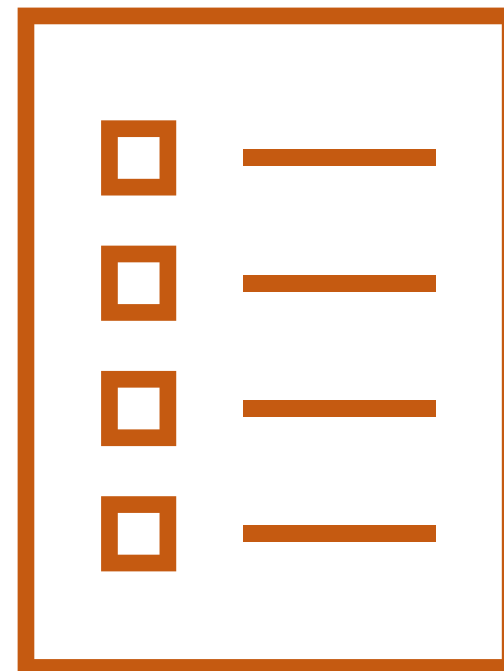
Jared Wright

Senior Air Quality Planner

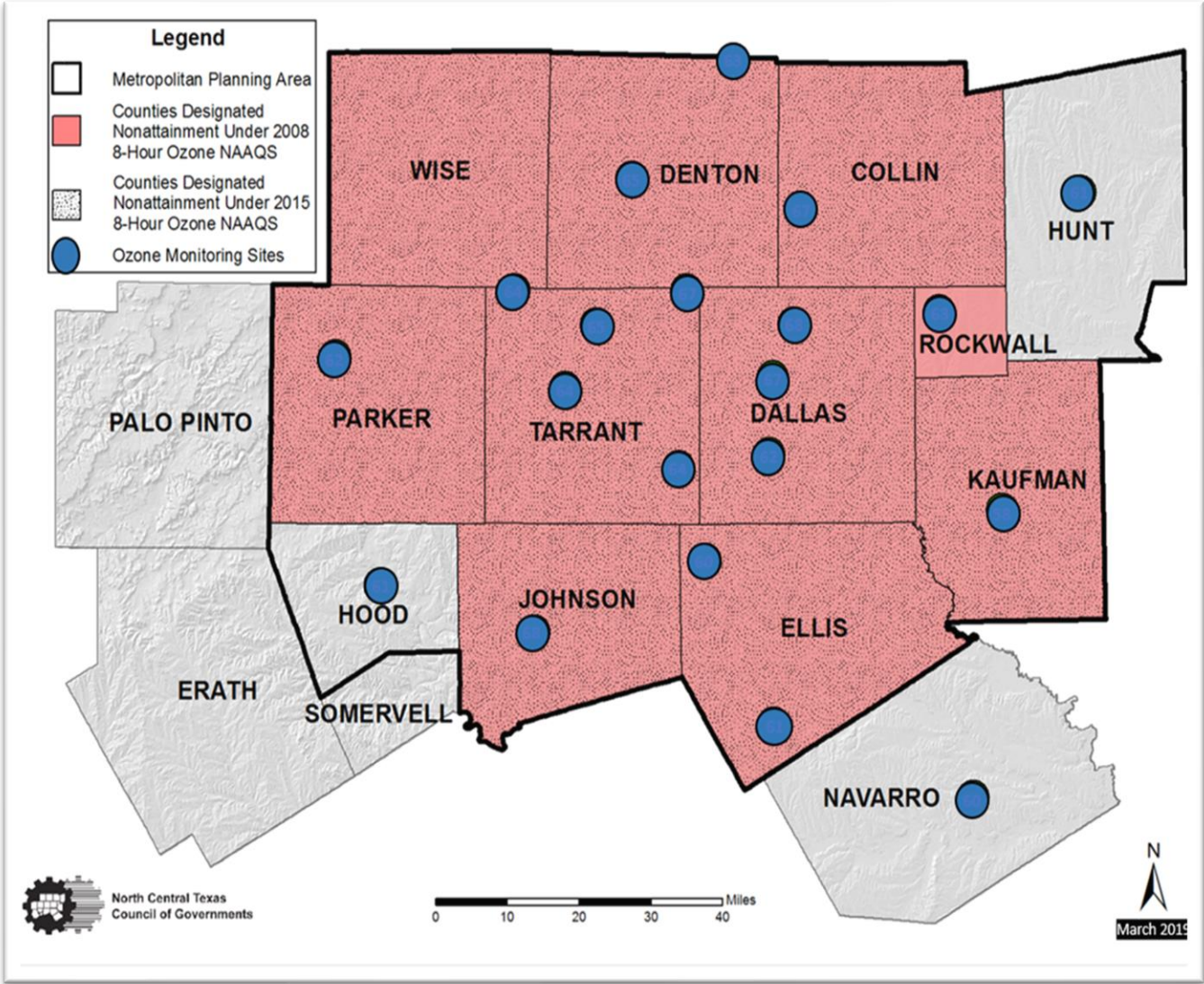
August 17, 2023

Agenda

- NCTCOG Presentation
- Survey Results, Polling, and Discussion
- Melissa Baker with City of Irving
- Questions and Discussion



Who We Are



Regional Planning Agency



Metropolitan Planning Organization (MPO)



Local Clean Cities Coalition

Key Focus Areas and Goals



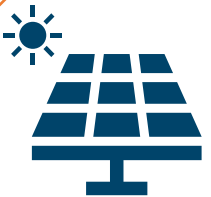
Clean Vehicle Initiatives

- Support Transition to Zero Emission Vehicle (ZEV) and Other Alternative Fuel Technologies
- Assist Deployment of Clean Vehicle Technologies by Identifying, Promoting, and Providing Funding



Clean Infrastructure Initiatives

- Increase Equitable Access to EV Charging Infrastructure
- Build Publicly-Accessible Infrastructure Network to Support ZEV Transition in Medium- and Heavy-Duty Sector
- Ensure Local Governments are Informed and Prepared to Support Local EV Adoption
- Reduce Barriers, Delay, and Cost in Local Infrastructure Development



Energy Integration

- Minimize Negative Electric Grid Impacts Associated with Transportation Electrification
- Increase Local Availability of Renewable Fuels (electricity, natural gas, hydrogen, biodiesel)
- Improve Resilience against Fuel/Energy Interruptions

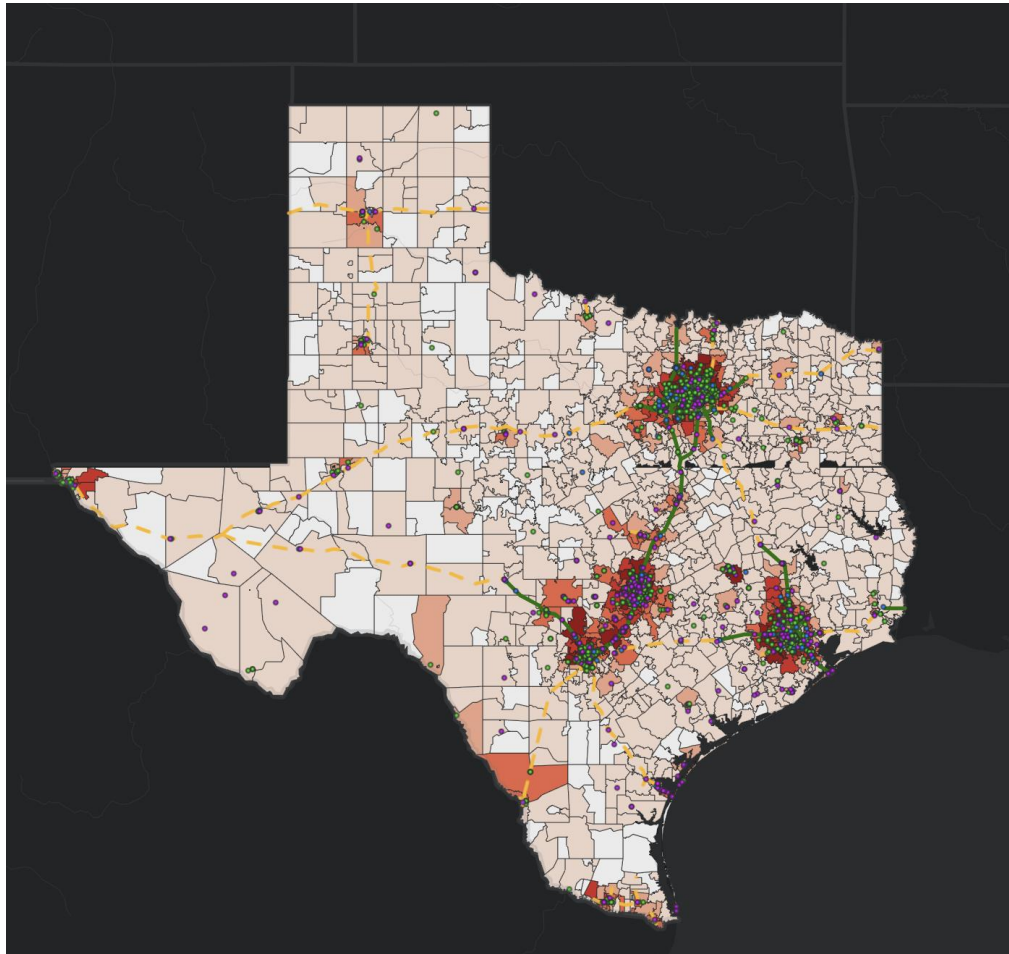
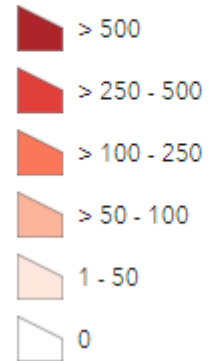
Texas Data And Trends

EV Charging Type

- DC Fast Charge
- Tesla
- Level 2

Zip Code EV Registration

Electric Vehicles



Electric Vehicle (EV) Registration Data

www.dfwcleancities.org/evnt -> EVs and Texas

Region	August 2022	August 2023	Increase
Texas	140,014	211,055	51%
DFW	49,783	78,045	57%
Austin	29,550	41,823	42%
San Antonio	13,960	20,332	46%
Houston	32,787	50,982	55%

Charging Station Dashboard

https://txdot.mysocialpinpoint.com/tx_ev_plan

Charging Sites Statewide (includes Tesla):

2,666 Level 2

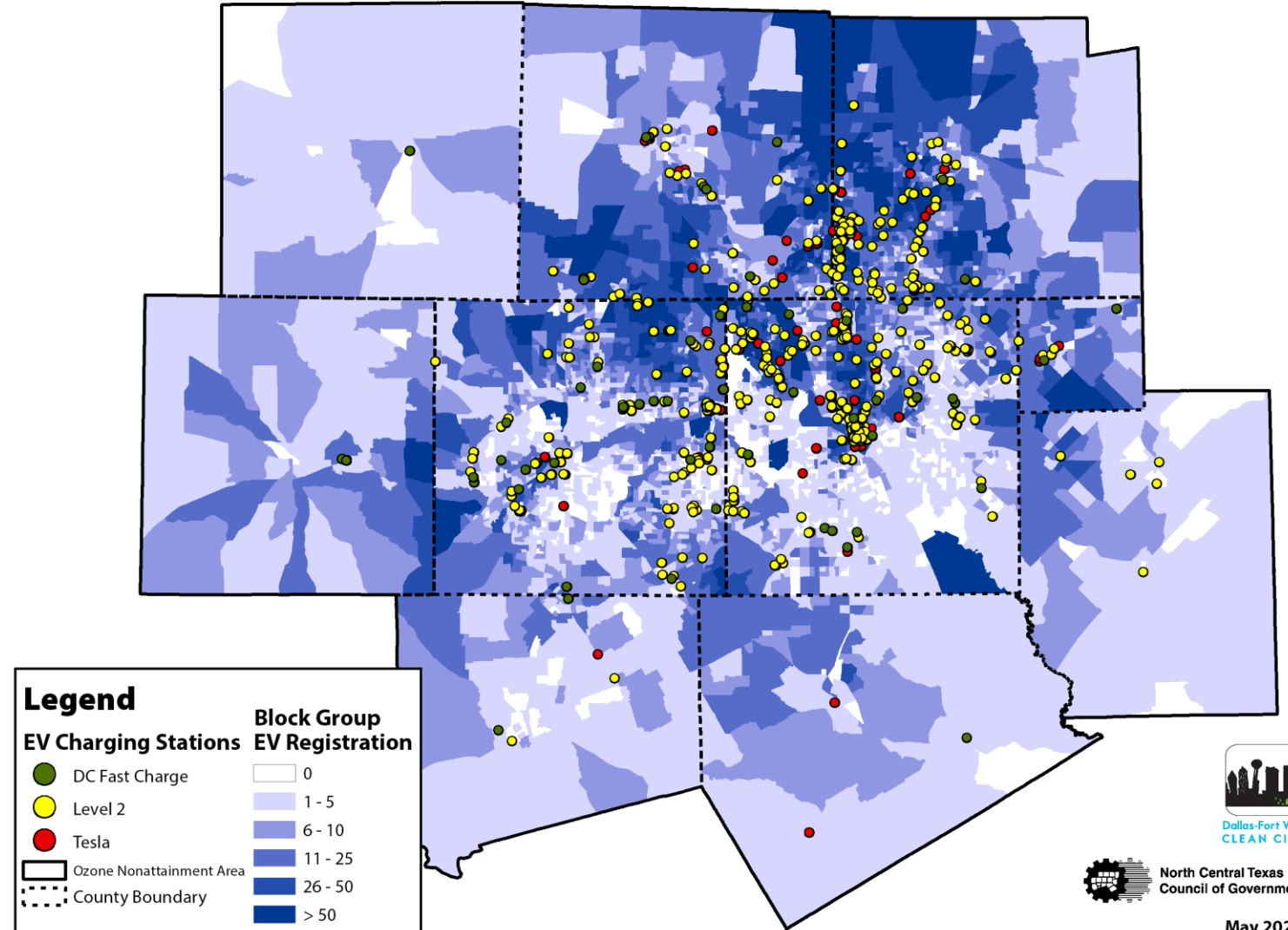
373 DC Fast

EV Adoption and Infrastructure Availability

County	Level 2 Plugs*	DC Fast Charge Plugs*
Collin	238	6
Dallas	574	20
Denton	98	15
Ellis	0	4
Johnson	5	2
Kaufman	12	0
Parker	4	2
Rockwall	9	5
Tarrant	354	26
Wise	2	1

*As of May 2023;
Excludes Tesla Stations

EV Registration and EVSE in Ozone Nonattainment Area



NEVI Formula Funding Impacts to Texas

Texas Department of Transportation (TxDOT) to Receive and Administer ~\$407 Million Over Five years to Deploy EV Charging

Statewide Infrastructure Deployment Plan Required – [Texas EV Infrastructure Plan](#)

Provide at Least One Qualifying Station Every 50 Miles Along Designated Corridors:

- Be Within One Mile of Designated EV Corridor Exit
- Include at Least Four CCS 1-type and four NACS (Tesla) DC Fast Charge Connectors, Minimum 150kW Power Output at All Times
- Minimum Site Power Capacity 600 kW

Restrict Funding to Designated EV Corridors until Demonstration that all Designated Highways are “Saturated” With Qualifying Stations

Remaining Funds Distributed:

- In/Near County Seats
- Other Locations TBD by MPO

CCS 1 = Combined Charging System

NACS = North American Charging Standard

Highlights Of Texas EV Charging Plan

Year 1

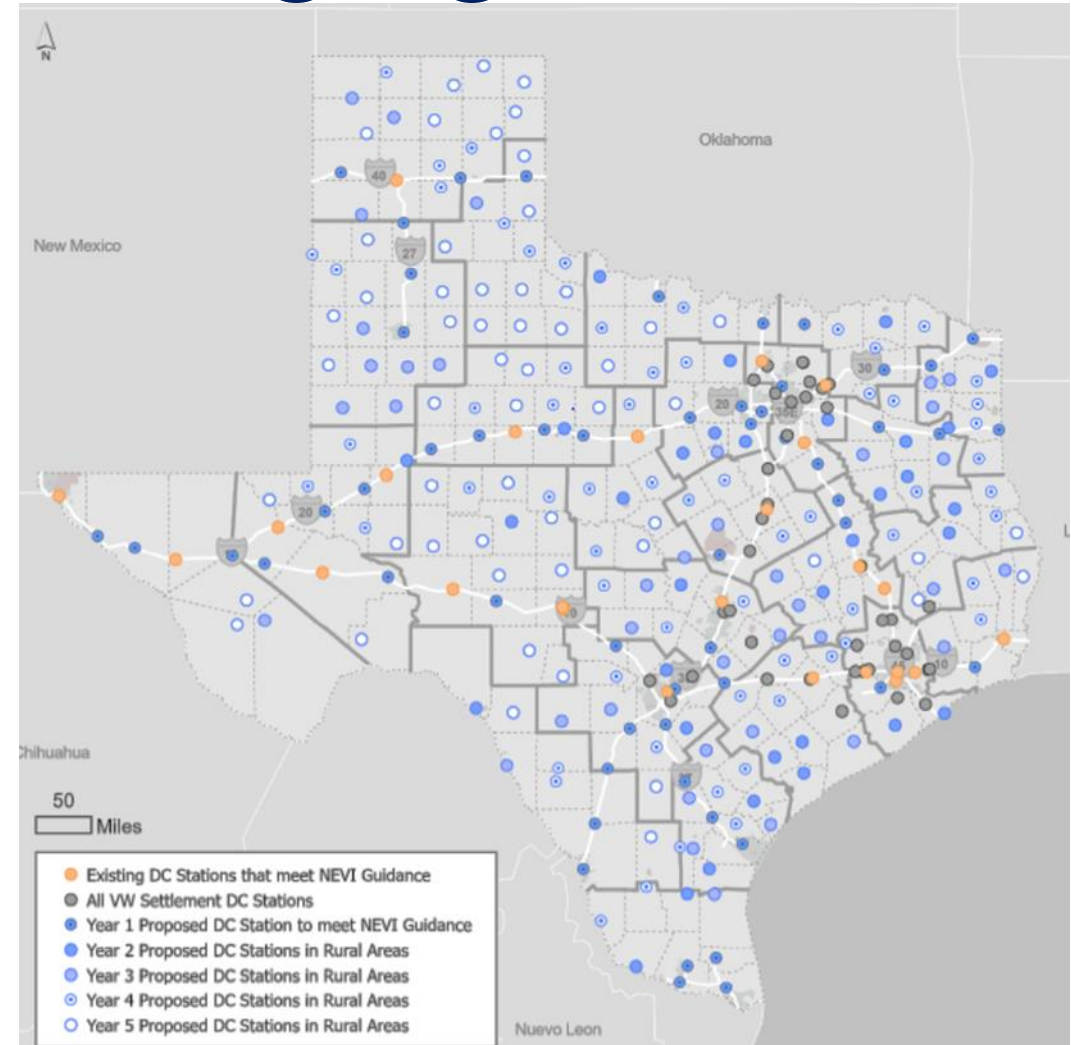
Install DC Fast Chargers Along Alternative Fuel Corridors
(56 Stations Statewide; \$48.51M Federal)

Years 2-5

Work with Counties and Small Urban Areas to Install DC Fast Charge Sites In/Near County Seats (Estimated 190 Locations, \$159.7M Federal)

Work with MPOs to Identify Locations and Appropriate Combination of Charging Sites (Number Locations TBD, Estimated \$198.92M Federal)

Throughout Collect Data



Posted at https://txdot.mysocialpinpoint.com/tx_ev_plan

Source: TxDOT Texas EV Charging Plan Story Map: [Texas Electric Vehicle Infrastructure Plan \(arcgis.com\)](https://www.arcgis.com/apps/StoryMap/index.html?appid=70000000000000000000000000000000)

EV-Ready Building Codes and Standards

International Code Council: Model Language Released

Commercial and Residential EV Infrastructure as part of the International Energy Conservation Codes (IECC)

Covers EV-Capable, EV-Ready, and EV-Installed Minimum Parking Space Standards Language Based Upon Amount of Total Available Parking Spaces

Does Not Include Recommended Number of Chargers

North Texas Regional EV-Ready Building Standards

Objective:

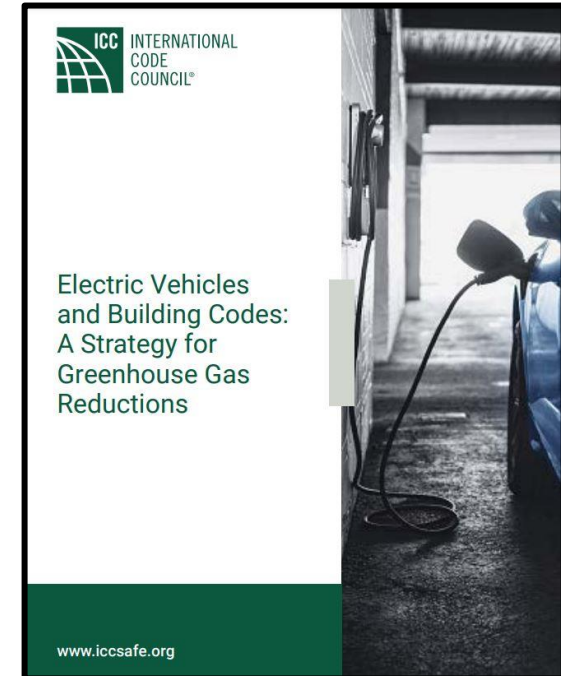
Encourage adoption while creating consistency regionwide

Process:

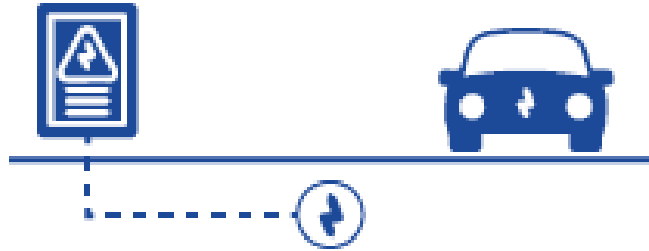
Engage local governments in developing guidance leveraging the IECC codes template with suggested levels of installation

Explore potential for a Regional Transportation Council position

<https://www.dfwcleancities.org/evreadiness>

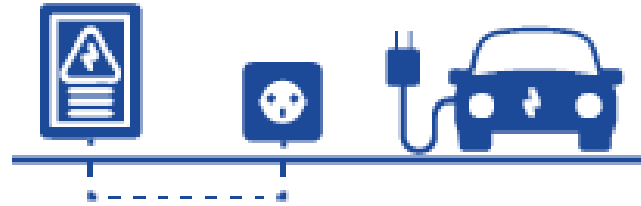


EV Parking Infrastructure Specifications



EV-CAPABLE

Electrical Panel
Capacity + Conduit



EV-READY

EV-Capable
+ Installed Full Circuit



EV-INSTALLED

Install a Minimum
Number of Level 2 EV
Charging Stations

4x-6x
less expensive

The cost to install EV-Capable infrastructure during new construction than during a stand-alone retrofit. Source: [Energy Solutions, 2019](#)

0.1%-0.5%

Total cost added to new construction project to add EV-ready for multifamily residential. Source: [California Air Resources Board, 2018](#)

Oncor's Electrification Efforts

Oncor's EVolution Program

- Ensure Adequate Infrastructure Planning for Fleets to Maximize Efficiency and Profitability
 - No Cost to Participate
 - Fleet Managers and Program Partners can Enroll!
 - [EVOLUTION \(oncor.com\)](https://oncor.com/evolution)



Oncor's Managed EV Charging Study

- EVolution Participants are Eligible to Participate
- Provides up to \$25,000 for Commercial Fleets to Work with Oncor on Peak Demand Shifting and Other Energy Efficiency Objectives
 - Participants Must Have 5 EV Chargers or at Least 2 Medium- Heavy-Duty EVs
 - Participants Must Attend Monthly Meetings
- Contact Joshua.Emeter@oncor.com for more information

Department of Energy Grant Proposals

Planning Resilient EV Charging in Texas

- Joint Office of Energy and Transportation "Ride and Drive Electric" Topic 1
- NCTCOG will develop an EV charging resiliency plan to ensure access to charging services in the event of grid disruptions and implements a demonstration project
- Partners include Oncor Electric Delivery, North Texas Innovation Alliance, and several local governments
- Concept paper was "Encouraged to Proceed," full proposal due August 25

EV Smart Communities

- Vehicle Technologies Office Topic Area 11
- Program by the Interstate Renewable Energy Council and Great Plains Institute to promote equitable access to electric mobility and help jurisdictions reduce non hardware "soft costs" related to EV charging development
- Will designate local governments that implement best practices in setting and achieving EV readiness goals
- Provides technical training and assistance
- Modeled after DOE's SolSmart program

National Drive Electric Week

National Celebration to Raise Awareness of Benefits of EVs

- Exhibitors
- Electric Vehicle Display and Ride and Drives
- Food, Games, and more

Dallas-Fort Worth National Drive Electric Week

Sunday, October 1, 2023, 2:00 - 5:00pm

Tanger Outlets

15853 North Fwy, Fort Worth, TX 76177



2022 National Drive Electric Week Event

Register and learn more at <https://www.dfwcleancities.org/ndew>

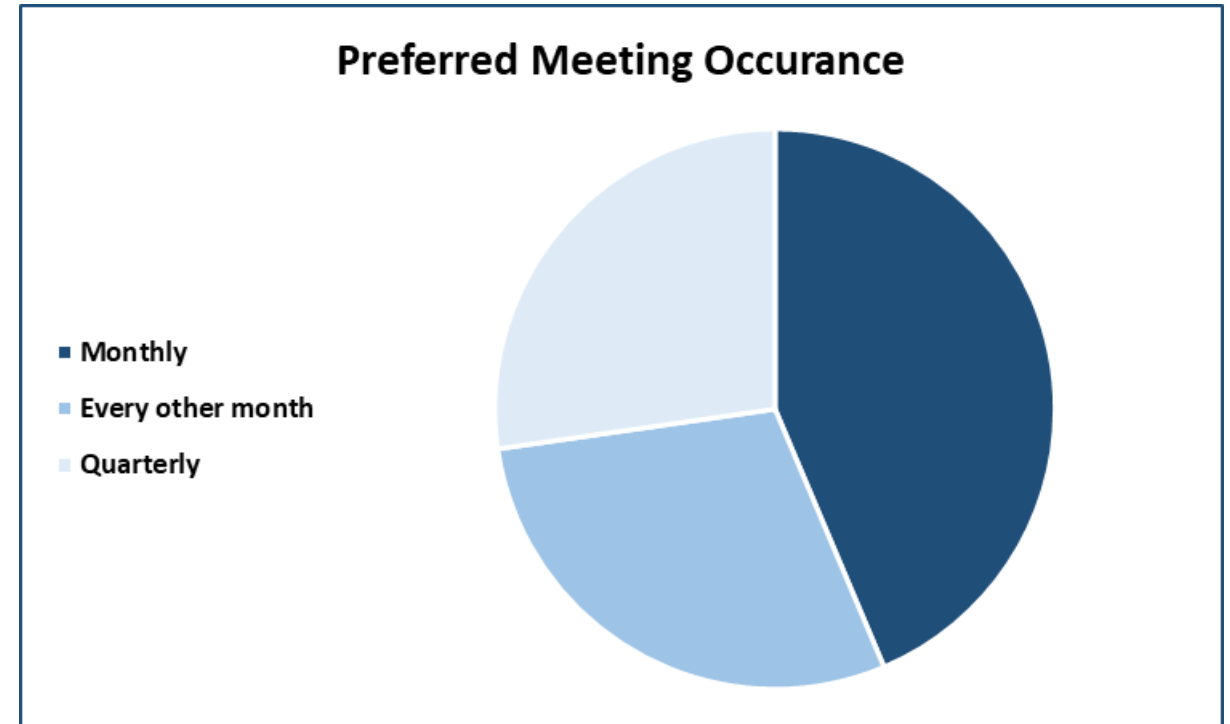
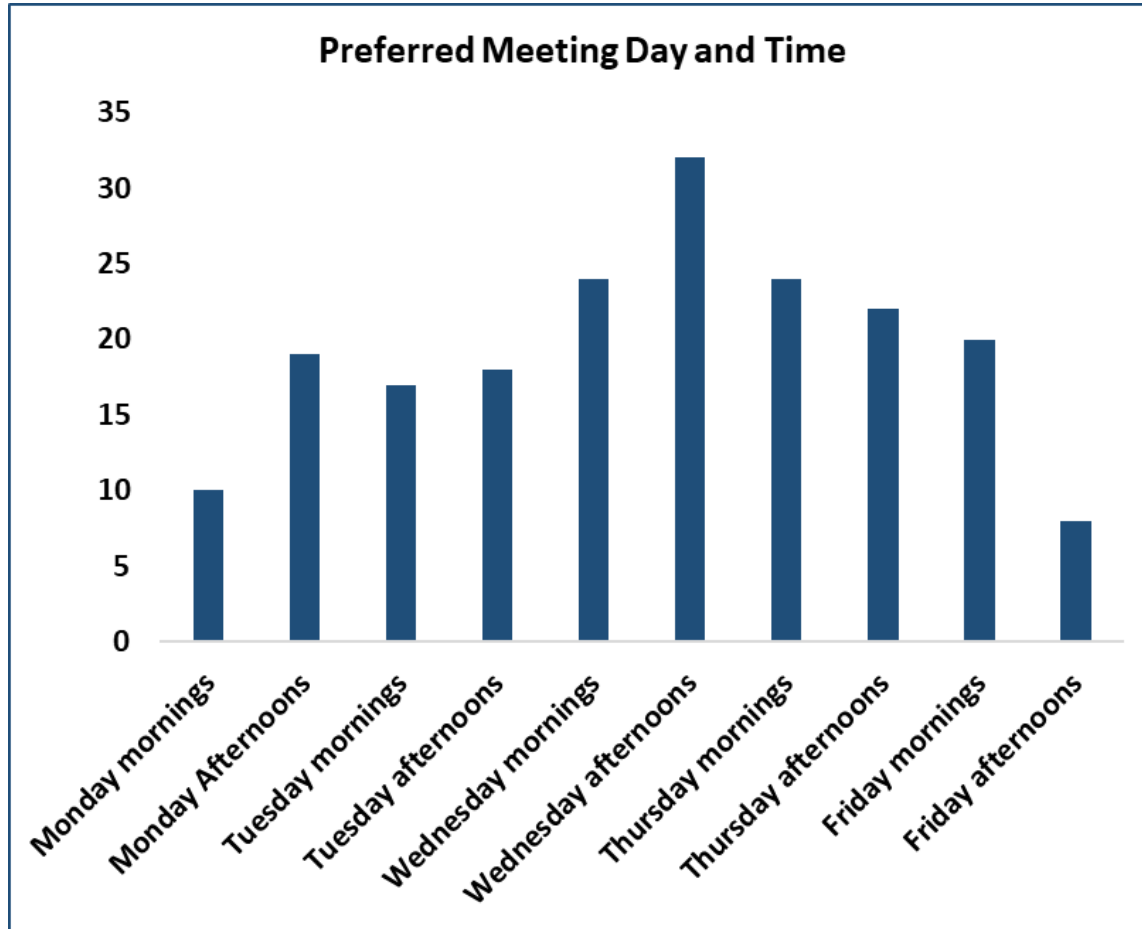


Funding for Infrastructure

Program/Incentive	Eligible Activities	Funding Amount	Deadline to Apply
<u>Alternative Fuel Infrastructure Tax Credit</u>	Installation of qualified fueling equipment, such as EV charging infrastructure in eligible locations	Up to 30% tax credit	December 31, 2032
<u>TERP Alternative Fueling Facilities Program</u>	Funds new construction or the expansion of existing alternative or natural gas fueling facilities	Up to \$400,000 for a compressed natural gas CNG or LNG project Up to \$600,000 for a combined CNG and LNG project Up to 50% or maximum of \$600,000, whichever is less, for fuels other than natural gas	Closed; Expected to open 2024
<u>Rural Business Development Grants</u>	EV charging stations can be funded through this grant if local small businesses can provide Letters of Support that state the charging stations will support job growth/retention	There is no maximum grant amount; however, smaller requests are given higher priority. There is no cost sharing requirement. Opportunity grants are limited to up to 10 percent of the total Rural Business Development Grant annual funding.	Closed; Expected to open Spring 2024

Survey Results

Once a month on Wednesday afternoon is preferred



Survey Results

Highest Priority



Lowest Priority

Regional and City EV Plans

Cost/Pricing Structure

Utilities and their Role

Charger Siting

Operations and Maintenance

EV Ready Parking Standards

EV Zoning Regulations

Multi Family Charging

Workplace Charging

Permitting

Medium- and Heavy-Duty

Equity

Survey Results

Goals and Objective takeaways:

Share information, best practices, methods, and resources

Form relationships

Identify, secure, collaborate on, and assist with funding opportunities

Create a unified framework and goal for a robust, equitable EV charging infrastructure network

Growth forecasting; identifying where growth will occur

Understanding long term goals and objectives for the region

Expedite EV charging implementation

Give a voice to underrepresented areas

Learn the details of EV charging

Be comprehensive and not work in a vacuum

Communicate goals clearly and often

Integrate goals of the state, MPOs, municipalities, public and private organizations, etc.

Contact Us



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Regional EV Infrastructure Working Group

City of Irving Electric Vehicle Fast Charger Station



Regional EV Infrastructure Working Group
August 17, 2023

Overview

- Background
- Fast Charger Details
- Best Practices
- Challenges
- Needs Assessment
- Lessons Learned
- Questions

Background

- February 2022- NCTCOG released criteria for EV charging stations call for projects
- April 2022- City of Irving submits grant application
- June 2022- RTC approved the City of Irving as one of the projects under the EV call for projects
- June 2023- City of Irving approves ILA between the City of Irving and NCTCOG
- June 2023- City of Irving approves agreement with Freewire
- July 2023- Fast Charger is completed

Fast Charger



Ultrafast Charging: adds up to 200 miles of range in 15 minutes

High Power: high voltage output for charging light to heavy-duty EVs

Dual Charging: provides simultaneous charging and customizable port configurations

Back-up battery

Best Practices

- Interdepartmental team
 - Traffic and Transportation
 - Building Services
 - Purchasing
 - CIP
- In-house signage
- Contract Capacity
- Procurement Methods
- Partnership with NCTCOG staff



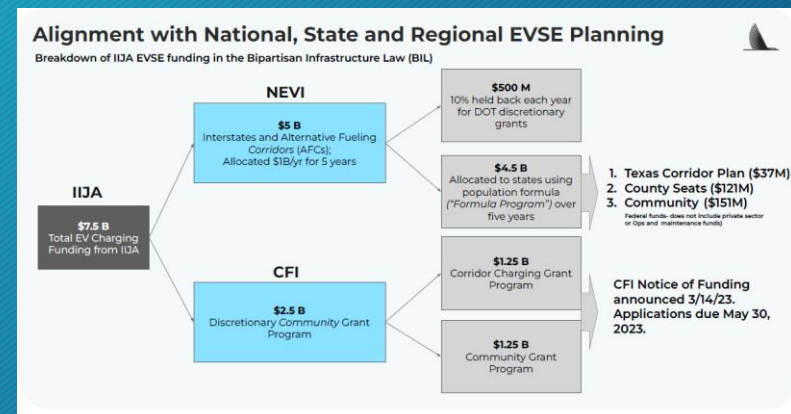
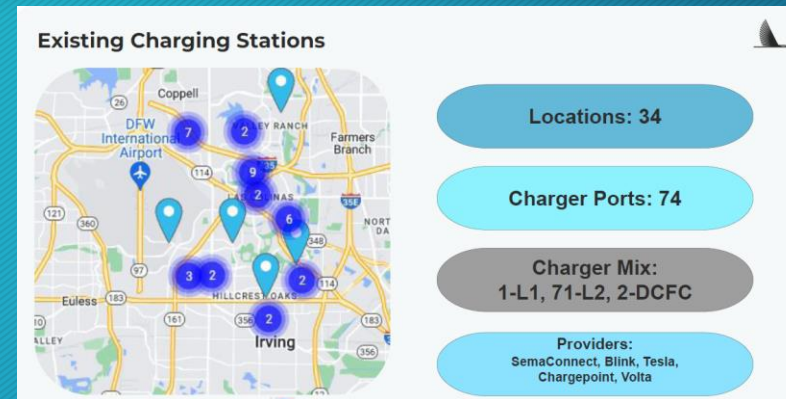
Challenges

- Federal Regulations
 - Purchasing
 - ADA
- Procurement
- Buy America Certification Requirements
- Energy Cost
- Site selection
- Customer Service



Needs Assessment

- In January of 2023 staff negotiated with Volta to conduct a citywide needs assessment for electric vehicle charging stations.
- In May of 2023 Volta presented its results using Predict EV technology.
- This approach allowed for better site selection.



Lessons Learned

- Partnership with NCTCOG staff is key
- Interdepartmental team is critical to success
- Know your contract capacity
- Procurement is fundamental
- Be proactive in site selection
- Federal requirements and knowledge is very important



Questions?