NTX-REV Technology Vendor Stakeholder Group Meeting

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May 21, 2025

Department of Energy (DOE) Acknowledgement

This material is based upon work supported by the Joint Office of Energy and Transportation through the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under Award Number DE-E0011235.

The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.

Welcome and Housekeeping

- Please keep your microphone muted unless speaking
- Questions can be asked through Chat or the “Raise your Hand” feature
- Put your name and organization in the Chat

Agenda

- Welcome
- Project Overview
- Brief Recap of Current Strategies, Case Studies, and NTX-REV
- Current Resources and Drafting of Gap Analysis
- Discussion Questions
- Next Steps

Overview of NTX-REV

Project Objective: Create North Texas Resilient Electric Vehicle (NTX-REV) plan for the region to ensure the continuity of critical transportation operations

Objective:

- Create North Texas Resilient Electric Vehicle (NTX-REV) plan for 16-county NCTCOG region to **continue critical transportation operations**

Outputs:

- Draft and final NTX-REV Plan
- Updated Hazard Mitigation guidance

Outcomes:

- Increased awareness and understanding of the risks and potential solutions surrounding electrification of critical **transportation** operations
- Improved readiness in the event grid- disruption occurs

Check out our Project Website: NTX-REV | DFWCC
(includes recording discussing Project Overview)

Project Timeline:

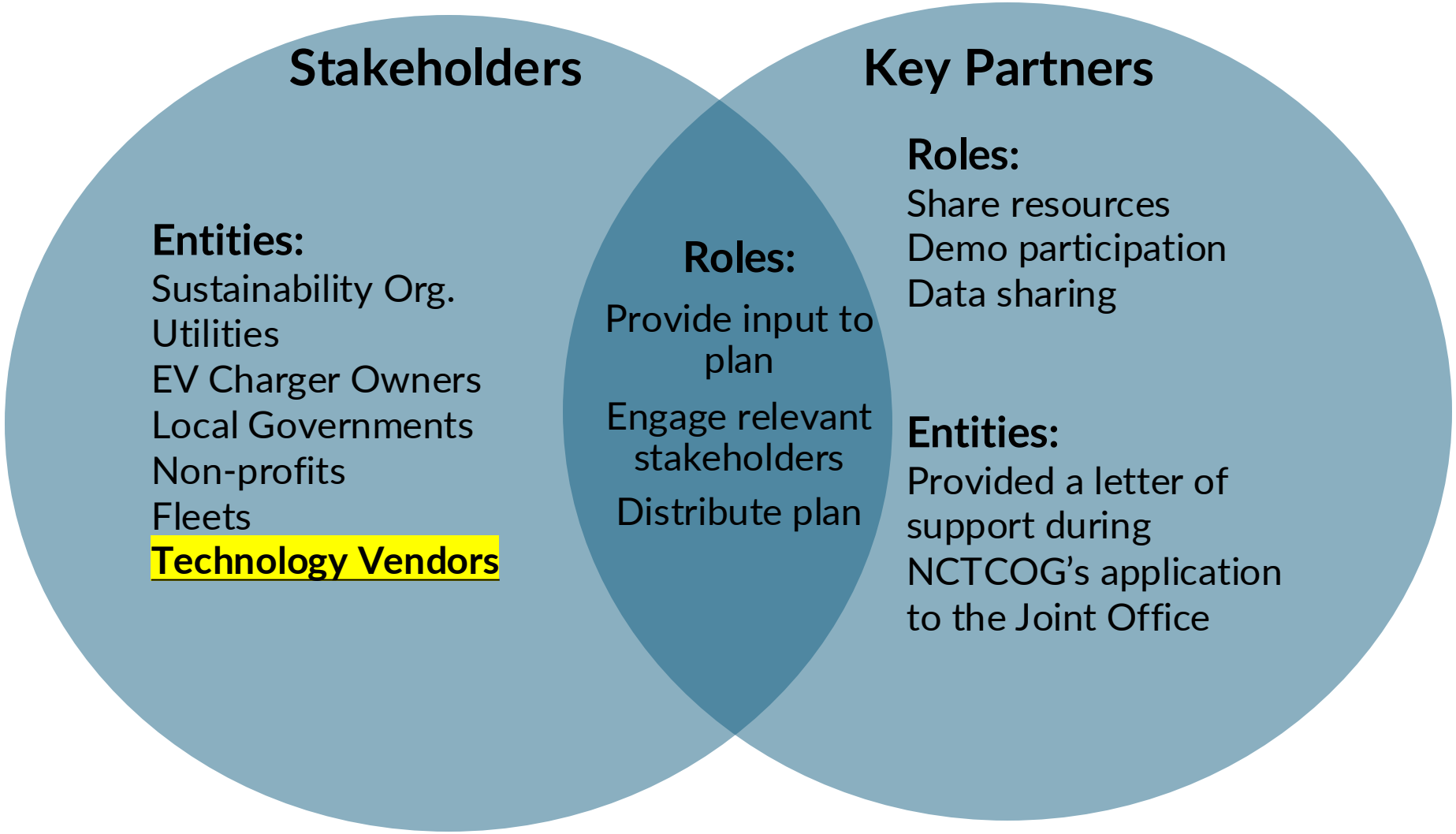
October 2024- July 2025*
Research and Engagement
NTX-REV Plan Drafting

August 2025 – September 2026*
Demo Project Development & Implementation

October 2026 – March 2027*
Plan Finalization and Distribution

*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

Opportunity for Technology Vendor Involvement

Budget Period 1:

- Assist NCTCOG in developing inventory of resilient EV infrastructure in North Texas*
- Share the project with other regional stakeholders*

Budget Period 2:

- Respond to NCTCOG Request for Information on Resilient EV Infrastructure*
- Respond to NCTCOG Request for Proposals (RFP) for technology demonstrations*
- Participate in technology demonstrations (***Vendors selected through RFP Only)****
- Assist stakeholder group in analysis of demonstration impact and lessons learned

Budget Period 3:

- Participate in the development of the final NTX-REV plan
- Disseminate the NTX-REV plan throughout the region (including through workshop)
- Develop the syllabus of resources based on RFI

BP TBD:

Participate in Technology Forum and/or site visit to increase stakeholder knowledge

**** Technology vendors will be separate from local government/public works stakeholder group***

Technology Vendor Guidelines

To ensure technology vendors can submit to NTX-REV RFI and RFP, the following guidelines will be in place until the **completion of the technology demonstration in BP2 or until determined by NCTCOG**:

1. *Technology Vendors will not give input on any criteria which might be used for the RFI/RFP, including metrics to measure success, what technology to use for the demonstration, etc.*

2. *Technology Vendor group will be kept separate from local government/public works group until after RFP awardee(s) have been selected.*

Procurement/contracting opportunities from NCTCOG, including the NTX- RFI and RFP, will be posted through the Transportation Department Vendor Database at North Central Texas Council of Governments - Requests for Proposals, Qualifications, and Information (nctcog.org).

Sign up for "air quality/energy planning" and/or "alternative fuels"

Sample NTX-REV Plan Outline

List of Tables and Figures

Introduction

Purpose

Objectives

Scope

- Planning Stakeholders
- Key Definitions

Situation Overview

- Electric Vehicle Infrastructure Overview

Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

Risk Assessment

- Potential Risks

Planning Considerations

Planning Assumptions

Gap Analysis

- Inventory of Resiliency Technology in Region
- Analysis of Critical Transportation Assets
- Analysis of Resiliency Technology Needed

Preparedness

- Infrastructure Hardening
- Training and Awareness

Activation, Notification, Implementation

- Emergency Communication
- Incident Management

Recovery

- Restoration of Services
- Evaluation and Improvement

Conclusion

Proposed Technologies for NTX-REV Gap Analysis

Technology	Lessens Grid Impact	Enables Off Grid Charging	Case Study	Technology Details
Energy Storage System (Battery, Hydrogen)	X	X	City of Allen- EV Charger with integrated battery storage	3MWh storage per charging station
Solar	X	X	U.S. Department of Agriculture Forest Service : EV charger with solar canopy and battery storage	4.4 kW solar 20 kWh battery
Wind	X	X	N/A	N/A
Generators (propane, diesel, natural gas)		X	N/A	N/A
Mobile Charging		X	N/A	N/A
Vehicle to Vehicle (V2V) Charging	X	X	N/A	N/A
Battery Swapping	X	X	N/A	N/A
Microgrids	X	X	Mongomery County, Maryland: **Microgrid 1:** solar canopies, on-site natural gas generation, battery storage **Microgrid 2:** Rooftop and canopy solar, battery storage, hydrogen electrolyzer	**Microgrid 1:** 633 kW generators; 1.6 MW solar; 3 MW battery **Microgrid 2:** 5.5 MW solar; 2 MW battery; 1 MW H^2 electrolyzer

Draft Gap Analysis for NTX-REV

Step	Task	Description	Primary Contributor	Secondary Contributor
1	**BP 1: Inventory of Resilient EV Infrastructure**	Identification of exiting resilient EV infrastructure and key data points (ex: technology, kWh of off-grid charging)	NTX - REV Technology Vendors and NCTCOG	NTX-REV Stakeholder Group; Regional Fleets; Other Resources/Case Studies
1	**BP 1: Identify Critical Transportation Assets**	Transportation assets that provide critical service (ex: transport of residents, delivery of critical goods, restoration of power/water/etc.) and MIGHT be/is electrified	NTX-REV Local Governments/Private Entities, PWERT, 1-1 Meetings, other regional plans/input	N/A
2	**BP 1: Develop Metrics to Measure Gap**	Primary needs (hours of off-grid operation, total kWh of off-grid charging, etc.) for critical TR assets	NTX - Local Governments	N/A
3	**BP 1: Create Draft Gap Analysis**	Compare what resilient EV infrastructure and technologies the region has vs what it needs (based on Steps 1-3_	NCTCOG	N/A
4	**BP 1: Analyze Draft Gap Analysis**	Review NCTCOG's Gap Analysis prior to inclusion in Draft NTX-REV	NTX - Local Governments	N/A; potentially other entities for Final plan
5	**BP 2: Review Draft Gap Analysis**	Review drafted gap analysis post-field demonstrations	NCTCOG	NTX-REV Stakeholder Group
6	**BP 3: Finalize Gap Analysis**	Finalize analysis before inclusion in final NTX-REV plan	NCTCOG	All

Resources for NTX-REV Gap Analysis

"Planning for Resilient EV Charging Infrastructure" is a white paper developed by NCTCOG with funding from the Texas State Energy Conservation Office (SECO) and highlights key strategies for achieving resilient EV charging:

- Analysis of Electric Grid Outages
- Analysis of ERCOT Grid Capacity
- ERCOT Grid Capacity and Constraint
- Resiliency Planning for Continuity of Operations - ***Minimal Information***
- Technology Options – ***Includes Demand Management and Off-Grid Charging Technologies***
- Case Studies – ***3 Cases Studies with Technology Deployed***
- Challenges and Considerations
- References

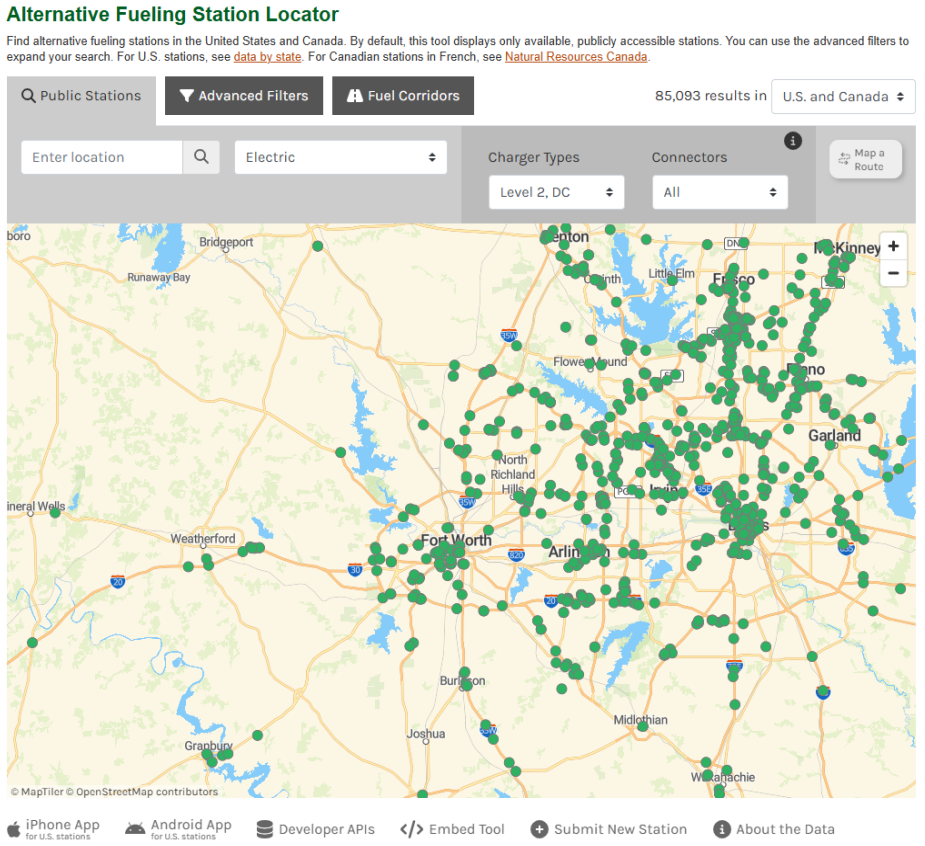
Gap Analysis: NTX Resilient Infrastructure

Draft North Texas Resilient Infrastructure Inventory

Owner	Location	Strategy	Identified by?
City of Irving	Library	Battery System	NCTCOG funded project
Xcharge North America	City of Allen	Battery System with 3MWh	Case Study
City of Dallas	City of Dallas	Microgrid	RISE Committee
University of North Texas	Denton	Solar with Battery	Project Collaboration with UNT
Dallas County	Dallas County	Solar with Battery	General Services Administration Multiple Award Schedule

Barriers: Mostly self-reported

Potential Resource: Alternative Fuels Data Center



afdc.energy.gov/stations

Barriers: Does not identify if station is "hardened" or not

Gap Analysis: NTX Resilient Infrastructure

How do we create an inventory of resilient EV infrastructure in the region?
Case studies, white papers, etc. Ideally publicly accessible.

What data should we collect on the existing resilient EV infrastructure?
Ex: kWh of off-grid power available, charging rate, etc.

How can Technology Vendor Stakeholder Group help?

Discussion Questions

- In your experience, what have been the main reasons entities express interest in resiliency projects?
- What are the biggest challenges with entities implementing resiliency strategies?
  - State/Local ordinances, public opinion, not considered a need by govt entity, govt budget, etc.?
- How do technologies and needs vary in rural and urban areas?
- What other parties should be included/consulted in the adoption of resiliency strategies? Utilities, vehicle manufacturers, governmental (state or local), etc.?

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