



Electric Vehicle Market Stimulation in Divested Economies

MIRIAM BOUALLEGUE
METROPOLITAN ENERGY CENTER
JUNE 13, 2023

Project ID: ti145

This presentation does not contain any proprietary, confidential, or otherwise restricted information.

Project Overview

EVSE Barriers Addressed

- Availability of EV charging infrastructure.
- Consumer reluctance to purchase electric vehicles.
- U.S. dependence on petroleum

Budget

- Total project funding: \$10,455,288
 - DOE: \$5,222,326
 - Collaborative: \$5,232,962
- Funding FY22: \$4,830,974
- Percent Spent: 2%

Timeline

- Start: March 1, 2022
- End: May 31, 2025
- Percent Complete: 2%

Partners

- Metropolitan Energy Center (lead)
- Kansas City MO Aviation Dept
- City of Osawatomie, KS
- City of Lee's Summit, MO
- Johnson County Community College
- Hirschbach
- Lazer Logistics

Project Objectives

Objectives:

- Substantially increase access to electric vehicles (EVs) and fueling in underserved markets in Kansas and Missouri, with attention to multi-family dwellers and curbside
- Offer consumers and businesses additional transportation choices
- Enable commercialization of affordable, energy-efficient transportation technologies

Tech Integration Goals:

- National Security
 - Increases local fuel diversification
- Affordability for business/consumers
 - Saves money by utilizing existing infrastructure

Barriers Addressed:

- EVSE accessibility
- Consumer reluctance to adopt EV technology
- U.S. dependence on petroleum

Approach

Deployments of heavy-duty electric vehicles in environmental justice areas by entities contributing cost-share overmatch

Community engagement and site selection led by community-based organizations in underserved areas

Install EVSE infrastructure at identified locations through small grants with reduced cost-share

Use data collected and lessons learned to create a strategic plan for other cities looking to deploy EVSE with a community-led process in underserved areas.

Approach

Budget Period 1 – Early Deployments and Community Engagement Launch

- Prepare Community Outreach and Engagement
- Vehicle Procurement and Deployment
- Infrastructure Development
- Outreach to Divested Communities

Go/No Go: Community Engagement Plan Executed

Budget Period 2 – Deployment and Educational Outreach

- Small Grants to Divested Communities
- Draft Best Practices and Planning Guide
- Execute Communications Plan
- Vehicle Procurement and Deployment
- Infrastructure Development

Go/No Go: Peer and Industry Workshops Completed

Budget Period 3 – Final Deployments, Analysis, and Recording Best Practices

- Data Management and Analysis
- Deployments Continue
- Publish Planning Guide and Success Stories

Milestones

Critical Milestones	Status
<u>Early Deployments & Community Engagement Launch (Budget Period 1)</u>	
≥30% of planned workshops complete	Complete
≥2 vendors selected for community engagement	In Progress
≥50% of planned media packets have been prepared	In Progress
EVSE contractors selected on ≥25% of the planned subrecipient projects	Complete
At least 1 meeting held with ≥2 vendors selected for community engagement	In Progress
<u>Deployment & Educational Outreach (Budget Period 2)</u>	
EVSE contractors selected on ≥70% of the planned subrecipient projects	Not Started
≥40% of vehicles purchased and in service	Not Started
Small grants complete for ≥2 target divested communities	Not Started
Public EVSE Best Practices document drafted	Not Started
≥80% of planned workshops have been completed	Not Started
<u>Complete Deployments, Analysis, Record Best Practices (Budget Period 3)</u>	
100% EV workshops complete	Not Started
100% complete infrastructure	Not Started
100% vehicles purchased and in service	Not Started
All data is archived in a way can be publicly accessible, according to the DMP.	Not Started

Project Accomplishments and Progress

Prepare Community Education and Engagement

- Create project communications plan
- Initiate community events
- Contract with community-based organizations

EVSE Barriers Addressed

- Availability of EV charging infrastructure.

Premise: Using community knowledge based on lived experiences to plan infrastructure locations uses invaluable insights to build out EVSE networks in underserved areas to best serve locals.

Community Events

Osawatomie, KS:

- Ribbon Cutting Ceremony
- Poster Contest
- Public Forums (5)



Left to right: City Manager, Mayor, and Project PI



EV CHARGING FORUM
LOCATION 545 MAIN STREET

Date	Time
October 29, 2022	9:00 am to 11:00 am
November 3, 2022	4:00 pm to 6:00 pm
November 10, 2022	4:00 pm to 6:00 pm
November 17, 2022	4:00 pm to 6:00 pm
November 22, 2022	10:00 am to 2:00 pm

FORUM ACTIVITIES

Exercise	Outcome
DOT the map	Using Red Dots : Vote on your favorite EV Charging Station locations. Blue Dots : EV Charging Station locations we should consider.
SURVEY the room	Using QR CODE fill out an online survey. Using Pen and paper complete the survey.
QUESTIONS to be answered?	Using sticky notes leave your question. Put it on a board. Put it on a map. Or just hand it to us.



Project Accomplishments and Progress

Procure and Deploy Vehicles

- Deploy heavy-duty zero-emission vehicles to improve air quality in underserved and overburdened areas.

EV Barriers Addressed

- Availability of EVs in underserved and overburdened areas

Premise: Deploying heavy-duty vehicles in partnership with entities contributing cost-share overmatch allows reduced cost-sharing requirements that would otherwise be a barrier for smaller entities.

EV Terminal Tractor Deployment

Hirschbach:

- Deployments underway in Edwardsville, KS



Collaborations and Coordination

Partners

- Metropolitan Energy Center (lead)
- Kansas City MO Aviation Dept
- City of Osawatomie, KS
- City of Lee's Summit, MO
- Johnson County Community College
- Hirschbach
- Lazer Logistics

Community Outreach:

- City of Osawatomie
- 2 TBD Community-Based Organizations in Underserved Communities

Market Impact and Sustainability

- **Deploying EVs in municipal fleet applications demonstrates to community members and City employees the capability of EVs**
- **Placement of charging stations in underserved communities by providing access to small grants at reduced cost-share rates will spur adoption of EVs in these markets**
- **Meaningful community involvement in EVSE site selection will contribute to ensuring the community's continued support for EVSE after project completion**

Contribution to Energy Equity and Environmental Justice

- Ensures meaningful involvement of all people through public forums, listening sessions, and community outreach and engagement as part of the site selection process
- Deploying heavy-duty vehicles in underserved and overburdened areas offers the greatest potential emissions reduction in areas that need it most
- Allocating funding to subrecipients with differing amounts and cost-share requirements based on the capacity and need of the entity provides equitable access to grant funding

Overall Impact

Past Accomplishments

- Held 6 community events to inform the community and incorporate feedback
- Deployed EV terminal tractors in 3 locations to reduce air emissions in overburdened and underserved communities

Future Plans

- Engage community residents and incorporate feedback into site selection
- Deploy vehicles to reduce air pollution
- Issue small grants to divested communities
- Deploy EVSE in selected locations
- Monitor and collect data on deployed vehicles and chargers

Project Summary

Objective

- Substantially increase access to electric vehicles (EVs) and fueling in underserved markets in Kansas and Missouri, with attention to multi-family dwellers and curbside

Approach

- Deployments of heavy-duty electric vehicles in environmental justice areas by entities contributing cost-share overmatch
- Community engagement and site selection led by community-based organizations in underserved areas
- Install EVSE infrastructure at identified locations through small grants with reduced cost-share
- Use data collected and lessons learned to create a strategic plan for other cities looking to deploy EVSE with a community-led process in underserved areas.

Collaborations

- Metropolitan Energy Center (lead)
- Kansas City MO Aviation Dept
- City of Osawatomie, KS
- City of Lee's Summit, MO
- Johnson County Community College
- Hirschbach
- Lazer Logistics

Accomplishments

- Held community events to inform charging station locations in underserved communities
- Deployed zero-emission heavy-duty vehicles in underserved and overburdened communities

<https://metroenergy.org/programs/current-projects/evs-in-underserved-markets/>