



2023 DOE Vehicle Technologies Office Annual Merit Review

Twin Cities Electric Vehicle Mobility Network

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American Lung Association | Minnesota Clean Cities Coalition

Project ID: TI126
June 14, 2023

EV Spot Network: www.EvSpotCharging.com
Evie Carshare: <https://eviecarshare.com/>
Multifamily: Equitable Electric Mobility:
<https://hourcar.org/multifamily>

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

Updated 4.14.23



Timeline

- Start: October 1, 2020
- End: December 31, 2023
- 70% complete

- **Barriers Addressed**
- Public with limited or no access to a garage and/or who cannot afford to purchase an EV
- Lack of public charging infrastructure

- **Targets**
- 70 Community Hubs (280 L2 + 10 DCFC)
- 200 Shared electric vehicles
- 25 Multi-unit dwellings with EVSE & EV

Budget

Total project funding: \$13,340,039

DOE share: \$6,653,985

Cost share: \$6,686,054

2021 (BP1): \$7,168,439

2022 (BP2): \$4,035,089

2023 (BP3): \$424,694

Partners

- American Lung Association
- City of Saint Paul
- City of Minneapolis
- East Metro Strong
- HOURCAR
- Xcel Energy

Project Objectives



evie
Operated by HOURCAR



ev spot
network

Objectives

Deploy electric vehicle charging and electric vehicles

Create a community focused mobility network

Provide supporting outreach and education

Technology Integration Goals

National Security

Economic Growth

Affordability for Consumers

Impacts

Increased EV adoption & awareness

Increased availability of electric vehicle charging infrastructure

Documented best practices for one-way & two-way carshare

Project Approach



Budget Period 1

Project Initiation and Launch

- Reviewed locations for community charging hubs/began installation
- Bid and awarded electric vehicle supply equipment company (ZEF Energy)
- Reviewed vehicles options for carshare program (ordered 101 Chevrolet Bolt)
- Developed multi-unit dwellings program and matrix
- Initiate outreach and promotional activities (built website, developed logo, introduction of project at community events)

Budget Period 2 (2022)

Implementation, Deployment & Education

- Continue location assessment for community charging hubs and continue installation
- Reviewed vehicles options for 2nd vehicle carshare purchase (ordered 50 Nissan LEAF and LEAF Plus)
- Continue site visits multi-unit dwellings program
- Collect data and disseminate lessons to other regions.
- Continue outreach and promotional activities (Public launch event May 2022, public launch of multifamily sites, host ride & drives, partner with local festivals with carshare program)

Budget Period 3 (2023)

Final Completion

- Commission final sites for community charging hubs (70 sites: All have level 2, 10 fast charging)
- Receive and implement final order vehicles into carshare program & multifamily carshare program
- Continue site visits multi-unit dwellings program and implementation and activation (25 sites)

Milestones



Budget Period 2

Milestone	Type	Description	Description
Multi-unit dwelling EVSE installation and carsharing launched	Technical	EVSE available and EV carsharing initiated at five low-income multi-unit housing locations.	Complete
Installation of Level-2 community charging hubs	Technical	All Level 2 EVSE at the ≥70 community charging hubs installed and operational.	in-progress
Additional multi-unit dwellings begin service	Technical	EVSE installed at ≥10 new low to moderate income multi-unit housing locations and carsharing vehicles deployed	in-progress
Educational activities continue	Technical	≥10 meetings with community-based organizations completed	Complete
Carsharing EVs Deployed	Go/No Go	≥100 electric vehicles deployed in the carsharing programs.	Complete

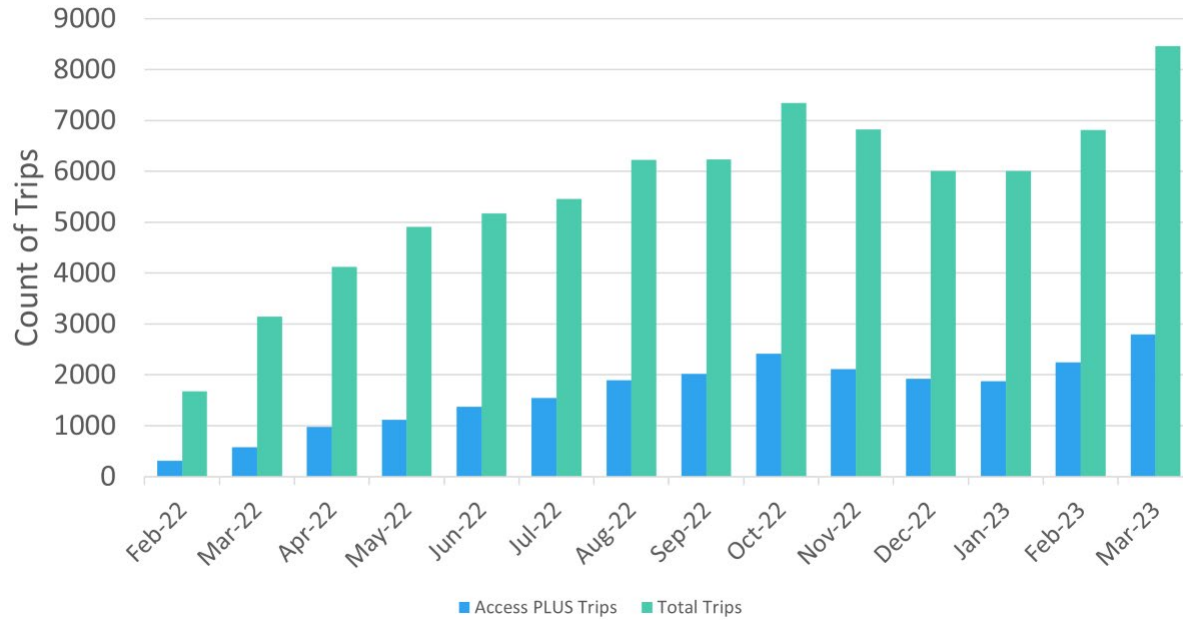
Budget Period 3

Milestone	Type	Description	Progress
Additional multi-unit dwellings begin service	Technical	≥10 multi-unit housing locations will begin a carsharing program	in - progress
Community carsharing vehicles fully deployed	Technical	All electric vehicles in the public carsharing program operational.	complete
Carsharing membership goal met	Technical	Recruitment of ≥ 5,000 carsharing memberships will be met.	in - progress 4,000 as of 4/2023
Educational activities completed	Technical	≥10 additional ride-and-drive or other outreach events will be executed.	in-progress 1 done & 9+ in planned

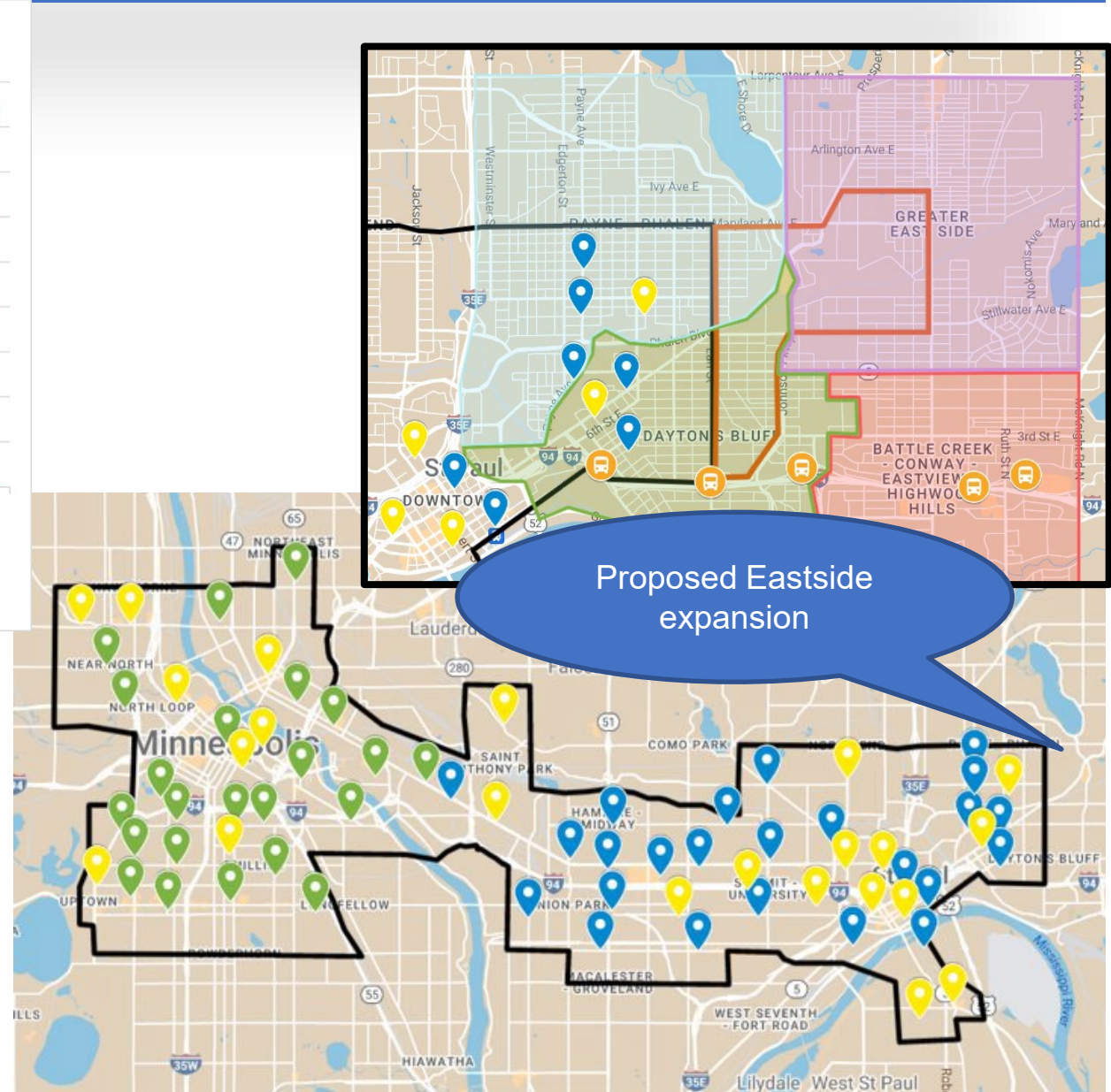
Project is slated to close in FY23 therefore no FY24 milestone to share. PI will request a 6 month no-cost continuation to complete implementation of Multi-unit dwelling portion of project. Equipment and supply chain issues, timeline of authorization of carshare with property owners along with Minnesota winter construction season caused a variety of delays.

Project Accomplishments and Progress

Trip Count - Evie Carshare



- EV Spots in Saint Paul and Minneapolis: Green: Mpls, Blue: St Paul, Yellow: Process
- Proposed expansion on east side with four new community-based organizations adding 10 charger hubs in 2 sq mile.



Project Accomplishments and Progress

OPEN STREETS MPLS

dance, bike, play, & explore the community

Hi, Ho to the Fair We Go!

Getting to the Minnesota State Fair is easy with Evie! And as always, we'll have parking costs covered.

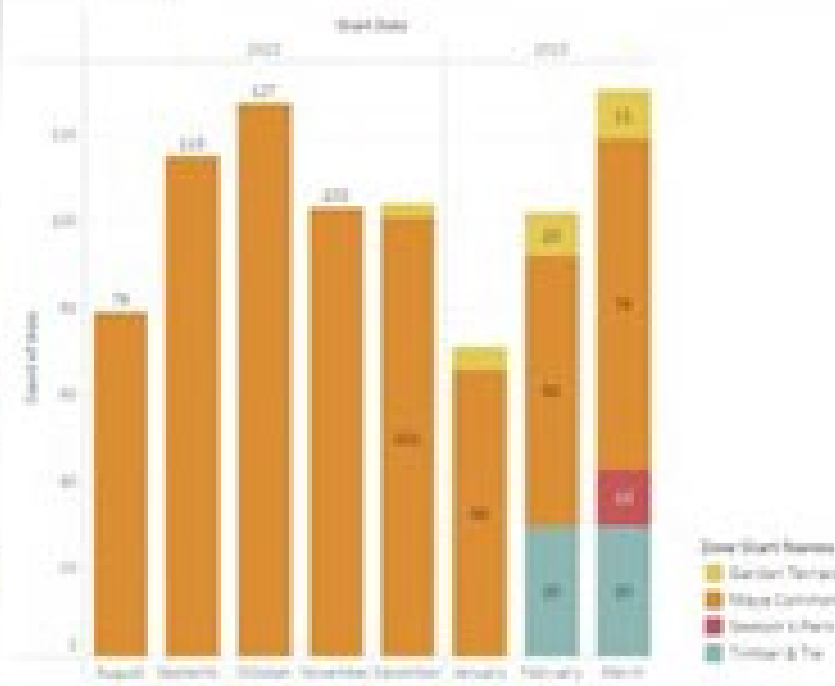
Drive Evie.



Meet Evie.



Number of Trips over Time



Education and outreach are large factors of growth.

Events, postcards, social media, presentations.

Meet Evie.

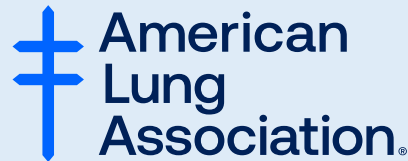
\$4 drive credit



Try It A Good Backup Plan	Access PLUS Income-Based Plan	Everyday Great for 24 Trips per Month	Student For all Those Smarties
\$0 Monthly	\$1 Monthly	\$7 Monthly	\$6 Monthly
30c / Minute	18c / Minute	20c / Minute	18c / Minute
\$15 / Hour	\$9 / Hour	\$9.75 / Hour	\$9 / Hour
\$130 / Day	\$78 / Day	\$84.50 / Day	\$78 / Day
75c / Mile	200 Miles / Trip / Day	100 Miles / Trip / Day	100 Miles / Trip / Day
	45c / Additional Mile	49c / Additional Mile	45c / Additional Mile
Prices effective Midnight, March 31, 2023	Prices effective Midnight, March 31, 2023	Prices effective Midnight, March 31, 2023	Prices effective Midnight, March 31, 2023

Collaboration among Project Team

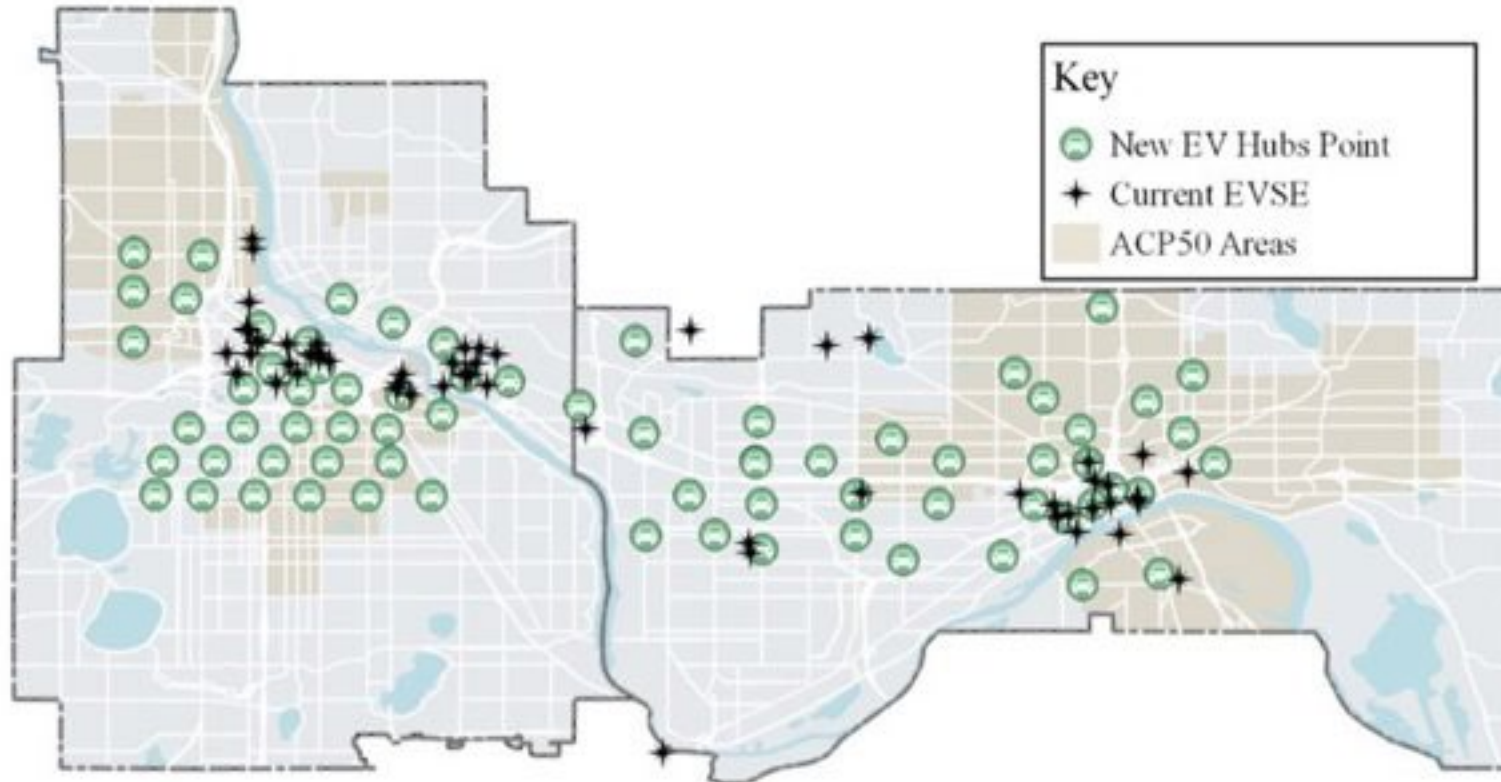
Blue: Prime, Yellow: Funders
Left White: Project Leads, Circle: Partners



American Cities
Climate Challenge



Contribution to Energy Equity & Environmental Justice



Acronyms:

EVSE: Electric Vehicle Supply Equipment

ACP50: Areas of Concentrated Poverty where 50% or more of residents are people of color

Challenges:

- Availability of EVs for fleet | Chevy Bolt Recall
- Global Supply Chain challenges
- Vehicle Damage | Electric charging equipment failures

Sustainability:

- Proposed Eastside Expansion as shown on slide #6
- Wide variety of funding partners will make project sustainable beyond the period of performance.
- Media support and presentations continues to grow carshare territory and multi-unit dwelling support and interest.
- Key messaging, best practices and speaking opportunities will continue to be developed and shared with partners outside of region.
- Website revamp while keeping Community Engagement Report and other documents for national show.

Summary



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**ev
spot**
network

Approach

- Create the basis for a highly visible, sustainable electric vehicle (EV) ecosystem in Saint Paul, Minneapolis, and the surrounding seven-county metropolitan area.
- Make the benefits of EV technology broadly available in the Twin Cities region, especially in underserved areas.

Collaborations

- Local governments, Community Based Organizations, Utilities, Private and Non-Profit Companies

Accomplishments

- 46 of 70 charging hubs port level 2 EVSE have been installed and commissioned
- 10 DC Fast Charging locations have been confirmed and equipment right sized and ordered
- 150 have been deployed as a one-way carsharing network
- 21 of 50 vehicles for use by residents at the multi-unit dwellings have been secured
- 1 of 10 ride and drive events have been completed (2022 included dozens of events)

www.evspotnetwork.org | www.eviecarshare.com | <https://hourcar.org/multifamily>



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