

# St. Louis Vehicle Electrification Rides for Seniors (SiLVERS)

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Organization: Forth

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Project ID: TI140



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# Project Overview

## Timeline

- Project Start Date: October 1, 2020
- Project End Date: December 31, 2023
- Percent Complete: roughly 70%

## Barriers

- Lack of awareness and exposure to electric vehicles (EVs) and charging infrastructure in St. Louis
- Unproven financial sustainability of utilizing EVs in the operations of nonprofit social service agencies
- Lack of validation that EVs can improve social service delivery

## Budget

- Total Project Funding: \$1,032,392
  - DOE Share: \$500,000
  - Cost Share: \$532,392
- Budget Period 1: 10/1/19-12/31/21:
  - Expended: \$338,532
- Budget Period 2: 1/1/22-12/31/22
  - Expended: \$306,028
- Budget Period 2: 1/1/22-12/31/22
  - Expected: \$370,000

## Partners

- Forth, project lead
- St. Louis Agency on Aging (SLAAA)
- Northside Youth and Senior Service Center
- City Seniors, Inc.
- North Newstead Association
- Ameren
- AmpUp
- St. Louis Regional Clean Cities Coalition
- General Motors
- Delivery Associates

# Project Objectives

## Objectives

Measure if and how EV fleets can save CBOs (community-based organizations) and social service agencies money and improve service delivery;

Create a model for deploying EVSE that serves those fleets and can also serve employees and community members;

Showcase that pilots like this can accelerate regional EV adoption; and

Create tools and best practices so this model can be replicated by CBOs and social service agencies nationwide.

## Impact

Additional social service agencies adopt the model for their own fleets;

Improved skills and capacity of service agencies to manage their EV fleets; optimized charger usage; and reduced operating costs;

Increased EV adoption in the St. Louis market.

## VTO TI Goals

National Security  
(domestic fuel sources)

Economic Growth  
(business opportunities)

Affordability for Business and Consumers  
(cost savings, alternative fuels)

Reliability/Resiliency  
(transportation options)

Any proposed future work is subject to change based on funding levels

# Project Approach

## Budget Period 1 (Oct. 2020 - Dec. 2021): *Project Initiation and Launch*

- Initiation and Operations Planning
- Clarifying Fleet Requirements
- Establish Site Locations
- Secure Vehicles
- Source and Install Charging Stations
- Site Preparation
- Staff Training and Education
- Launch Program
- Data Management Planning
- Implementation of Public Use of Chargers
- Host Regional Workshop
- Introduce Project at Conferences and Workshops

Go/No-Go Milestone: Infrastructure complete

- *Secure site locations*
- *Secure 5 vehicles*
- *Install 5 charging stations*

## Budget Period 2 (Jan. 2022 – Dec. 2022): *Project Refinement*

- Present on initial Project Findings
- Host Regional Workshop
- Project Refinement
- Educational Sessions with Other Fleets
- Identify Clean Cities Coalitions for Technical Assistance

- Go/No-Go Milestone: Technical Assistance product offering
  - *Post first set of resources on website*

## Budget Period 3 (Jan. 2023 – Dec. 2023): *Project Wrap-up and Results Dissemination*

- Share Results Nationally
- Host Regional Workshops
- Refining the project model
- Provide Technical Assistance to Three Clean Cities Coalitions
- Finalize Project and Data Collection
- Produce Final Case Study

# Project Approach

## Components of SiLVERS

- 5 new Electric Vehicles for the fleet
  - 3 at Northside Youth and Senior Service Center
  - 2 at City Seniors, Inc
- Car insurance covered through Forth
- 5 EV chargers to be used in the fleet and by the public
  - Chargers, installation, maintenance and operation covered by program
- \$25,000 for each CBO personnel time
  - Over 3 years, covers personnel time for training in the program and promotion to community
- Technical assistance, training, and project management support
- Regional and national promotion of program
- Supplies for outreach and events

Any proposed future work is subject to change based on funding levels



# Project Accomplishments and Progress: *Budget Period 2 and 3 (first quarter)*

- Full implementation of the chargers and vehicles
- Collecting of service, vehicle, and charging data
- Presenting at several national conferences
- Releasing the first toolkit resources (available at [forthmobility.org/silvers](https://forthmobility.org/silvers))
- Establishing Clean Cities Coalition working group



Any proposed future work is subject to change based on funding levels

# Project Accomplishments and Progress BP2: *Data*

## Service Data

11/1/2021-3/31/2023

- **16,396** individual meals delivered
- **1,748** rides conducted
- **373:** Number of unduplicataed individuals provided rides

*Source: St. Louis Area Agency on Aging*

## Charging Station / Vehicle Telemetry Data

11/22/21-2/23/2023

# of Active Days (Vehicle)*	124
# of Days with Data (Station)	442
# of Active Days (Station)	289
Average Battery % at SOD per Active Day	74.7
Average Miles Traveled per Active Day	112.8
Median Miles Traveled per Active Day	44.0
Total # of Charging Sessions	961
Total # of Unique Users	17
# of SiLVERS Charging Sessions	943
Total Charging Energy (kWh)	21355.3
Total Charging Duration (hr)	6731.9
Charging Station Utilization	12.7%
Total Charging Cost**	\$2,153.50

*Source: AmpUp*

Any proposed future work is subject to change based on funding levels

# Collaboration and Coordination among Project Team

## Prime

Forth (501c3 and 501c6)

Connor Herman – Principle Investigator

Forth conducts:

- Monthly calls with community partners to provide status updates and allow for best practices sharing + program design guidance
- Quarterly check-ins with the full project team, community and industry partners to solicit feedback and suggestions for program design and improvements to inform project refinement
- Communications with VTO as required
- Coordinated effort to ensure media releases and project marketing are consistent and amplified across all partner organizations
- Presentations of SiLVERS at its annual Roadmap Conference, among others

## Subrecipients

- North Newstead Association
  - Community outreach and support
- St. Louis Area Agency on Aging
  - Coordination with community partners, utilization data tracking and project funding
- St. Louis Regional Clean Cities Coalition
  - Information dissemination, CCC collaboration

## Industry Partners

- General Motors - project funding
- AmpUp - charger software, data collection
- Ameren - charger rebates, in-kind support

## Community Partners / Host Sites

- Northside Youth and Senior Service Center
- City Seniors, Inc.

Any proposed future work is subject to change based on funding levels



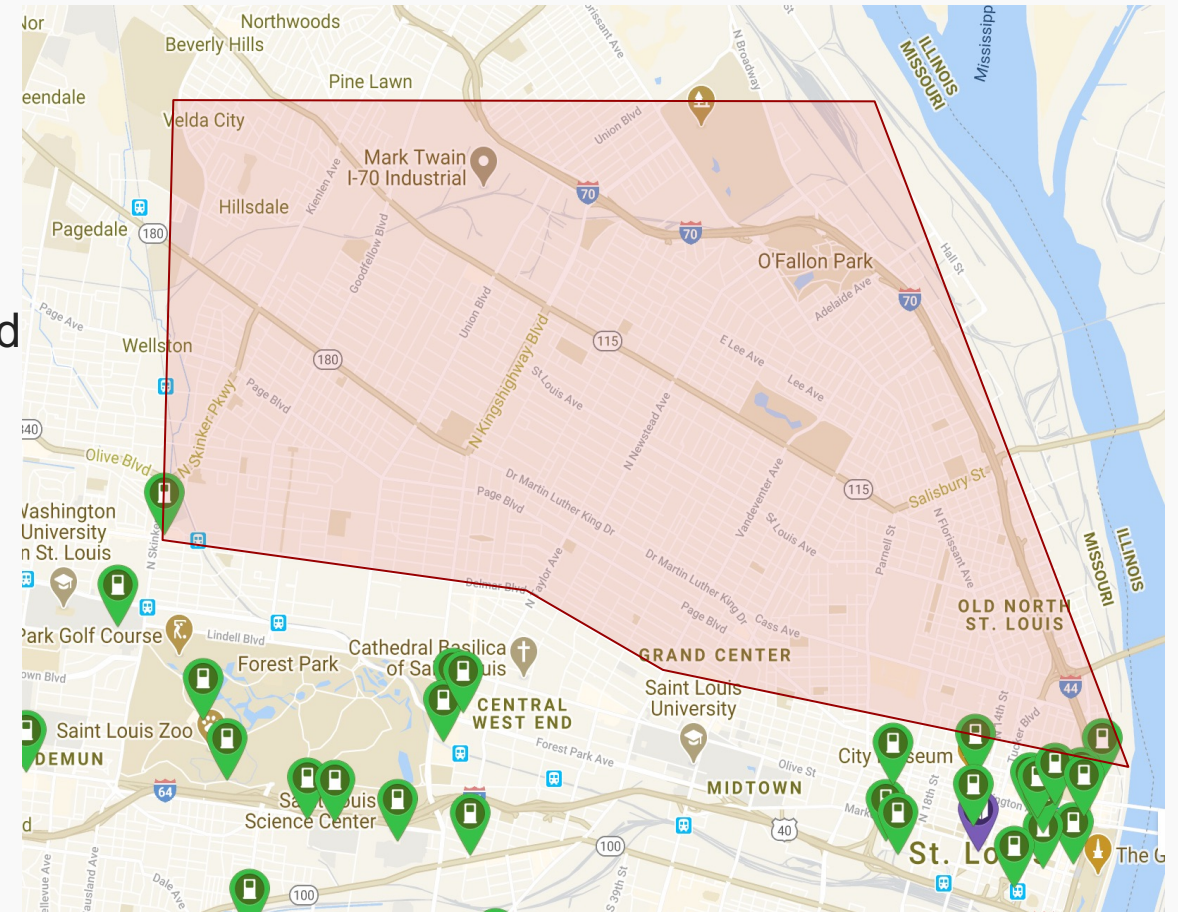
# Contribution to Energy Equity and Environmental Justice

Project Location: North St. Louis

Demographics Being Served:

- **40%** of rides provided were provided to persons aged 65-74 (the highest percentage of clients served)
- **27** clients over age 84 received rides.
- **75%** of clients served are female.
- **52%** of clients served are African American.
- The average client served continues to be a low-income African American woman in the 65-74 age range living in North City.
- **39,563 lbs** of CO2 saved, also no tailpipe emissions

TCO calculations to come in BP3



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# Summary

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- Create tools and best practices so this model can be replicated by CBOs and social service agencies nationwide.

## Collaborations

Project Team: Forth, St. Louis Agency on Aging (SLAAA), Northside Youth and Senior Service Center, City Seniors, Inc., North Newstead Association, Ameren (electric utility), AmpUp, St. Louis Regional Clean Cities Coalition, General Motors,

## Project Accomplishments

The project has maintained operations the past year and the social service agencies are using the vehicles in their daily services. Forth and partners have continued to gather data and document lessons learned. Forth has developed several tools to assist other organizations in replication and will continue to release tools and data while showcasing project development and results to external audiences.