



# Transportation Efficiency Case Studies for Small Local Governments

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MIDWEST RURAL FEDERAL FUNDING OUTREACH SERIES | ACEEE

In light of new and expanded federal funding opportunities, this fact sheet highlights transportation efficiency project examples that small local governments can use as models with federal funding. Rural municipalities can draw on these examples to design projects that help residents access electric vehicles (EV), EV charging stations, and public transportation (e.g., buses, shuttles, or vanpools). ACEEE selected projects relevant to local governments, focusing on federally funded rural projects and strategies that can serve as models for other rural communities of varying sizes. This is not intended to serve as a comprehensive assessment of best practices, but rather a select description of relevant projects.

The projects described here can serve as replicable examples that small, rural local governments could pursue using unprecedented levels of new and expanded federal funding from the American Rescue Plan Act (ARPA), Infrastructure Investment and Jobs Act (IIJA), and Inflation Reduction Act (IRA). This fact sheet highlights key features, available results, and lessons learned for each project.

Projects	Location	Sector	Measures and services
Low or No Emission Bus Project	Arvin, California	Municipal transit	Lighting upgrades, electric buses, charging equipment and related infrastructure
The Clean Rural Shared Electric Mobility (CRuSE) Project	Hood River, Oregon	General public	Electric vehicle carsharing

While this fact sheet primarily focuses on specific project examples, more information on strategies for securing funding and relevant federal funding opportunities for rural local governments in IIJA, ARPA, and IRA can be found in our companion factsheets at [Connecting Rural Communities with Historic Federal Clean Energy Investments](#).

# Low or No Emission Vehicle Project

City of Arvin, California | Population 20,000

## PROJECT SUMMARY:

IJA significantly increases funding for Federal Transit Administration (FTA) grants to replace, rehabilitate, and purchase buses and related equipment, including electric vehicles for public transportation. These programs include formulas and competitive grants for *Buses and Bus Facilities* and competitive *Low or No Emission Bus Program* grants.<sup>15</sup> Rural applicants to the Low or No Emission Bus Discretionary Program must submit proposals as part of a consolidated state application.



**A 100% battery electric bus recently added to Arvin's city fleet.**  
Source: City of Arvin, CA.

Arvin, a small city in California's southern San Joaquin Valley, has leveraged the FTA's *Low or No Emission Vehicle Program* to work toward its goal to convert to a 100% electric transit bus fleet by 2025. Situated at the base of the Tehachapi mountain range and downwind of the largest oil and gas refineries in Kern County, the city has long faced high air pollution burdens, which it is working to address by investing in energy efficiency, alternative fuels, and renewable energy.<sup>1</sup> With the help of a \$2.3 million FTA grant, the city purchased three new electric buses and charging stations in 2018. These infrastructure investments are saving about 3,000 gallons of diesel fuel per month.<sup>2</sup> The project also helps the city work toward the goals set forth in its Transit Asset Management Plan, which includes strategies to reduce greenhouse gas emissions and localized pollution from vehicles by expanding transit options (e.g., buses or rail) and encouraging non-motorized transportation with measures such as sidewalks, bicycle lanes, and bus shelters.<sup>3</sup>

In early 2022, FTA awarded Arvin another \$2.9 million grant through the *Buses and Bus Facilities Competitive Program* to buy two additional electric buses and build a renewable microgrid. The system will include battery backup to provide emergency power in the event of power outages or shutoffs and help further improve the air quality of the region. The microgrid is expected to save the city \$1 million in energy costs over the next 10 years.<sup>4</sup>

<sup>1</sup> California Air Resources Board. Arvin, Lamont. ([ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communities/arvin-lamont](http://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communities/arvin-lamont)).

<sup>2</sup> Murillo, Erica, "Arvin Has Been Awarded a \$2.9M Grant to Receive Two New Electric Buses." *Kern Sol News*. April 9, 2022. [southkernsol.org/2022/04/09/arvin-has-been-awarded-a-2-9-million-grant-to-receive-two-new-electric-busses/](https://southkernsol.org/2022/04/09/arvin-has-been-awarded-a-2-9-million-grant-to-receive-two-new-electric-busses/).

<sup>3</sup> Kern County Rural Alternative Transportation Plan (2020). [www.kerncog.org/wp-content/uploads/2020/06/Rural\\_Alt\\_Trans\\_Plan\\_202006.pdf](http://www.kerncog.org/wp-content/uploads/2020/06/Rural_Alt_Trans_Plan_202006.pdf).

<sup>4</sup> "City of Arvin Announces Grant and Unveils Future Microgrid and Electric Bus Project." *BakersfieldNow*. March 25, 2022. [bakersfieldnow.com/news/local/city-of-arvin-announces-grant-and-unveils-future-microgrid-and-electric-bus-project](https://bakersfieldnow.com/news/local/city-of-arvin-announces-grant-and-unveils-future-microgrid-and-electric-bus-project).

## ACEEE SUGGESTIONS FOR OTHER LOCAL GOVERNMENTS:

- Explore opportunities to combine federal, state, and utility funds to maximize program resources. The U.S. Department of Transportation’s [Rural EV Toolkit](#) provides a one-stop resource to help rural communities scope, plan, and fund EV charging infrastructure, including how to take advantage of relevant planning tools and available financing.
- Assess current and future vehicle charging demand to manage the need for future upgrades. The [Alternative Fuels Data Center](#) and [Joint Office of Energy and Transportation](#) provide additional tools to help communities plan, procure, and install charging infrastructure.
- Develop a local transportation plan to identify transit goals and priorities, including reducing greenhouse gas emissions through multiple strategies (such as reducing driving).
- Coordinate early and often with key stakeholders. For example, early discussions with local utilities can help determine required upgrades to electrical service for electric vehicle (EV) charging–related projects. EVSE manufacturers, charging networks, and installers also offer important technical expertise and stakeholder connections.
- Planning processes should be transparent and allow for input from the public. Transparency makes it more likely that the impacts of project siting and design, including geographic coverage of infrastructure, are fully considered. These processes should also consider how benefits and burdens are distributed across populations to help ensure equitable access across underserved communities.



# The Clean Rural Shared Electric Mobility Project

Forth, Hood River, Oregon | Population <10,000

## PROJECT SUMMARY:

Forth, a Portland-based nonprofit, coordinates the Clean Rural Shared Electric Mobility (CRuSE) pilot project in Hood River, Oregon, with financial and technical support from several local and national organizations, including an affordability and environmental evaluation by the Pacific Northwest National Laboratory.

The Hood River project is the first EV carshare in the state and is designed to provide a sustainable and replicable financial model for EV sharing in a rural setting. Five electric vehicles are available to the community at five public- and privately owned sites to ensure access for city employees, affordable housing residents, tourists, and the public. The cars are available for \$8 per hour (\$64 a day), paid through a smartphone app.<sup>5</sup> The \$1.15 million project is supported by a Department of Energy (DOE) grant to Accelerate Advanced Vehicle Technologies Research for almost \$550,000 and over \$605,000 in matching funds from multiple local, regional, and national groups (including in-kind support, such as parking spaces).<sup>6</sup>

The CRuSE project is intended to provide an accessible, low-emissions transportation option to local riders. In designing the project, Forth brought together many local stakeholders including transit and housing groups, the local economic development office, and the carshare platform partner. Regular outreach, education, and user surveys have been conducted to collect feedback on the service.

The project aims to provide equitable access to the cars by locating two charging sites by income-based housing, offering in-app Spanish language translation, and providing an option for prepaid credit card payment, which would enable access for some unbanked individuals. The project initially intended to offer tiered pricing options for lower income users but opted to provide at the lowest flat rate its vendor would accommodate. The three-year CRuSE demonstration period is scheduled to end in December 2023.<sup>7</sup>



Source: Forth

<sup>5</sup> Details for the CRuSE project obtained from [forthmobility.org/our-work/CRuSE](https://forthmobility.org/our-work/CRuSE). We thank Lindsay Schuelke, program manager at Forth, for providing additional program information over email.

<sup>6</sup> For further funding opportunities through DOE's Vehicle Technology Office (VTO), visit their [Funding Opportunities](#) page.

<sup>7</sup> See Forth's detailed project objectives in DOE's [2020 Annual Progress Report](#) (Section I.27).

## ACEEE SUGGESTIONS FOR OTHER LOCAL GOVERNMENTS:

- Engage multiple stakeholders at various levels, including other local or national organizations.
- Prioritize local workforce and resources for ongoing project operations and maintenance needs.
- Consider accessibility for a variety of users by including a tiered pricing structure and alternate payment method for unbanked individuals.
- Gauge user experience on an ongoing basis. For example, Forth learned through user surveys that the initial vehicles were range-limited and replaced them with newer models.

