



# Helping America's Rural Counties Transition to Cleaner Fuels & Vehicles

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Transportation Energy  
Partners

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Project ID: ti129



## TIMELINE

Start: October 1, 2020

End: June 20, 2024

36% Complete

## BUDGET

Total project funding: \$2,310,562

- DOE share: \$1,078,580
- Cost share: \$1,231,982

Budget Period 1: \$823,085

Budget Period 2: \$760,300

Budget Period 3: \$727,177

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

## PARTNERS

**Leader:** Transportation Energy Partners

Clean Cities Coalition Partners

- Alabama Clean Fuels Coalition
- Clean Fuels Ohio
- Columbia Willamette Clean Cities
- Drive Clean Indiana
- Utah Clean Cities
- Virginia Clean Cities
- Western Washington Clean Cities
- Wisconsin Clean Cities

Industry Partners

- Alliance AutoGas
- Altec
- Clean Fuels Alliance America
- Electric Drive Transportation Association
- Landi Renzo
- NGVAmerica
- Propane Education Research Council
- REG
- Toyota

## BARRIERS ADDRESSED

- Lack of staff capacity and expertise to explore and test out new technologies.
- Limited resources to provide the upfront financing often needed to purchase clean fuels and vehicles.

# Project Objectives

## OBJECTIVES

- Create models for effectively transferring advanced clean fuel and vehicle technologies to small and rural communities, which face unique challenges and are often underserved.
- Disseminate lessons learned and playbook for successful replicability to counties in the target states and across the country.

## IMPACT

- New strategies and messages for rural communities to explore and test out cleaner fuels and vehicles.
- Increased understanding of local and regional assets that can be leveraged and enhanced by advancing clean transportation solutions.
- New models to enable county governments and rural communities to join together and conduct regional clean transportation planning for vehicles and infrastructure.

## VTO TI GOALS

- Improving fuel diversity: Education and testing a full range of clean fuel solutions.
- Increasing local resiliency: Promotes diverse range of clean vehicle and infrastructure solutions.
- Reducing greenhouse gas emissions: Promotes wide adoption of emission-reducing fuels and vehicles in small and rural communities.

# Project Approach

## **BUDGET PERIOD 1: OUTREACH AND EDUCATION**

- Convene and operate national Project Advisory Committee.
- Conduct outreach to rural county leaders & educate on
  - benefits of clean fuel vehicles
  - opportunities to receive technical assistance through this project.
- Prioritize leaders in rural counties to receive in-depth technical assistance.

## **BUDGET PERIOD 2: TECHNICAL ASSISTANCE**

- Deliver in-depth technical assistance to leaders in rural counties through fleet assessments and workshops.
- Connect small and rural community leaders and fleet managers with subject matter experts and demo vehicles.

## **BUDGET PERIOD 3: NATIONAL REPLICATION PLAYBOOK**

- Complete remaining technical assistance and vehicle demonstration activities.
- Collect and analyze project results.
- Create replication playbook and resources.
- Disseminate playbook to rural communities across the country.

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# Milestones (1/2)

Budget Period 1 Milestones			
Milestone	Type	Description	Progress
<b>PAC formed and operational</b>	Technical	Membership includes ≥ 7 Clean Cities representatives, ≥ 5 industry representatives, and ≥ 3 association leaders with ≥ 2 quarterly meetings completed.	Accomplished
<b>Key leaders list completed</b>	Technical	≥ 15 key leaders identified and documented for each state.	Accomplished
<b>National Outreach Webinars</b>	Technical	Complete 3 national webinars with a goal of at least 6 participants from each target state on each webinar.	In Progress
<b>Outreach events completed in target states</b>	Technical	Complete ≥ 24 total outreach events (e.g., state webinars, statewide or regional meetings, presentations at state or regional workshops) with at least 3 performed in each project state.	In Progress
<b>Demo vehicles available and used for outreach.</b>	Technical	≥ 8 demonstration vehicles will be contracted for and made available for use in the target states.	Accomplished
<b>Technical assistance needs identified</b>	Go/No Go	In-depth technical assistance identified for ≥24 target counties with ≥ 3 in each project state.	In Progress

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# Milestones (2/2)

Budget Period 2 Milestones			
Milestone	Type	Description	Progress
Clean vehicle workshops complete	Technical	≥ 24 total clean vehicle workshops completed with ≥3 performed in each project state.	Not started
Fleet Assessments Complete	Technical	In-depth technical assistance provided in ≥24 target counties with ≥3 performed in each project state.	Not started
Vehicle Demonstrations complete	Technical	≥40 total vehicle demonstrations with a goal of equal distribution among the target states.	Not started
Fleet assessments complete.	Go/No Go	At least 24 fleet assessments complete.	Not started
Budget Period 3 Milestones			
Milestone	Type	Description	Progress
Complete vehicle demonstrations.	Technical	≥ 8 total vehicle demonstrations with a goal of equal distribution among the target states.	Not started
Surveys (including interviews) complete.	Technical	≥ 24 total surveys and interviews completed with ≥ 3 completed in each project state.	Not started
Draft Playbook	Technical	Draft playbook complete.	Not started
Playbook complete	Technical	Playbook dissemination list completed.	Not started
Disseminate Playbook	Technical	≥ 2 national and ≥ 8 state webinars completed for dissemination of the playbook and results.	Not started
Playbook disseminated nationally	Final	Playbook disseminated to 100% of entities identified on dissemination list.	Not started

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# Accomplishments & Progress: Project Advisory Committee



National Project Advisory Committee includes Clean Cities Coalition partners and industry representatives from across all clean fuel and vehicle types.

## CLEAN CITIES COALITIONS



## ELECTRIC



## ANTI-IDLING & HYBRID ELECTRIC



## HYDROGEN



## NATURAL GAS



## PROPANE



## BIODIESEL



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# Accomplishments & Progress: Demonstration Vehicles



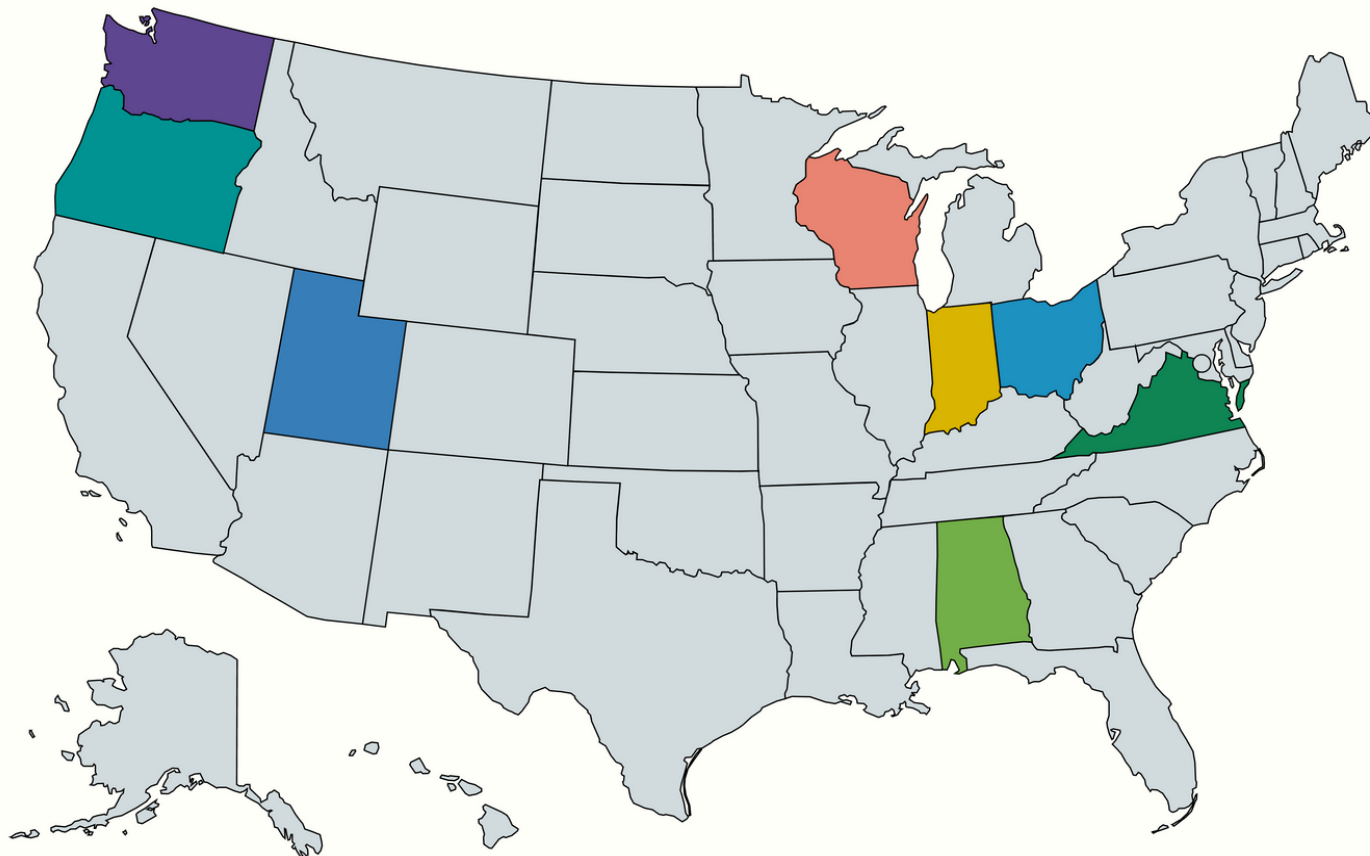
- Contracted with partners for eight demo vehicles:
  - (1) F-150 XLT propane-powered truck
  - (2) F-150 natural gas-powered trucks
  - (2) Bucket trucks that include the JEMS plug-in hybrid electric solution
  - (3) Hydrogen fuel cell sedans
- Submitted a request to include additional vehicle partners in the project, which if approved will add the following demo vehicles:
  - (1) F-150 ANG-powered pickup truck
  - (1) Ford Escape CNG-powered sedan
  - (1) F-350 CNG & LPG-powered truck
  - (24) 15' propane-powered box trucks
- In discussions with EV manufacturers to secure demo vehicle availability

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



# Accomplishments and Progress: Identification of Key Leaders

- Coalitions identified at least 15 key leaders in each state and assessed interest, suitability for receiving in-depth technical assistance in Budget Period 2.
- Final selection of 24 counties to receive technical assistance will be complete by the end of June 2022.



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# Accomplishments and Progress: National Outreach Webinars

Two of three national outreach webinars completed.

- First webinar covered new clean transportation funding opportunities for small and rural fleets and highlighted local leaders, success stories:
  - Electric patrol cars in Bargersville, IN
  - Propane school buses in Arcadia, WI
- Second webinar covered:
  - A rural propane transit case study presented by the local transportation director
  - USDOT ROUTES program and its new EV infrastructure toolkit
  - Propane and electric school buses: Benefits and funding strategies

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Bargersville, IN (Johnson Co.)

## Electric patrol cars

### Benefits:

- \$6,300/year per car savings: fuel & maintenance
- 100% reduction in carbon monoxide (CO) and nitrogen oxide (NOx) for every conventional vehicle replaced
- Positive feedback from community for cutting emissions
- Less maintenance means cost savings and more time in service
- Instant acceleration, great pursuit performance

### Challenges:

- Battery charge after 240 miles: Ideal to have DC fast charging station or 2+ Level 2 chargers



School District of Arcadia, WI (Trempealeau Co.)

## 14 school buses (92% of operations) powered by propane

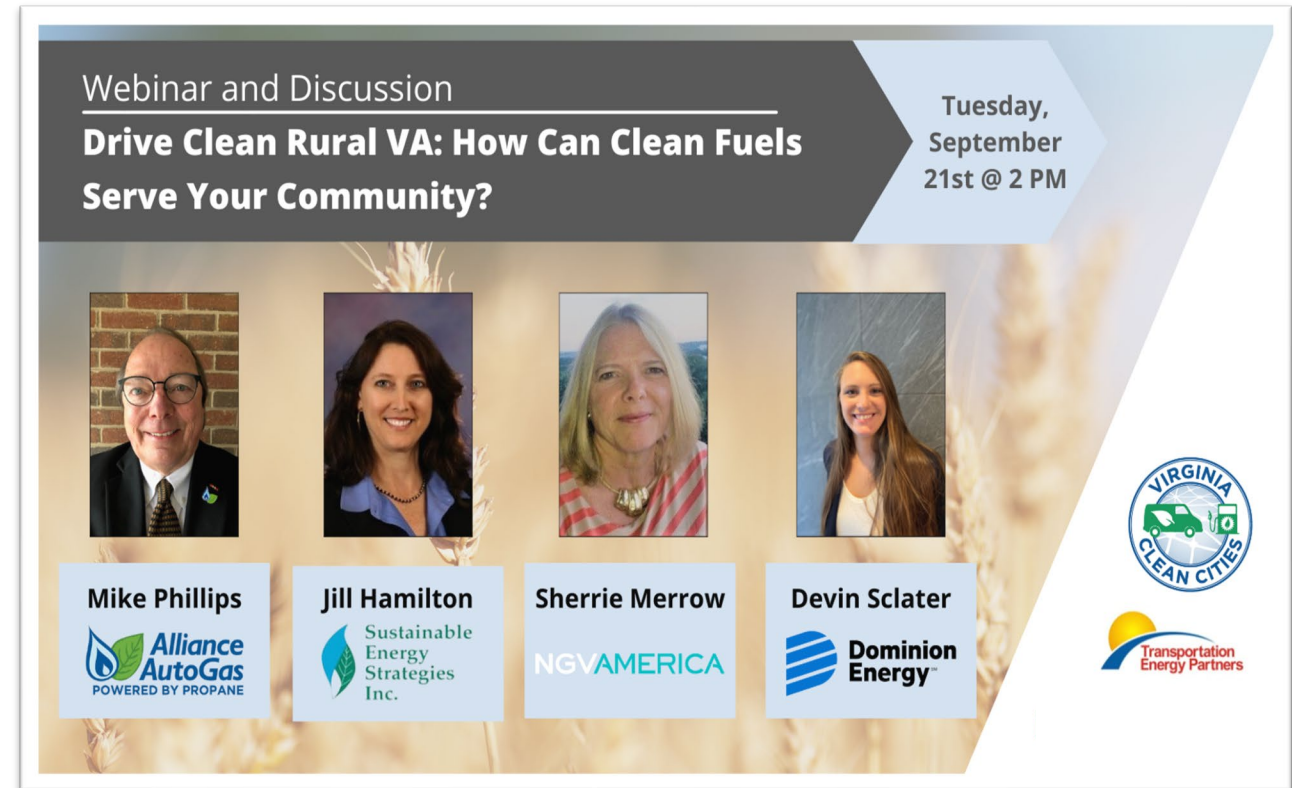
### Benefits:

- More reliable than traditional diesel
- Cost-savings on fuel, oil, parts & maintenance
- Grant funds and fuel tax incentives make LPG buses even more economical
- Environmentally friendly, healthier for children
- Faster warm up and getting to peak operation status
- Reduction in idle time



# Accomplishments and Progress: State Outreach Events

Coalitions have organized or participated in events to educate decision-makers on clean fuels and vehicles and publicize the project's technical assistance opportunities.





Webinar and Discussion


**Drive Clean Rural VA: How Can Clean Fuels Serve Your Community?**


Tuesday, September 21st @ 2 PM


Mike Phillips  
  
POWERED BY PROPANE

Jill Hamilton  
  
Sustainable Energy Strategies Inc.

Sherrie Merrow  
  
NGVAMERICA

Devin Sclater  
  
Dominion Energy

  
VIRGINIA CLEAN CITIES

  
Transportation Energy Partners

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# Collaboration and Coordination among Project Team

- Monthly calls with Coalitions
- Quarterly all-team meetings
- Shared Google Drive

**Project Sponsor:  
US DOE**

**Prime Recipient/Project  
Manager:**



**Subprime Recipient:**



## Industry Cost-Share Partners



## Clean Cities Coalitions





# Contribution to Energy Equity and Environmental Justice



- Focus on counties serving **rural communities**, which are often underserved and face unique challenges in acquiring the information and expertise, staff capacity, and funding needed to explore and utilize new technologies.
- Pilot projects in eight states will generate models for different paths that underserved rural communities can take to realize cost-saving, clean air, and economic development benefits of adopting a range of cleaner fuels and vehicles.
- Starting July 1, 2023, the project team will work with identified target communities to provide technical assistance in the form of:
  - Fleet assessments
  - Clean vehicle workshops
  - Demo vehicles
- In Budget Period 3 (July 2023-June 2024) the project team will collect and analyze lessons learned and best practices.
- A Replication Playbook, disseminated nationally, will provide models for underserved rural communities across the country interested in transitioning to cleaner fuels and vehicles.

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# Summary

## Objective

Create and share models for effectively transferring advanced clean fuel and vehicle technologies to underserved rural communities.

## Approach

**Outreach & Education:** Select 24 counties in 8 states to receive technical assistance.

**Technical Assistance:** Conduct fleet assessments, host clean vehicle workshops, provide demo vehicles in target counties.

**Dissemination of Results:** Draft and disseminate a National Replication Playbook so rural communities across the nation can learn from project successes and challenges.

## Accomplishments

**Convened Project Advisory Committee** with geographic diversity and expertise across all clean fuels.

**Secured demo vehicles** for rural fleets to try.

**Conducted education and outreach** to identify and prioritize counties for technical assistance.

## Next

**Finalize selection** of 24 target communities.

**Technical Assistance** in BP2 (July 2022 – June 2023).

**Creation & Dissemination of Replication Playbook** in BP3 (July 2023 – June 2024).

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