

Mid-Atlantic Electrification Partnership Annual Merit Review Presentation



Mid-Atlantic Electrification Partnership

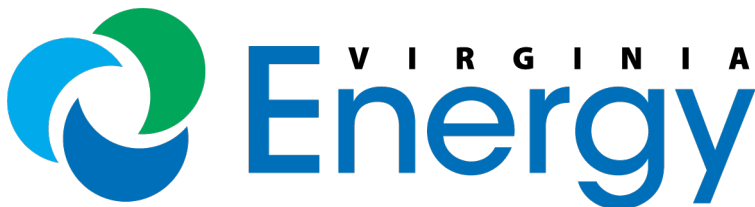
Principal Investigators: Al Christopher, Alleyn Harned

Presenter: Alleyn Harned

Organization: Virginia Department of Energy

Presentation Date: June 14, 2023

Project ID: ti127 (DE-EE0009225)



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



Overview

Timeline

Project Start Date: September 1, 2020

Project End Date: December 31, 2024

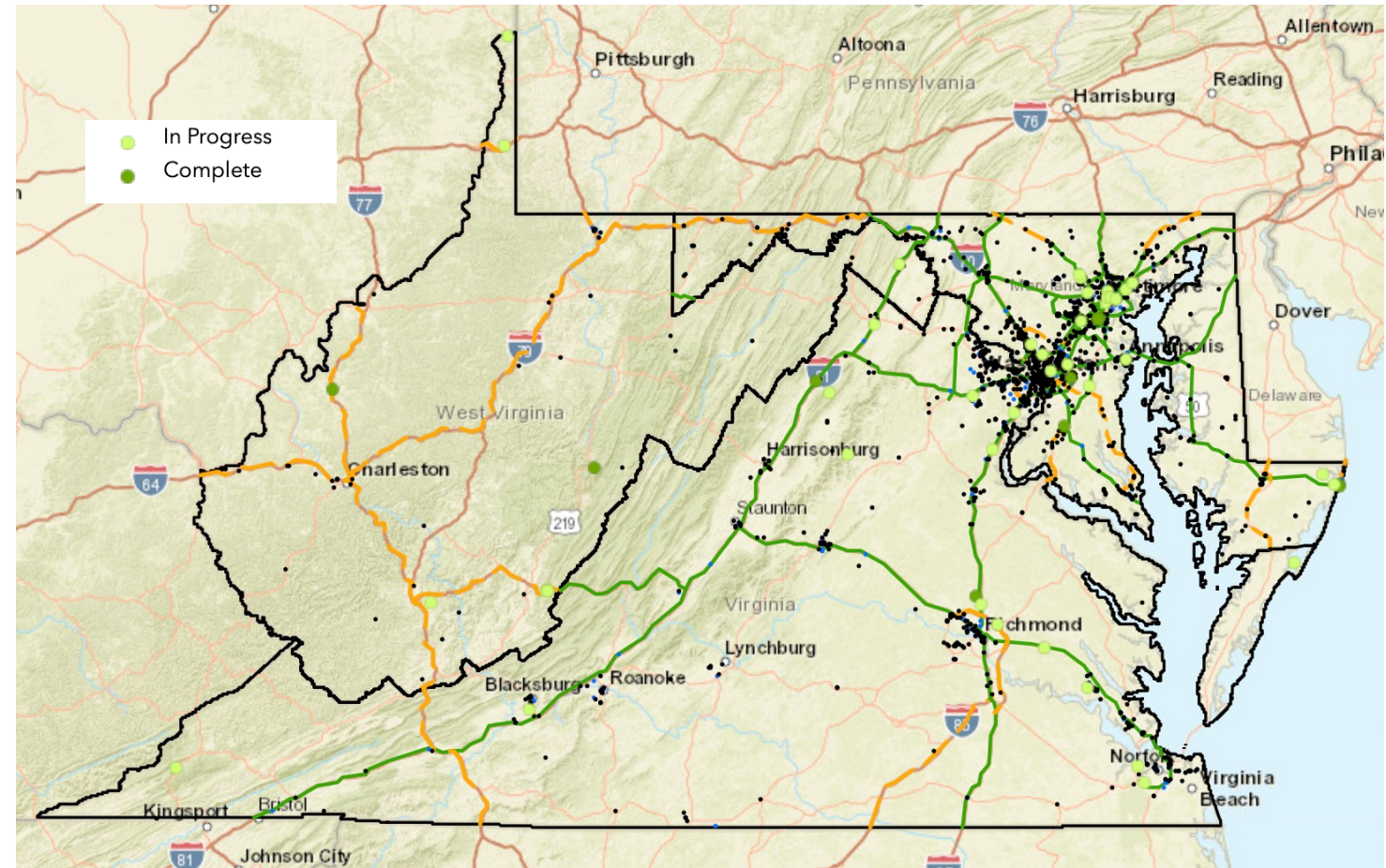
Percent Complete: 40%

Budget

- Total Project Funding: \$14,747,791
 - DOE Share: \$5,988,154
 - Cost Share: \$8,759,637
- Total Project Expended: \$4,246,132
 - DOE Share: \$1,347,512
 - Cost Share: \$2,898,620

Virginia Energy and Partners

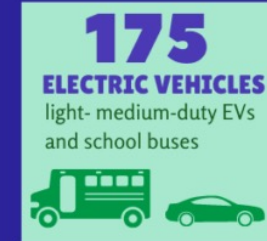
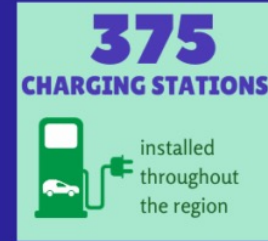
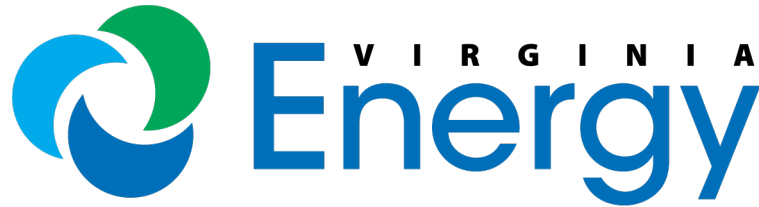
- Virginia Clean Cities (leader)
- Argonne National Laboratory (analysis lead)
- Greater Washington Clean Cities (vehicle lead)
- EVNoire (education lead)
- Plus other project partners



Barriers and Targets

1. Gaps in knowledge (analysis and education)
2. Limited awareness and access of infrastructure
3. Community Experience with vehicles

Project Objectives



Objectives:

- Develop tools, education, and teams
- Execute 25 educational events
- Deploying 175 EVs
- Installing 375 EV charging stations in VA, DC, MD, and WV

VTO TI Goals:

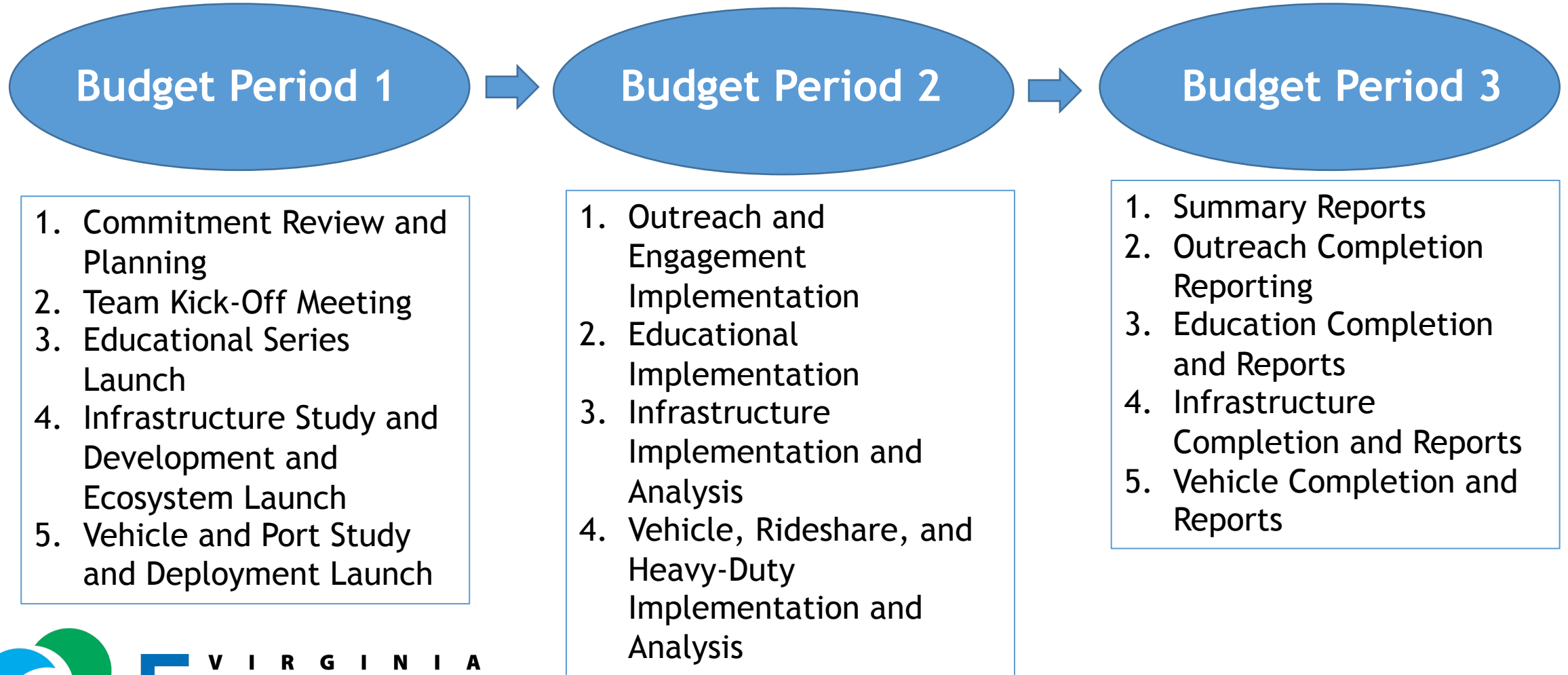
- Improving fuel diversity
- Increasing local resiliency (infrastructure reliability, diverse/resilient fueling, and transportation options)
- Reducing greenhouse gas emissions (through increasing alternative fuel use and transportation efficiency)

Impact:

- This project will introduce 375 EV charging stations and 175 EVs
- This project is giving local communities diverse fueling and transportation options.
- The increasing use of EVs reduces greenhouse gas emissions

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

Approach

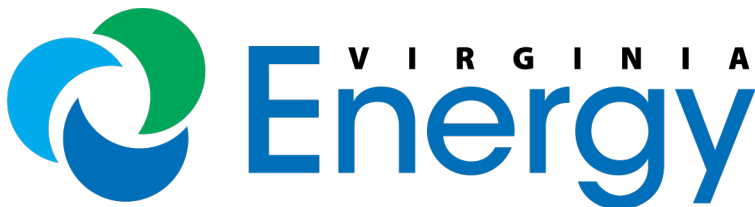


Milestones (Budget Period 2)

Milestone	Type	Description	Status
Consumer Education	Technical	Education on EVs used to inform consumers of costs and environmental benefits of these vehicles at events/ride and drives. A webinar conducted on various fleet vocations, vehicle types, and EVSE deployment	In Progress, 27 events
Data Collection and Analysis	Technical	Data collected on fleet EV charging and results will be presented in a report and webinar	In Progress
Fleet and Infrastructure Additions	Technical	EVs and charging infrastructure added to participant fleets and facilities	In Progress
Disadvantaged Communities Outreach	Technical	Outreach event targeting disadvantaged communities held. Report on needs for EV adoption in disadvantaged communities to be prepared and distributed	Complete
Tools Promotion	Technical	An overview of analysis and live demo of how to use EV data and tools presented in a series of webinars. Recordings will be made available for later viewing	Complete
Progress	Go/No Go	All educational events completed, vehicles deployed, and chargers completed	In Progress

Project Accomplishments and Progress

- Ecosystem taking shape with 25 regional and local partners, with an emphasis on rural and disadvantaged areas
- A construction schedule and plan for 200 fast L2 charging ports is complete
- Heavy usage of the 30 ride-share vehicles; 70 more arriving in September
- Charging station openings becoming the basis for the National Electric Vehicle Infrastructure (NEVI) Program
- The Joint Office of Energy & Transportation selected the project for a case study
- Argonne National Lab developed the Geospatial Energy Mapper (GEM) tool, a comprehensive online mapping tool. GEM is a redesigned and rebranded system based on the Energy Zones Mapping Tool (EZMT)
- Argonne National Lab published the technical report “Modeling Electric Vehicle Charging Station Siting Suitability with a Focus on Equity” on the U.S. DOE Office of Scientific and Technical Information website
- More than 27 virtual and in-person outreach events



Project Accomplishments and Progress



Greenspot e-mobility hub deployment



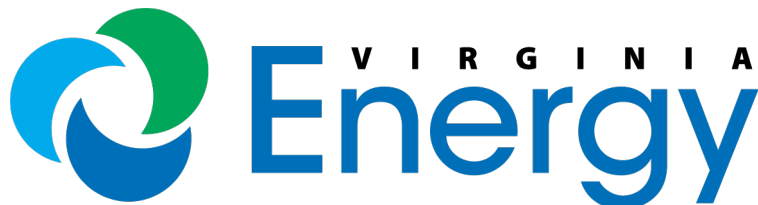
Example of Blink EV charging station ribbon cutting

Collaboration and Coordination

- VCC led monthly project meetings as well as monthly infrastructure meetings
- Argonne National Lab led monthly ports analysis meetings
- EVNoire led monthly education and outreach meetings

Example: EV charging deployment

- Virginia Clean Cities
- West Virginia Clean Cities
- Maryland Clean Cities
- Blink
- Greenspot
- Beam Global
- Dominion Energy (utility)



Contribution to Energy Equity and Environmental Justice

Project partners are working with historically Black colleges and universities (HBCUs) to provide EV demos, education, and outreach to students

Benefits to underserved communities include:

- Ride-share vehicles are experiencing heavy use, and the zero-emission vehicles are reducing pollution in communities while giving economic opportunities for drivers
- The intake call process with prospective site hosts and communities serves as a team and national model for environmental justice listening
- Co-benefits from the outreach and mapping analysis components allowing partners to identify overlaps in charging gaps and community interest, many of which are located in rural and Justice 40 communities



Summary Slide

Relevance:

- Addressing EV charging gaps in the Mid-Atlantic Region
- Timely national supporting tools and education efforts for equity
- Ecosystem development and preparing for long term fuel transition

Approach:

- Education: large-scale virtual and increased in-person events
- Infrastructure study and development, releasing tools
- Vehicle and ports planning; EV charging station deployment

Collaborations:

- Multiple collaborations in EV charging station deployment
- New collaborations with external hospitality and retail partners

Accomplishments:

- 80 L2s ports, 2 hubs deployed, and 20 DCFCs done
- Preparing construction schedule for remaining fast L2 charging ports
- New publicly available GEM analysis tool launched