

Electric Vehicle Charging Station Needs Assessment

Project Scope

Background

As electric vehicles (EVs) take up greater shares of the automotive market, the importance of developing infrastructure to support the use of these vehicles becomes a larger concern. The parking garages in downtown Charlottesville are being outfitted with EV charging stations, and the demand for these facilities will continue to grow as more consumers opt for electric vehicles.

MPO staff will assess the predicted need for EV charging stations in the area and begin identifying sources that could likely support this need.

Goal

Increase transportation options, reduce fossil fuel emissions, and improve transportation infrastructure in the Thomas Jefferson Planning District Commission (PDC) area by improving the supports for the use of electric vehicles for residents.

Milestones

1. Projection of EV use and charging station needs throughout the PDC area
2. Develop a network of key stakeholders to assess and build strategies for meeting charging station needs
3. Build partnerships with government, community, and business leaders to plan for infrastructure in key locations
4. Investigate funding sources available for providing EV charging infrastructure at various types of facilities

Steps Towards the Milestones

1. Identify and consult with stakeholders

Timeline: First Quarter and ongoing

Deliverable: Kickoff meeting (Q1), regular contact with stakeholders

Resources: 2 hours a month (total 25 hours)

Stakeholders for this project will include government, community, and business leaders who are affected by the use of EVs in the PDC area and will provide guidance and direction to meet the project objectives. TJPDC staff will work with the stakeholders to assess the community EV support needs and develop strategies, in partnership, to meet those needs. Some of the questions for the stakeholders include:

- What are the EV needs in the PDC area?
- Are we asking the right questions?
- How can we promote and support the use of EVs in the PDC area?

Possible members would include representatives from:

1. Albemarle County
2. City of Charlottesville
3. VDOT
4. EV manufacture
5. Virginia Department of Motor Vehicles
6. Citizen/EV user
7. Major employers (University of Virginia)
8. Ride Share (commuter lots)
9. Virginia Clean Cities
10. MPO Tech and CTAC Committees
11. TJPDC Rural Tech Committee

2. Needs Statement and Data Collection

Timeline: Second and Third Quarter

Deliverable: Projection of EV use and charging station needs throughout the PDC area

Resources: 150 hours

The needs statement will describe the purpose of the project and why it is important to support EV use in PDC region. This step will also work to identify any missing supports for EV use in the PDC area. Some of the factors researched and sources used could include:

1. Market share and historical trends, factors that influence EV purchase and use, why it is important to support, infrastructure opportunities
2. How many electric vehicles there are in our PDC region? Registration, licensing fees
3. Destination/Commute patterns, travel patterns
4. Industry needs, manufactures, dealerships, what information they are giving
5. MetroQuest Survey
6. Inventory of charging stations

3. Recommendations

Timeline: fourth Quarter

Deliverable: Final Report disseminated to Technical Committee and the public

Resources: 25 hours

In addition to building partnerships with key stakeholders and bringing awareness about EVs to the community, the project will produce a final report that will include the needs identified in step two above and possible strategies to support EV use in the PDC area. These strategies could include:

1. Recommended actions to support EV use, including zoning ordinances, promotional activities, and strategic locations for charging stations to support EV use
2. Funding sources available for providing EV charging infrastructure at various types of facilities