

Regional Electric Vehicle Infrastructure Implementation (REVII) Strategy

INTRODUCTION TO THE REVII STRATEGY

- **Background on the REVII Strategy:** Developed by National Capital Region Transportation Planning Board (TPB) and Metropolitan Washington Council of Governments (COG) as a follow up to TPB's Climate Change Mitigation Study of 2021 (CCMS).
 - CCMS found that zero-emission vehicle (ZEV) adoption is a critical component of achieving significant GHG reductions from on-road transportation sources.
- **Goal of the REVII Strategy:** Guide state and local jurisdictions across the region in the development of their EV charging infrastructure to support the electrification of light-duty vehicles (LDVs).
- **Why the REVII Strategy is Important:** The REVII Strategy aims to identify solutions that can address and fill gaps in charging infrastructure around the region by informing member jurisdictions of possible scenarios for EV market growth and their associated infrastructure demands, and by offering recommendations for deployment locations.

OBJECTIVES OF THE REVII STRATEGY

[The REVII Strategy](#) has three primary objectives (Figure 1). To meet these objectives, the REVII Strategy includes an assessment of charging infrastructure needs based on anticipated EV demand and identifies priority locations for deploying chargers based on considerations such as accessibility and convenience for drivers, support for multi-family housing (MFH) residents, and equitable access for individuals living and working in Equity Emphasis Areas (EEAs).



Identify locations for publicly accessible Level 2 and direct current fast charging facilities to support increased EV adoption throughout the metropolitan Washington region.



Support reliable access to publicly accessible EV charging infrastructure, particularly in areas with limited at-home charging, including multi-family housing (MFH) developments and disadvantaged communities (DACs).



Help ensure that all populations in the metropolitan Washington region, including DACs and individuals living within equity emphasis areas (EEAs), are able to access and benefit from the financial and environmental benefits of EVs.

Figure 1. REVII Strategy Objectives

REVII STRATEGY ANALYSIS COMPONENTS

EV Registration Projections and EV Charging Needs

The first component of the REVII Strategy forecasts future light-duty EV registrations in the region under various policy scenarios. The projections are then used to estimate the approximate number of EV chargers needed to support the growing EV population.

The EV projections shown in Figure 2 and the EVI-Pro Lite tool from the U.S. Department of Energy are used to calculate the approximate number of EV charger ports needed for the future (Table 1).

The REVII Strategy estimates that by 2045 EVs may account for anywhere between 57% and 80% of all LDVs in the region. Figure 2 visualizes the low-, medium-, and high- adoption scenarios for each planning year in the region.

EV Charger Siting Analysis

The second component of the REVII Strategy is the EV charger siting priority map (see Figure 3), which identifies priority locations for deploying the EV charging scenarios listed in Table 1. The map highlights parcels of land that are scored based on their suitability for light-duty EV chargers; red indicates high priority deployment locations and blue indicates lower priority locations. There are three scenarios available for use by member jurisdictions: prioritizing direct current fast charging (DCFC) with high utilization, prioritizing Level 2 chargers with an equity focus, and prioritizing DCFC with a MFH focus.

Table 1. Projected Publicly Accessible Regional EV Charging Needs

Scenario		Charger Type	2030	2035	2045
Low	EV Charging Port Needs	Level 2	13,848	30,647	72,013
		DCFC	485	1,103	2,447
	EVs ⁶		464,246	987,682	2,777,657
Medium	EV Charging Port Needs	Level 2	21,840	44,333	86,936
		DCFC	785	1,538	2,955
	EVs		705,096	1,515,557	3,340,186
High	EV Charging Port Needs	Level 2	29,339	58,822	98,704
		DCFC	1,052	2,024	3,320
	EVs		945,945	2,043,433	3,902,714

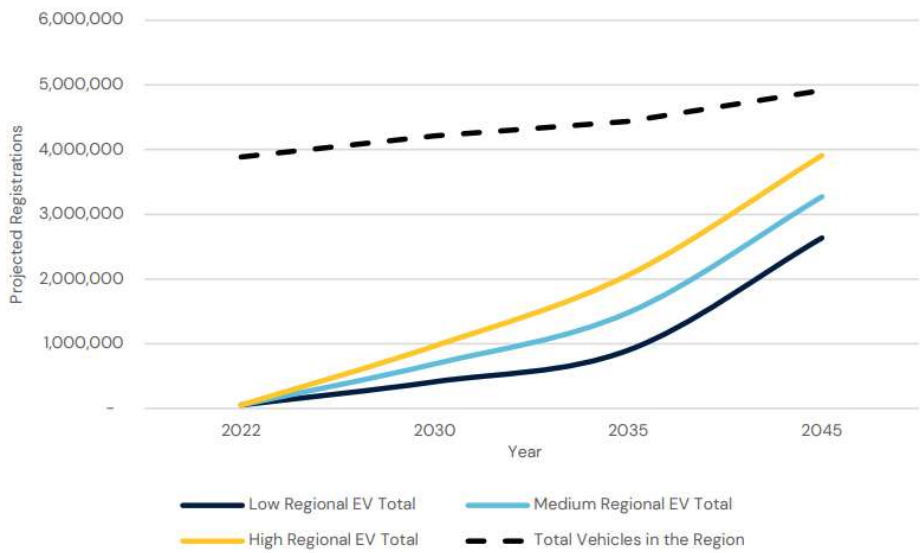


Figure 2. Light-Duty EV Registration Projections in the Region

Use the REVII Strategy Throughout Your Planning Process:

- Identify priority locations to focus planning efforts
- Crosscheck against locations jurisdictions have already flagged as high interest areas for charging deployment
- Select high priority parcels for in-depth charging station siting assessments
- Engage with private property and non-government site owners to encourage and support the deployment of EV charging stations on their property

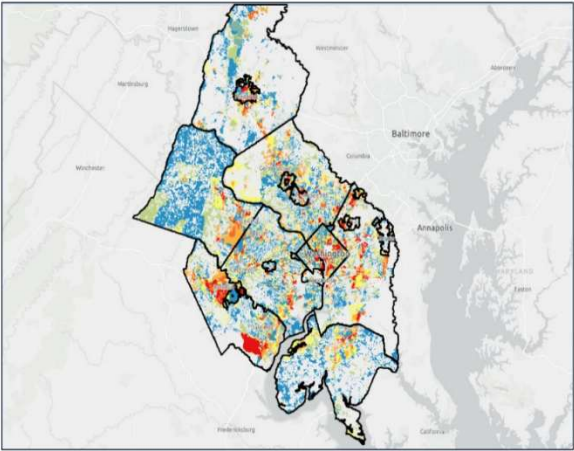


Figure 3. Regional EV Charging Station Analysis