

ELECTRIFYING THE FUTURE: STRATEGIES AND SOLUTIONS FOR CLIMATE POLLUTION REDUCTION FOR ONROAD TRANSPORTATION

BACKGROUND ON ELECTRIC VEHICLES

Plug-in Hybrid Electric Vehicles (PHEVs) are low emission vehicles powered by electricity and gasoline. The electric batteries are primarily charged by being plugged into a charging port.

PHEVs in COG Region in 2023: 29,584

Battery Electric Vehicles (BEVs) are zero emission vehicles that are solely powered by electricity and are recharged by being plugged into a charging port.

BEVs in COG Region in 2023: 82,121

EV CHARGING IN THE REGION

Charging infrastructure has become widely accessible, with 3,655 stations and 10,406 charging ports currently available throughout the Metropolitan Washington Council of Governments (COG) region.

Virginia

1,755 stations

4,887 ports

Maryland

1,572 stations

4,438 ports

D.C.

328 stations

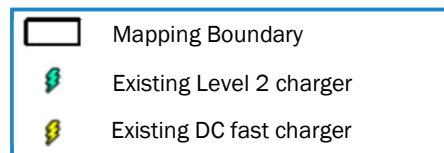
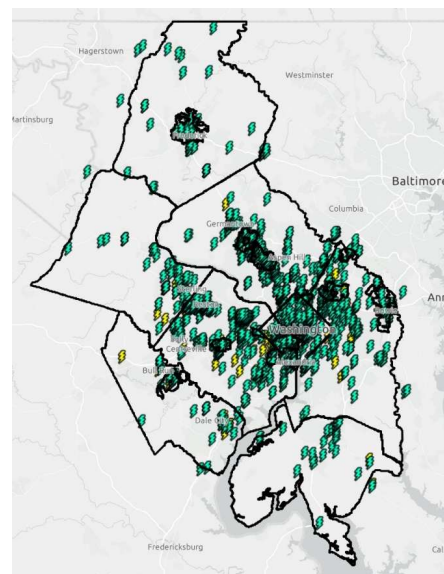
1,081 ports

Charging stations are designed to provide a specific level of charging power: **Level 1, Level 2, and DC fast charger**. Each level has specific requirements for power supply as well as different shaped plugs for connection to the vehicle.

A Level 1 charger requires 120V and can be plugged into a regular home outlet. Level 1 chargers provide 2-5 miles of estimated range per hour, on average.

A Level 2 charger requires 240V, and its plug type differs from a Level 1 charger. Level 2 chargers need a specific type of wall outlet installed for residential locations or they can be hardwired (as commonly seen at public stations). Level 2 chargers provide 10-20 miles of estimated range per hour of charging, on average.

A DC fast charger requires 400-1000V DC that is usually found at a public charging station. DC fast chargers provide 180-240 miles of estimated range per hour of charging, on average.



Source: MWCOG EV Charging Station Locator

REGIONAL EV GOALS

The Transportation Planning Board (TPB) adopted regional voluntary, on-road transportation GHG reduction goals of **50% below 2005 levels by 2030 and 80% below 2005 levels by 2050** ([Visualize 2045 Plan](#)).

EV INCENTIVES AND GRANTS

Regional

- [EV Deployment Clearinghouse](#)
- [REVII Strategy](#)

D.C.

- [AFV Conversion and Infrastructure Tax Credit](#)
- [District of Columbia's NEVI Planning](#)
- [Reduced Registration Fee for EVs and Fuel-Efficient Vehicles](#)
- [EV Title Excise Tax Exemption](#)
- [Alternative Fuel Vehicle Exemption from Driving Restrictions](#)

Maryland

- [Maryland's NEVI Planning](#)
- [Clean Energy Grants](#)
- [EV Charging Station Rebate Program](#)
- [EV and FCEV Tax Credit](#)
- [Solar Canopy EV Infrastructure Grant](#)
- [EV HOV Lane Exemption](#)
- [Zero Emission School Bus Grant Program](#)
- [Idle Reduction Weight Exemption](#)
- [Electric Vehicle Emissions Inspection Exemption](#)
- [MHD ZEV Grant](#)

Virginia

- [Virginia's NEVI Planning](#)
- [Government AFV Incentive](#)
- [Port Drayage Truck Replacement and Retrofit Incentive](#)
- [Biodiesel Production Tax Credit](#)
- [Agriculture and Forestry Biofuel Production Grants](#)
- [HOV Lane Exemption](#)
- [Green Jobs Tax Credit](#)
- [Biofuel Feedstock Registration Exemption](#)

- [EV Charging Station Deployment Grants](#)
- [Alternative Fuel and HEV Emissions Testing Exemption](#)
- [Idle Reduction and Alternative Fuel Vehicle Weight Exemption](#)
- [Alternative Fuel Tax Exemption](#)

Federal Grants

- [Freight Efficiency and ZEV Infrastructure Grants](#)
- [ZEV Infrastructure and Advanced Vehicle Grants](#)
- [Port Infrastructure Development Grants](#)
- [UPLIFT Climate and Environmental Community Action Grant](#)
- [DOT's FTA Bus and Bus Facilities Grants](#)
- [DOE charging infrastructure grant](#)
- [EPA Port Electrification Grants](#)
- [DOE EECBG Program](#)
- [DOT FHWA PROTECT Grant Program](#)
- [DOT FHWA EV Charging Reliability Grants](#)

Federal EV and Charging Infrastructure Programs

- [Community Change Grants Program](#)
- [EJ TCGM Program](#)
- [EJCPS Cooperative Agreement Program](#)
- [EJG2G Program](#)
- [Carbon Reduction Program \(CRP\)](#)
- [CFI Program](#)
- [NEVI Formula Program](#)
- [Low-No Vehicle Program](#)
- [Low or Zero Emission Ferry Program](#)
- [EPA Heavy-Duty ZEV and Infrastructure Grants](#)
- [EPA Clean School Bus Program](#)
- [EPA DERA Program](#)