



Regional Electric Vehicle Infrastructure Implementation Strategy: Draft EV Projections



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Regional Electric Vehicle Infrastructure Implementation (REVII) Strategy

Part 1: Electric Vehicle and Charging Needs Assessment and Forecast

- EV projections for 2030, 2035, and 2045 by county and region
- Scenario development is informed by:
 - Vehicle registration data and population data
 - Technology readiness
 - Total cost of ownership
 - Existing and upcoming federal policies
 - Barriers to EV adoption

Reviewing [draft projections](#) today

Part 2: Electric Vehicle Charger Deployment Planning

- Use EV projections to estimate number and type of chargers needed
- Recommendations will identify sites that have a high probability for charging demand.
- A GIS map will be created that shows priority charging locations and will be available for download and use by member jurisdictions.

→ **REVII Strategy Refresher**



Projection Methodology

- **Business as Usual (BAU)**: Growth rate informed by historical vehicle registration data and knowledge of the jurisdiction, serves as a conservative estimate.
- **Medium**: Average of BAU and high scenarios.
- **High**: Jurisdiction's proportion of state or district ZEV adoption goals; subsequent goal of 80% EVs by 2045. This scenario serves as the maximum potential for EV adoption.
 - EV registration goals & Advanced Clean Cars
 - 80% assumes maximum capacity for EVs on the grid

→ Projection Scenarios

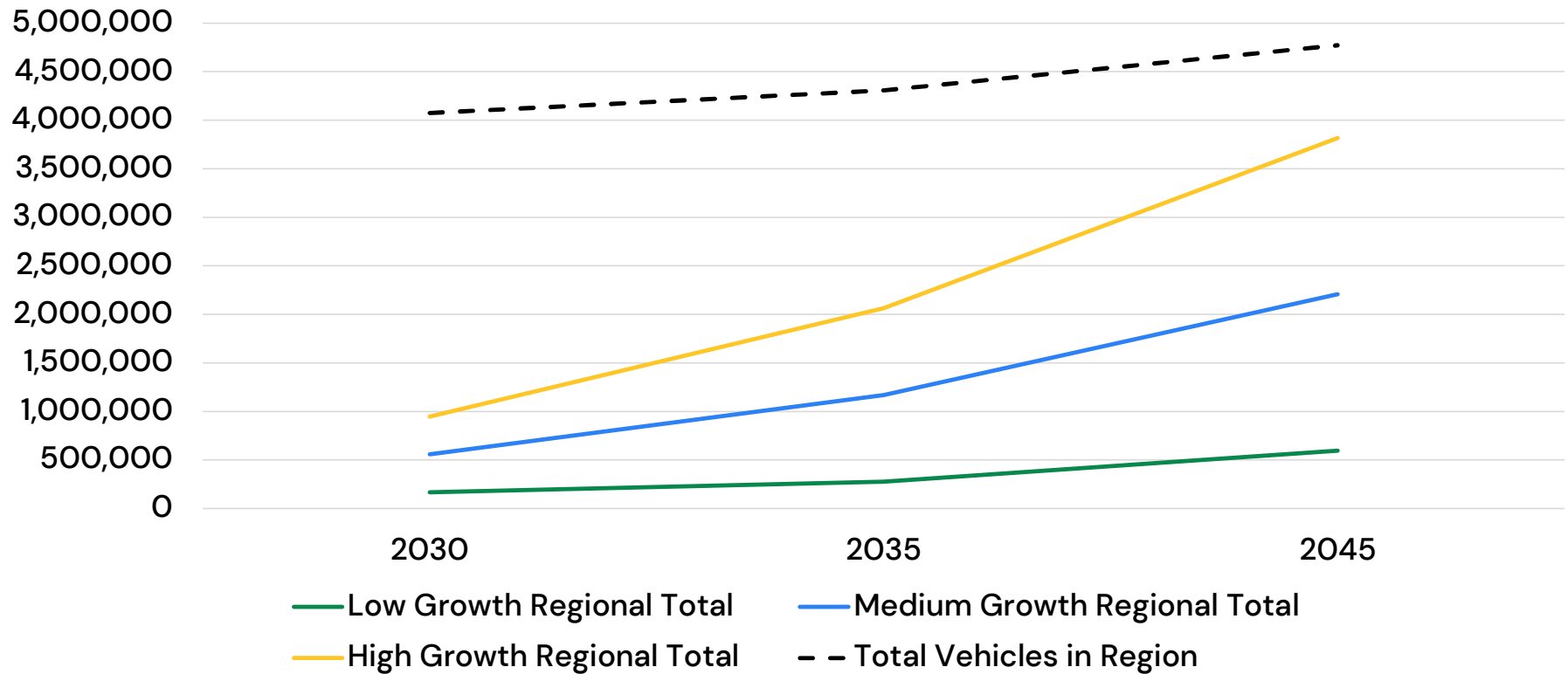
| Input Data | Source |
|---------------------------|---|
| State Population | US Census Bureau |
| Jurisdiction Population | A combination of MWCOG Cooperative Forecast 10 and US Census Bureau |
| Vehicle Registration | MWCOG data |
| EV and PHEV Registrations | MWCOG data |
| EV Adoption Goals | A combination of the Alternative Fuels Data Center and state or district agencies |

→ EV Projection Inputs



**Draft Projections
2030, 2035, and 2045**

Regional EV Projections by Scenario and Year



→ Draft EV Projections: Regional Summary

| Business As Usual | | | | | | |
|-------------------------------------|------------------|--------------|------------------|--------------|------------------|--------------|
| Year | 2030 | % EVs | 2035 | % EVs | 2045 | % EVs |
| Montgomery County | 36,539 | 4.8% | 59,601 | 7.5% | 126,774 | 14.5% |
| Prince George's County | 7,467 | 1.2% | 11,979 | 1.9% | 24,931 | 3.6% |
| Frederick County | 5,528 | 2.4% | 9,214 | 3.7% | 20,374 | 7.3% |
| Charles County | 1,481 | 1% | 2,464 | 1.6% | 5,442 | 3.1% |
| Arlington County | 6,931 | 4.9% | 11,133 | 7.7% | 23,017 | 15.1% |
| City of Alexandria | 3,941 | 3.2% | 6,415 | 5% | 13,570 | 9.9% |
| Fairfax County* | 39,582 | 4.1% | 65,102 | 6.4% | 140,576 | 12.5% |
| Loudoun County | 18,041 | 5.4% | 31,255 | 8.6% | 73,133 | 17.2% |
| Prince William County* | 8,205 | 1.8% | 13,803 | 2.9% | 31,040 | 5.6% |
| District of Columbia | 12,942 | 4.2% | 21,104 | 6.5% | 45,068 | 12.6% |
| Regional EV Total | 140,655 | | 232,070 | | 503,926 | |
| Total Vehicles in the Region | 4,075,113 | | 4,307,745 | | 4,773,012 | |
| Share of EVs in the Region | 3% | | 5% | | 11% | |

→ Draft EV Projections: Regional Summary (BAU)

**Fairfax County totals include City of Fairfax and Falls Church, and Prince William County totals include City of Manassas and City of Manassas Park*

| Medium Growth | | | | | | |
|------------------------------|-----------|-------|-----------|-------|-----------|-------|
| Year | 2030 | % EVs | 2035 | % EVs | 2045 | % EVs |
| Montgomery County | 70,566 | 9.3% | 202,241 | 25.3% | 412,435 | 47.3% |
| Prince George's County | 52,050 | 8.4% | 146,681 | 22.8% | 288,262 | 41.8% |
| Frederick County | 17,561 | 7.5% | 58,222 | 23.4% | 122,004 | 43.6% |
| Charles County | 9,798 | 6.7% | 34,696 | 22.3% | 72,800 | 41.6% |
| Arlington County | 24,834 | 17.7% | 42,240 | 29.3% | 72,565 | 47.5% |
| City of Alexandria | 20,799 | 16.9% | 35,807 | 28% | 61,680 | 44.9% |
| Fairfax County* | 168,811 | 17.5% | 294,936 | 28.9% | 521,562 | 46.2% |
| Loudoun County | 61,389 | 18.5% | 110,805 | 30.5% | 206,573 | 48.6% |
| Prince William County* | 73,853 | 16.6% | 132,495 | 27.5% | 237,433 | 42.8% |
| District of Columbia | 45,098 | 14.6% | 89,693 | 27.6% | 165,854 | 46.3% |
| Regional EV Total | 544,758 | | 1,147,816 | | 2,161,168 | |
| Total Vehicles in the Region | 4,075,113 | | 4,307,745 | | 4,773,012 | |
| Share of EVs in the Region | 13% | | 27% | | 45% | |

→ Draft EV Projections: Regional Summary (Medium)

**Fairfax County totals include City of Fairfax and Falls Church, and Prince William County totals include City of Manassas and City of Manassas Park*

| High Growth | | | | | | |
|------------------------------|-----------|-------|-----------|-------|-----------|-------|
| Year | 2030 | % EVs | 2035 | % EVs | 2045 | % EVs |
| Montgomery County | 104,593 | 13.7% | 344,882 | 43.1% | 698,095 | 80% |
| Prince George's County | 96,634 | 15.6% | 281,383 | 43.8% | 551,593 | 80% |
| Frederick County | 29,594 | 12.7% | 107,231 | 43.1% | 223,634 | 80% |
| Charles County | 18,115 | 12.4% | 66,929 | 43% | 140,158 | 80% |
| Arlington County | 42,738 | 30.5% | 73,348 | 50.8% | 122,112 | 80% |
| City of Alexandria | 37,656 | 30.6% | 65,199 | 51% | 109,790 | 80% |
| Fairfax County* | 298,040 | 30.9% | 524,770 | 51.5% | 902,549 | 80% |
| Loudoun County | 104,737 | 31.5% | 190,355 | 52.4% | 340,013 | 80% |
| Prince William County* | 139,502 | 31.3% | 251,186 | 52.1% | 443,827 | 80% |
| District of Columbia | 77,253 | 25% | 158,282 | 48.6% | 286,640 | 80% |
| Regional EV Total | 948,862 | | 2,063,563 | | 3,818,410 | |
| Total Vehicles in the Region | 4,075,113 | | 4,307,745 | | 4,773,012 | |
| Share of EVs in the Region | 23% | | 48% | | 80% | |

→ Draft EV Projections: Regional Summary (High)

*Fairfax County totals include City of Fairfax and Falls Church, and Prince William County totals include City of Manassas and City of Manassas Park



Next Steps

- COG Staff will share the draft projections following this meeting
- Feedback is requested by COB **September 28th**
 - *Your feedback will help inform modifications to the draft projections and, ultimately, the EV Charger Deployment Planning analysis that these projections support.*
- Questions may be directed to:

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→ **Working Group Feedback**



Questions?