



MCCC GHG MWG – Near end-project update: Accelerating light-duty ZEV adoption across Maryland

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Project Goals

- Evaluate the current status of Maryland's light-duty zero emission vehicle (ZEV) and charging infrastructure plans, programs, and other efforts → **Determine if they are sufficient to meet the State's goal of reducing GHG emissions by at least 60% by 2031**
- Evaluate the effectiveness of existing Maryland programs to determine if: 1) **they can be improved** and 2) **whether they should continue**
- Identify/**develop potential policy frameworks for improved/new programs** to increase adoption to meet/exceed the State's goals

Project Tasks

- Task 1 – Reference Case Analysis
- Task 2 – Recommendations for State Action
- Task 3 – Recommendations for Equitable ZEV Charging Solutions

Current Market Trends, Forecasts, and Projections

- **Projections**

- U.S. EIA – 2022 Annual Energy Outlook – Only public source of detailed national trends/data
- **MD 2030 GGRA Plan (2021, 2017 data) best and most detailed MD-specific data and projections

- **Calculation tool**

- Developed based on MD 2030 Plan framework/assumptions
- Updated with EIA VMT → Evaluating MDE and EIA vehicle class (LDA/LDT) adoption trends
- Updating tool ZEV sales data with MVA and ZEEVIC data
- Current scenarios: (MD) Reference, (MD) GGRA, (MD) MWG, ACC II (all BEV), ACC II (20% PHEV), ACC II
- Estimates ZEV sales, ZEV stock, net GHG avoided, NOx estimates, and public EVSE (AC L2 and DCFC). Baseline with MVA data and industry sales projections and for program scenario evaluations.

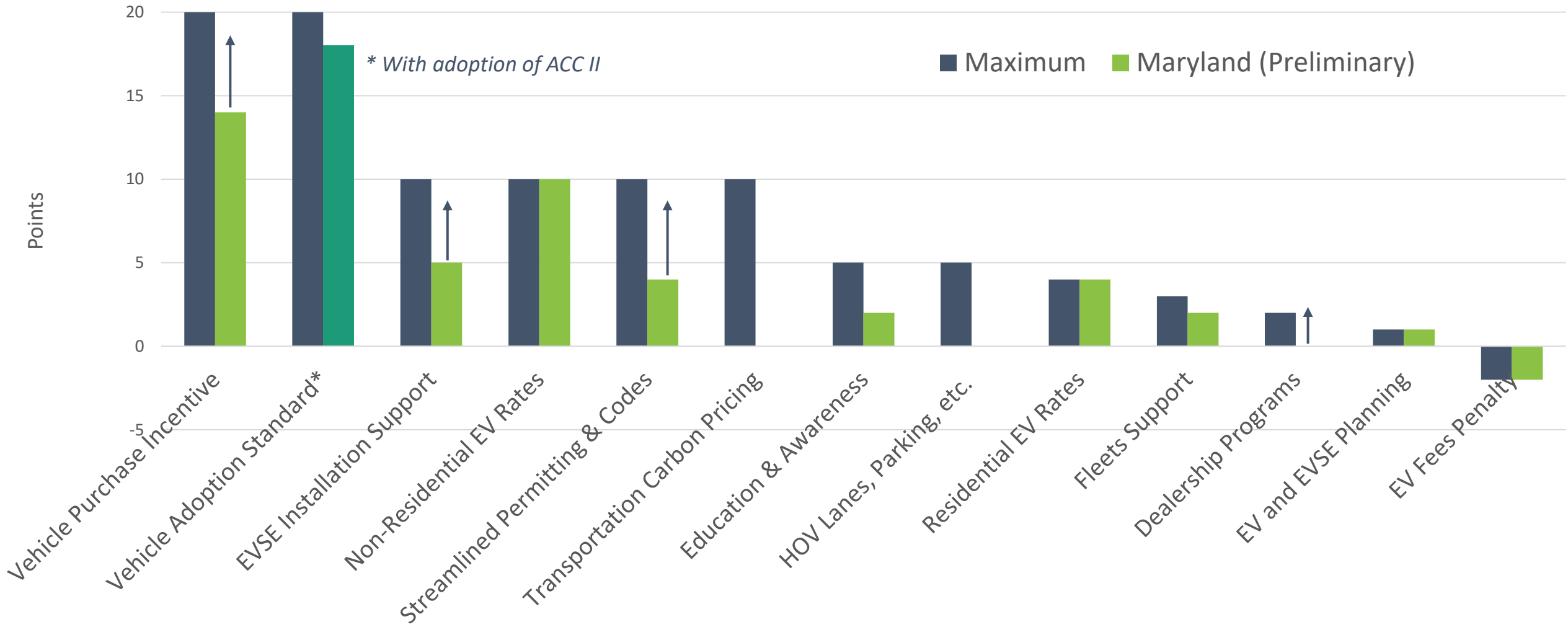


Recommendations for State Action

Determine practical actions Maryland could take to achieve the greatest reduction in greenhouse gas emissions from light-duty vehicles by 2031

Use learnings from other states' programs to determine the most appropriate focus for Maryland's program(s)

NASEO ZEV Policy Rubric



Sales Tax Exemption for New ZEV Purchases

- Plug-in vehicles with MRSP <\$50,000 qualify for exemption from sales tax of 6%
 - Maximum value of exemption is therefore \$3,000; however common EVs such as the Nissan Leaf or Chevy Bolt would receive approximately \$1,700-\$1,800
- The sales tax exemption can be applied directly at point-of-sale. This is a best practice for motivating EV purchases.
- No pick-up trucks would currently qualify for any sales tax exemption
- Used vehicles do not currently qualify for any sales tax exemption
- The sales tax exemption is very funding constrained. The FY24 budget (\$8.25 M) will provide approx. 4,000 incentives – expected to be gone in 2-3 months
- Start-stop incentives greatly diminishes impact on the market
 - Many car buyers make decisions more slowly or outside of this short window; car dealers invest in sales they can count on all year
 - Ironically, incentives with such limited availability may increase “free ridership”

EVSE Installation Support: Public Charging

- MDOT
 - \$63 million available in **NEVI** funding through FY26 to develop DCFC stations along FHWA designated alternative fuel corridors
- MDE
 - MDE offers grants of up to 80% of the cost for the installation of direct current fast charging (DCFC) stations along Federal Highway Administration designated alternative fuel corridors through the **Electric Corridors Grant Program**, for up to \$150,000 per DCFC station and \$600,000 per applicant.
- MEA
 - The **Maryland Smart Energy Communities (MSEC)** program offers local governments grants for transportation-related projects, including the installation of EV charging stations. Grants are available for up to \$6,000 per charging station.
 - The **Electric Vehicle Supply Equipment (EVSE) Rebate Program** provides funding assistance for up to 40% of costs incurred acquiring and/or installing qualified EV supply equipment. Funding is exhausted until FY24.
- Utility
 - EVSE stations can be installed throughout Delmarva, PEPCO, and SMECO territory at no cost to government sites through the **Public Charging Program**, pending available funds.



EVSE Installation Support: Residential & Workplace

- **MEA**

- The Electric Vehicle Supply Equipment (EVSE) Rebate Program provides funding assistance for up to 40% of costs incurred acquiring and/or installing qualified EV supply equipment. Funding is exhausted until FY24.

- **Utility**

- Potomac Edison offers multifamily property owners a rebate of up to \$20,000 for the purchase and installation of qualified Level 2 or direct current fast charging (DCFC) stations on their property through the EV Driven Program.
- Delmarva and PEPCO offer a \$300 rebate to residential customers who install a Level 2 smart charger. For multifamily customers, they offer a 50% discount on equipment and free installation for Level 2 smart chargers, up to \$15,000
- BGE, Delmarva, and PEPCO offer 50% rebate on equipment, warranty, and installation, up to \$5,000/port/\$30,000 max for workplace charging
- Delmarva and PEPCO offer 50% discount on equipment and installation costs
- SMECO is making proposals for EVSE programs to the Public Service Commission

Recommendations for State Actions: Summary

1. Ensure sustainable funding for state sales tax exemption
2. Within 2 years: Extend sales tax exemption to used ZEV, introduce incentives for low-income households, and lift the MRSP cap for pickup trucks
3. Initiate a dealer support and engagement program
4. Provide financial and technical support to commercial and high-use governmental fleet conversion
5. Encourage ZEV initiatives and partnerships with ride-hailing services

** Recommendations for EV Charging are presented later*

Recommendations for State Actions: ZEV Purchase Incentive

- Maryland should plan for annually sustained funding for the sales tax exemption through 2026
 - *We are still estimating a sustainable budget consistent with sales targets*
 - After FY27, the state may be able to end the sales tax exemption on new cars and SUVs (subject to broad availability of federal tax credit)
- Within 2 years, MRSP cap should be increased for pick-up trucks, and potentially large SUVs
 - This higher cap could require the pickup truck/SUV to be full BEV in order to maximize GHG reductions
 - A \$60,000 limit would include the Ford F-150 Lightning (BEV); a \$75,000 limit would also include the Rivian R1T (BEV) – and Jeep Grand Cherokee, (PHEV w/ 26-mile range)
 - Consider an added incentive for pickup trucks, on top of 6% exemption to reduce incremental price

Recommendations for State Actions: Equity in EV Purchases

- New vehicles are inherently out of reach for a large portion of Maryland households, even those not considered “low income”
- Used EV markets are currently very limited, but are expected to grow
- **To increase equity of EV adoption, within 2 years, Maryland should extend the sales tax exemption to used EVs and establish an additional low-income incentive**
- Extending the sales tax exemption to used vehicles is relatively straight forward
 - Each vehicle should receive one used vehicle sales tax exemption in its lifetime.
 - It can be limited to dealership sales
- A low-income incentive should be provided at point-of-sale, to reduce the amount the individual must pay or finance
 - Income eligibility can be demonstrated through multiple means, especially via demonstrated qualification for any existing income-based assistance program

Looking to other states: Equity in EV Purchases

- [Washington](#) state and [New Jersey](#) offer sales tax exemptions and include used vehicles
 - Washington has an MSRP cap for tax exemption of \$45,000 for new vehicles and \$30,000 for used vehicles
 - New Jersey also offers a direct vehicle purchase incentive on top of the tax exemption
- [Maine](#) provides a low-income incentive for new BEVs of \$7,500 (compared to its standard incentive of \$1,000); lower amounts are available for new PHEVs (\$3,000 for low-income; \$500 for others)
 - Used vehicles are also eligible for an incentive of \$2,500 for low-income households only
 - All incentives are offered at point-of-sale through participating dealerships
 - Low-income customers complete a pre-purchase application with multiple options for income verification, including demonstrated qualification for most other income-based state assistance programs
 - (Maine also offers mid-level incentives for new BEV and PHEV for moderate-income households)

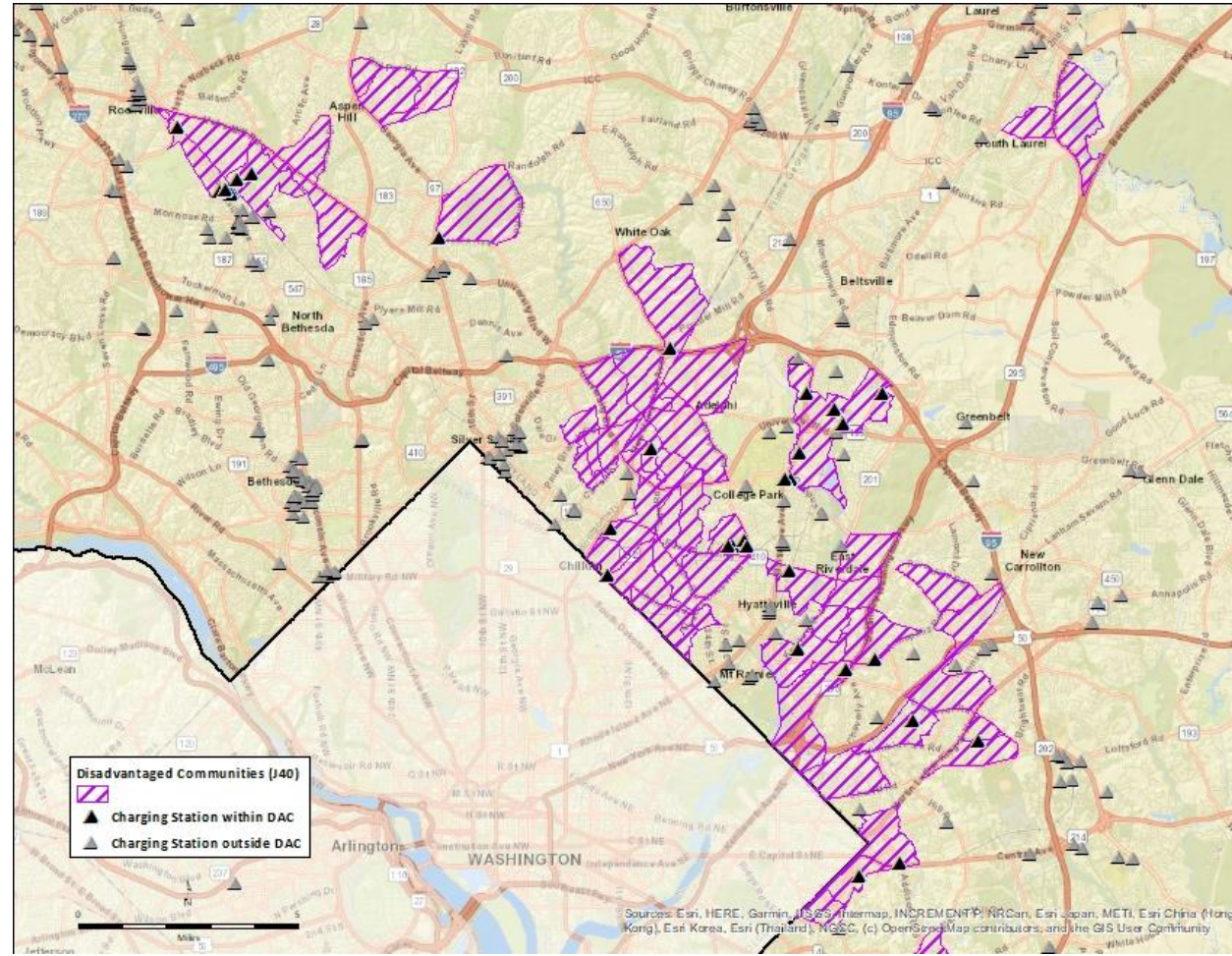
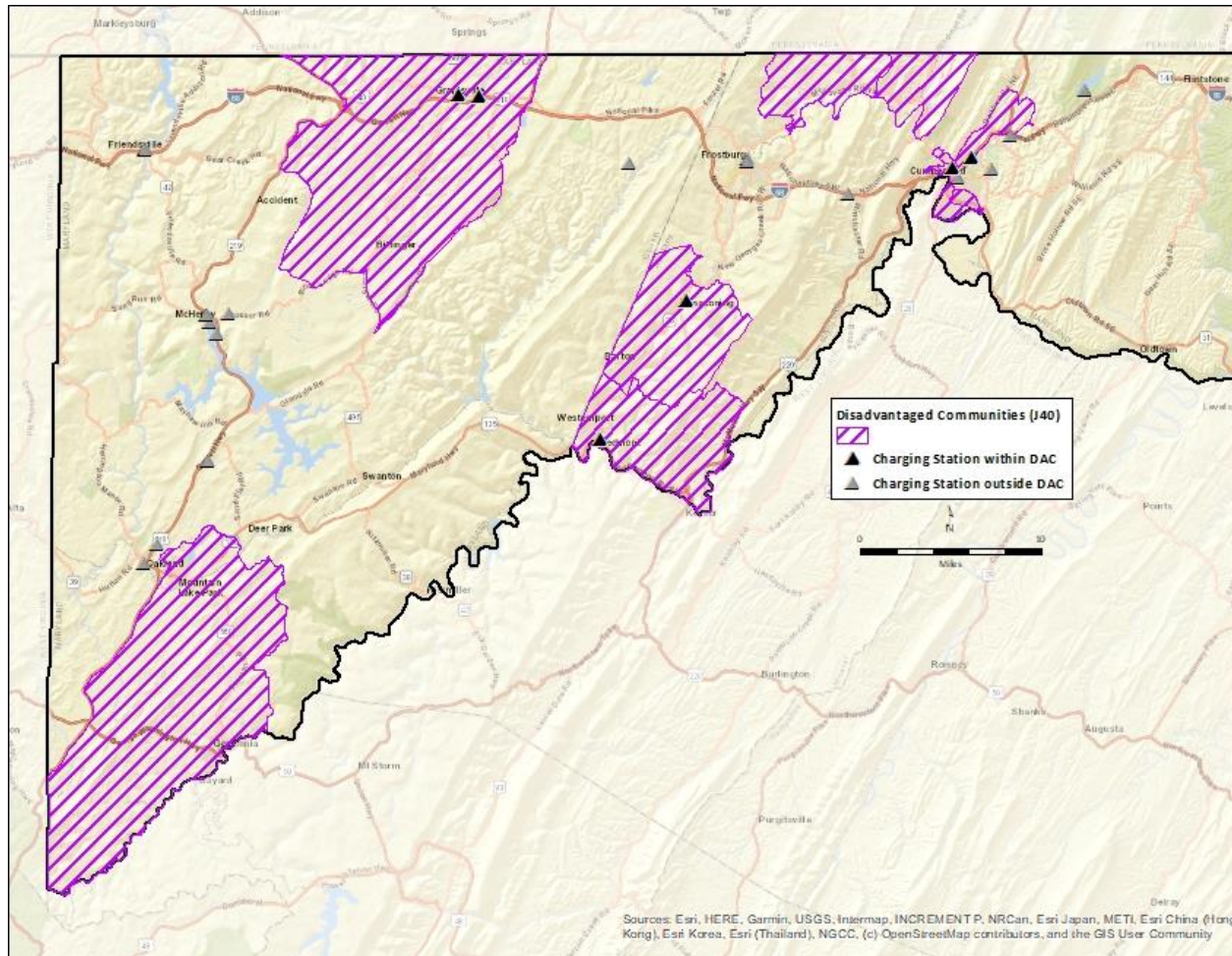
Recommendations for State Actions: Dealer Engagement

- Dealers are a critical link in vehicle purchasing decisions
- Dealerships and manufacturers may provide some training and education, but state programs, such as those in Vermont or Maine, provide more consistent and focused education, training and tools to support the EV sales process
- **Maryland should have a program to increase outreach, education and training support to dealers**
- **Maryland should consider either a per vehicle incentive and/or a stipend for dealers (e.g. \$200) and salespeople who attend training sessions about EVs and customer needs**
- Dealer engagement can also include targeting dealerships for EVSE installation (under existing EVSE incentive programs)

Recommendations for State Actions: Fleet Conversion

- Maryland should target vehicle and EVSE incentive programs at vehicle fleets, which *may* have relatively high VMT/vehicle
- **Providing technical support to help fleet managers understand, assess, and design economic fleet conversion strategies can be a relatively low-cost way to increase fleet conversion**
- In general, commercial fleets with the highest vehicle utilization will be the most economically motivated to begin conversion – and those conversions will also be associated with the highest GHG reduction
- Ride-hailing services such as Uber and Lyft are experimenting in some states with EV strategies, and some jurisdictions (e.g., NYC) will phase in EV requirements
- **Maryland should explore partnerships with ride-hailing companies to promote EV conversion and utilization; this is an area for innovation and creativity (e.g., coordinated marketing at BWI)**

Recommendations for Equitable ZEV Charging Solutions



Recommendations for Equitable ZEV Charging

1. Increase funding for public charging stations with emphasis on increasing volume of high visibility/easy access L2 charging
2. Set specific targets for charging investment in disadvantaged communities
3. Increase funding for charging stations to serve multi-family housing, including through utility programs
4. Update building codes to require charging or charging-ready new construction, especially for multi-family housing

Recommendations for Equitable Charging: Building Codes

- It is far easier and much less expensive to install EV charging infrastructure during new construction; however, **unamended, IECC 2021 does not include provisions requiring EV charging**
- Maryland should adopt model amendments to the IECC 2021 that require EV charging or “Charging-ready” infrastructure in single family, multifamily and/or commercial construction
- It is especially important to incorporate EV charging into new multifamily construction, because this is one of the most challenging spaces for charging retrofits
- The International Code Council documents possible amendments in its publication “[2021 Electric Vehicles and Building Codes: A Strategy for Greenhouse Gas Reductions](#)”
- Oregon requires 5% of multifamily parking spaces to be EV-ready (all electrical infrastructure short of the charging station itself); St. Louis, MO also requires 2% of spaces to have installed charging
- Dozens of local jurisdictions have similar or stricter requirements



Questions?

Thank you!

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