2023-FAV-SB477-PHI.pdf
Uploaded by: Anne Klase
Position: FAV

February 14, 2023

112 West Street
Annapolis, MD 21401

FAVORABLE – Senate Bill 477- Residential Construction or Significant Renovation- Electric Vehicle Charging

Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (Delmarva Power) support **Senate Bill 477- Residential Construction or Significant Renovation- Electric Vehicle Charging**. This legislation would require the installation of electric vehicle charging equipment during the construction or significant renovation of certain housing units and would also require a greater number of electric vehicle parking places.

Maryland has set an ambitious goal of 300,000 zero emission vehicles on the road by 2025 and 600,000 by 20230. By requiring the installation of electric vehicle charging infrastructure in new construction and renovations, this will lead to more electric vehicles on Maryland roads, effectively expanding the use of zero emission vehicles in the state. This is essential to achieving Maryland's climate and air quality goals. Finally, encouraging the growth of electric vehicles is critically important as transportation is the single largest GHG emissions generator in Maryland. Electric vehicles will play an integral role in helping Maryland meet its emission reduction goal.

Pepco and Delmarva Power are committed to helping Maryland achieve its electric vehicle goals. Accordingly, we support this legislation and respectfully request a favorable committee report. For reasons stated above, Pepco and Delmarva Power respectfully request a favorable report on Senate Bill 477 and we thank Chairman Feldman for sponsoring this legislation.

Contact:
Anne Klase
Senior Manager, State Affairs
240-472-6641
Annek.klase@exeloncorp.com

Katie Lanzarotto
Manager, State Affairs
202-428-1309
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SB477_MDSierra Club_fav 14Feb2023.pdf
Uploaded by: Brian Ditzler
Position: FAV

P.O. Box 278
Riverdale, MD 20738

Committee: **Education, Energy, and the Environment**

Testimony on: **SB477 - "Residential Construction or Significant Renovation - Electric Vehicle Charging"**

Position: **Support**

Hearing Date: **February 14, 2023**

The Maryland Chapter of the Sierra Club supports SB447. The bill would specify requirements for the installation of electric vehicle charging equipment during the construction or significant renovation of housing units that include at least one garage, carport, or driveway for each housing unit. New townhouses and multifamily buildings under construction that do not have at least one garage, carport or driveway for each housing unit but do have off-street communal parking must include at least one communal parking space for each 25 residential units featuring an electric vehicle (EV) charging station capable of at least Level 2 charging (alternating current electrical service with a minimum of 208 volts). Each communal parking space featuring EV charging equipment must be marked for EV charging only.

Current law requires the builder or builder's agent of new single-family detached homes and townhouses with at least a garage, carport, or driveway for each housing unit to provide the home buyer the option to have an EV charging station installed capable of at least Level 2 charging or a dedicated electric line to support the addition of a charging station at a later date. SB477 would alter and strengthen that requirement so that EV charging equipment must be included in new single family detached homes, townhouses, and multifamily residential buildings with communal parking.

Transportation is now the largest contributor to climate-damaging greenhouse gas emissions in this country and is also a major source of toxic emissions including benzene, nitrogen oxides, and sulfur dioxide. Emissions from vehicle tailpipes are hazardous to human health and are linked to various cancers, heart disease, asthma, emphysema, other respiratory diseases, and premature death. Unlike gas and diesel-powered vehicles, plug-in EVs require little or no fossil fuel and emit little or no air pollution from their tailpipes.

In summary, SB477 would enable more plug-in EVs in our state to be used and recharged when parked. Approval of this bill also would encourage more people to purchase, lease, or operate plug-in EVs, which would reduce our dependence on petroleum and be better for our health and the environment. We urge this committee to issue a favorable report on SB477.

Brian E. Ditzler
Chapter Transportation Chair
Brian.Ditzler@MDSierra.org

Josh Tulkin
Chapter Director
Josh.Tulkin@MDSierra.org

BGE - SB 477 Residential Construction or Significa

Uploaded by: John Quinn

Position: FAV

bge
AN EXELON COMPANY

Position Statement

Support
Education, Energy, and the Environment
2/14/2023

Senate Bill 477 - Residential Construction or Significant Renovation – Electric Vehicle Charging

Baltimore Gas and Electric Company (BGE) supports *Senate Bill 477- Residential Construction or Significant Renovation – Electric Vehicle Charging.* Senate Bill 477 will continue the push for the installation of electric vehicle charging infrastructure which will lead to more electric vehicles on Maryland roads, effectively expanding the use of zero emission vehicles in the state, which will be essential to achieving Maryland's climate and air quality goals.

Specifically, this bill would require the installation of electric vehicle charging equipment during the construction or significant renovation of certain housing units and would also require a greater number of electric vehicle parking places under certain circumstances.

Maryland's goal of 300,000 zero-emission vehicles on the road by 2025 is extremely ambitious and the state has stated a concern about its ability to meet the goal. Right now, we have something like 64,000 electric vehicles in the state with about 30,000 in the BGE Service Territory. Studies show that to meet the 2025 goal, approximately 125,000 electric vehicles (EVs) would need to be added to BGE's service territory and about 27,000 charging stations would be needed to meet the additional charging demand. It is important that we expand supporting policies that promote electric vehicle adoption to help us get to the on-road target. The construction mandates in Senate Bill 477 would help ensure that Marylanders have adequate access to charging stations and would support broader electric vehicle adoption.

BGE is a cooperative partner on the state's goals. Accordingly, BGE launched its EVsmart Program, and will propel progress on Maryland's Air Quality and Chesapeake Bay goals. Under EVsmart, in addition to consumer education programs, BGE has 250 chargers in place with plans to install 250 additional public access charging stations. In addition, BGE's EVsmart program would help to mitigate the costs of implementing the bill because the program incentivizes the installation of charging infrastructure at multi-unit dwelling properties.

BGE is committed to helping Maryland achieve its electric vehicle goals. Accordingly, we support this legislation and respectfully request a favorable committee report.

Charles Washington | John Quinn 410.269.5281

Maryland SB 477 - EV Building Codes - Favorable.pd
Uploaded by: Joshua Fisher
Position: FAV

February 14, 2023

The Honorable Brian Feldman
Chair, House Education, Energy, and the Environment Committee
Miller Senate Office Building
Annapolis, Maryland 21401

SB 477: Residential Construction or Significant Renovation - Electric Vehicle Charging
Position: Favorable

Dear Chair Feldman,

The Alliance for Automotive Innovation (Auto Innovators) requests a favorable report for SB 477, which seeks to update the state's building codes to accommodate the increasing numbers of electric vehicles (EVs) on Maryland's roads. From the manufacturers producing most vehicles sold in the U.S. to autonomous vehicle innovators to equipment suppliers, battery producers and semiconductor makers – Alliance for Automotive Innovation represents the full auto industry, a sector supporting 10 million American jobs and five percent of the economy.

Expanding EV Charging is Critical to Maryland's Goals

Maryland previously set a goal of 60,000 EVs on the road by 2020 and 300,000 EVs by 2025. To date, approximately 59,000 EVs have been sold in Maryland, well short of its goals.[1] Long ago, Maryland also chose to follow the California Advanced Clean Car rules which were updated last year to include a requirement for 100% of all new vehicle sales to be electric in 2035.

More work needs to be done to accomplish these goals, and it is on this point that SB 477 can help advance the acceptance of EVs.

The Time to Act is Now

According to the U.S. Department of Energy, roughly 80% of EV charging occurs at home, making access to home charging a top priority for customers considering an EV. Lack of access to home charging is a major barrier to EV adoption. As a first and most cost-effective step, states should immediately begin adopting residential building codes to require EV-ready charging capabilities in parking spots in new multi-unit dwellings (MUDs) and single-family homes.

According to BestPlaces.net[2], the median residential unit age in Maryland is 40 years. Housing being built today will likely be around through at least 2050 or 2060. Consequently, if EV

[1] https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard

[2] https://www.bestplaces.net/housing/state/maryland

charging infrastructure is not installed as a new construction, it will need to be a retrofit installation afterwards which is a costly endeavor.

Historically, only about 1% of residential units are newly constructed each year. Consequently, in 2035, the year the requirement for 100% of all new vehicle sales to be EVs would kick in, the language in SB 477 will still only cover about 12-15% of all residential units. It's not perfect, but it's a start.

MUD Residents Should be Able to Charge at Home

While most charging occurs at home, MUD residents often face the most costly and burdensome obstacles to installing residential EV charging. For MUD residents, the additional costs to upgrade the electrical panel, install conduit between the electrical panel and their parking space, and the logistical challenges of securing building owner approval, coordinating the billing with the building owner, and persuading an owner to make a long-term investment on a rental property, make it nearly impossible to be an EV driver in a MUD.

Nonetheless, some suggest that while those in single family homes can charge at home, MUD residents can simply charge elsewhere, such as DC fast charge stations or public chargers. Not only is this patently unfair it also raises equity and access concerns for some communities where MUDs are the dominant housing option due to cost or geography. Ensuring access for all communities should be a priority particularly those that have been traditionally underserved.

Charging at home is far cheaper, far more convenient, and far more reliable. It would be unreasonable to expect MUD residents to pay 2 or 3 times as much for charging and spend hours away from home each week just to charge their vehicles. This will lead them away from EVs and is not consistent with Maryland's stated goals.

Updating Codes Will Save Money

Numerous studies show the costs to retrofit EV charging is several times more expensive than installing it during new construction.[3] In fact, compared to the cost of a new residential unit, the cost of installing even 208/240v 7.2 kW EV Ready charging is relatively small and typically well under $2,000 per charging station.[4] Compare this to the California Public Utilities Commission's approval of ratepayers funding up to $15,000 per charger make-ready to retrofit charging stations at MUDs.[5]

Failing to update building codes that do not adequately plan for 100 percent EVs, does not help long-term housing affordability. Instead, it trades small savings today for vastly higher costs down the road. Moreover, these higher costs will be borne by MUD residents (or ratepayers). To the extent MUD residents are lower income, this further exacerbates inequities and widens economic divides.

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[3] For example, see Pike, Ed, Jeffery Steuben, Shayna Hirshfield. 2020. City of Oakland Plug-in Electric Vehicle Readiness Grant. California Energy Commission. Publication Number: CEC-600-2020- 116.

[4] Id. See Table

[5] See CPUC Decision 20-08-045 "Decision Authorizing Southern California Edison Company's Charge Ready 2 Infrastructure And Market Education Programs," August 27, 2020.

The California Energy Commission (CEC) summarizes this well in their most recent study (January 2021)[6]:

> *Building codes are often a cost-effective tool to support state policy, ensure equitable outcomes, and reduce barriers to adoption. Increased charging options at MUDs are needed to ensure that all Californians have access to convenient charging. This is all too often an issue at apartments, condos, and for renters where the motivations of tenants and landlords do not always align. Building codes that address new construction as well as major renovations to existing buildings such as when new parking is added or during repaving of an existing parking lot can materially address the EV charging infrastructure gap.*

EV Ready

In using the term, "EV Ready" we mean panel capacity, breaker installed, with wiring to the parking spot terminating in either a receptacle or EV charger. MUD residents (in many cases, renters) cannot be expected to bear the significant costs and coordination responsibility associated with obtaining landlord permission, local permitting, and hiring contractors to install breakers, wiring, and chargers. This is unlikely to happen, and residents need access to charging to realize Maryland's EV goals.

Conclusion

Passing SB 477 aligns with, and will support, Maryland's climate and transportation goals. The bill will also save Maryland residents money while ensuring they have access to EV charging in the future. Thank you in advance for your consideration of our views. For more information, please contact our local representative, Bill Kress, at (410) 375-8548.

Sincerely,

Josh Fisher
Director, State Affairs
Alliance for Automotive Innovation

[6] Crisostomo, Noel, Wendell Krell, Jeffrey Lu, and Raja Ramesh. January 2021. Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment: Analyzing Charging Needs to Support Zero-Emission Vehicles in 2030. California Energy Commission. Publication Number: CEC-600-2021-001.

SB477_2023_LannyHartmann.pdf
Uploaded by: Lanny Hartmann
Position: FAV

SB 477 — Residential Construction or Significant Renovation - Electric Vehicle Charging
Position: **Favorable**

February 14, 2023

The Honorable Brian J. Feldman
Chair, Education, Energy, and the Environment Committee
Miller Senate Office Building
11 Bladen St., Annapolis, MD 21401

Dear Chairman Feldman and Members of the Committee:

I am writing to express my strong support for Senate Bill 477, which aims to establish requirements related to the installation of electric vehicle (EV) charging equipment during the construction or significant renovation of housing units.

As the use of EVs becomes increasingly popular, it is crucial that we take steps to ensure that these vehicles have access to convenient and reliable charging options. This bill will not only make it easier for homeowners to adopt EVs, but it will also promote the growth of clean transportation and help reduce our dependence on fossil fuels.

To help facilitate this transition, it is imperative that new home construction be built to be "EV-Ready" with wiring to the garage or parking space. Installing the wiring for electric vehicle charging during construction will make it easier for homeowners to adopt EVs and help Maryland reach its goal of 300,000 Zero Emission Vehicles on the road by 2030.

Additionally, the bill provides clarity on the role of counties and municipalities in requiring a certain number of EV-Ready parking spaces. This will ensure that local governments have the flexibility they need to respond to the specific needs of their communities.

Finally, I would like to commend the sponsor of this bill, Senator Feldman, for his foresight and leadership in promoting clean transportation and addressing the challenges associated with the growth of EVs.

I strongly urge you to **support** Senate Bill 477 and help advance this important initiative.

Sincerely,

Lanny Hartmann
Columbia, Maryland

SB477_IndivisibleHoCoMD_FAV_RichardDeutschmann.pdf
Uploaded by: Richard Deutschmann
Position: FAV

SB477 – Residential Construction or Significant Renovation - Electric Vehicle Charging

Testimony before

Senate Education, Energy, and the Environment Committee

February 14, 2023

Position: Favorable

Mr. Chair, Madame Vice Chair and members of the committee, my name is Richard Deutschmann, and I represent the 750+ members of Indivisible Howard County - an active member of the Maryland Legislative Coalition (with 30,000+ members). We are providing written testimony today in ***support of SB477***, to update the Public Safety statutes to mandate a certain percentage of EV Supply Equipment installed parking spaces for certain newly constructed buildings and buildings undergoing certain renovations We appreciate the leadership of Senator Feldman in sponsoring this bill.

The number of registered EVs in Maryland has nearly tripled – from 14,930 in 2020 to 39,517 as of the end of 2022. MDOT projects there will be 790,000 EVs in Maryland by 2030 – with ownership extending to a large portion of Maryland residents. The Edison Institute estimates that nearly 19 million EVs will be in use in the U.S. by 2030. Nine states, covering 13 major metropolitan areas, with 629,000 registered EVs, determined this is an important issue for the adoption of EVs and have passed EV-ready building codes.

Eighty percent of EV owners charge their vehicles overnight at home - it is the most convenient option and takes advantage of lower overnight electricity rates, while utilizing the grid when it is at its lowest usage. Post construction charging at-home requires the installation of equipment which can cost homeowners $1500 or more; costs to multifamily building owners can be up to $4000 per parking space. When installed during construction, these costs are reduced 40% - 75% when these installations become common practice as part of new construction or major renovations.

This bill would require EVSE-installed parking spaces in new homes, new townhomes, multi-family residential properties, a critical component in supporting the adoption of electric vehicles in Maryland.

Thank you for your consideration of this important legislation.

We respectfully urge a favorable report.

Richard Deutschmann
9485 Hickory Limb
Columbia, MD 21045

Erdman SB 477 Construction Favorable 2023.pdf
Uploaded by: Robert Erdman
Position: FAV

SB 477

Testimony for the Senate Education, Energy, and the Environment Committee

SB 477 Residential Construction or Significant Renovation - Electric Vehicle Charging

Position: **Favorable**

February 13, 2023

The Honorable Brian J. Feldman, Chair
Room 2 West, Miller Senate Office Building
Annapolis, MD 21401

Honorable Chair Feldman and Members of the Senate Education, Energy, and the Environment Committee:

I am Robert Erdman, a proud owner of two electric vehicles, a Chevy Volt and a Tesla Model S, as well as the Treasurer of the Electric Vehicle Association of Greater Washington DC (EVADC). I write to express my strong support for SB 477 Residential Construction or Significant Renovation - Electric Vehicle Charging.

As a family who relies on electric vehicles, we understand the importance of having the ability to charge at home. The convenience of charging at home is a crucial factor for us, and I believe that this bill will provide much-needed help for Maryland residents, especially those who live in HOAs and multi-dwelling units, to take advantage of the benefits of electric vehicles such as lower maintenance costs and fuel savings.

As the sales of electric vehicles continue to rise and the choice of EVs expands, it is vital to ensure that residents have the infrastructure to support their needs. The proposed bill will go a long way in achieving this goal and making Maryland a leader in sustainable transportation with the added benefits of cleaner air and domestically sourced fuel.

I have attached a flyer that highlights the benefits of electric vehicles for Maryland and hope that you will consider passing this bill. Thank you for your time and attention to this matter.

Sincerely,

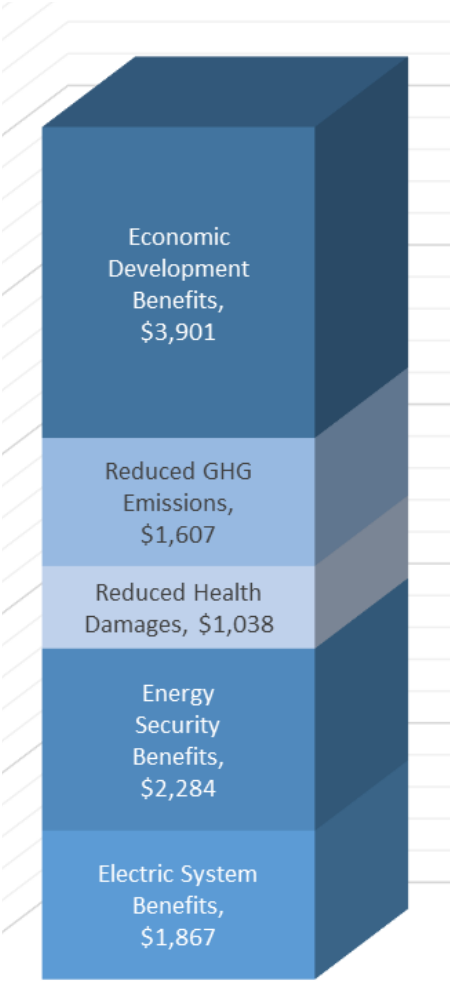
Robert S. Erdman

Potomac, MD 20854

Electric Vehicle Incentives are an Investment in Maryland

Economic Benefits

- Every day, Maryland drivers spend over $18 million on motor vehicle fuels. That's over ***$6.6 billion*** a year![1]
- Since Maryland has no crude oil industry, at least 80% of the cost of every gallon of gas immediately leaves the state economy.[2] That's over $14.5 million that leaves the state every day.[3]
- Driving an EV in MD will save a driver ~$3,901 in fuel costs.[4] This money can be used for eating out, groceries, home improvements, and entertainment. This creates local jobs and support Maryland's economy.



$10,697 Cumulative Benefits
(over 8 years of operation)

Environmental Benefits

- Transportation is the leading cause of greenhouse gas emissions in the United States *and* in Maryland.[5]
- Climate change damages from vehicle emissions include reduced agricultural yields, health impacts in cities due to heat, and flooding and erosion in coastal areas.[6]
- Using the Social Cost of Carbon, each EV on the road in MD prevents ~$1607 in damages from carbon in the atmosphere.[7]

Health Benefits

- Transportation accounts for more than half of all the air pollution in the United States. The primary mobile source of air pollution is the automobile.[8]
- Exposure to on-road pollution leads to heart attacks, strokes, and asthma attacks resulting in ER visits, hospitalization, and premature death.[9]
- Every EV on the road prevents health damages of over ~$1038.[10]

Energy Security Benefits

- Dependence on imported fossil fuels for transportation results in risk and costs associated with fuel security and national security.
- A 2018 study by Securing America's Energy Future (SAFE) measured money spent by the U.S. military to protect global oil supplies and calculated this value over the number of barrels of imported oil. They calculated a value of between 28¢ to over 70¢ per gallon.[11]
- We calculated that every EV on the road will save ~$2284 in energy security and national security costs.[12]

Electric System Benefits

- EV batteries can store electricity which can be used to create a more resilient and efficient electric system.
- Increasing grid efficiency puts downward pressure on electric rates, which can save *all* customers money on electric bills.
- Studies show that each EV can provide about ~$1867 in benefits to the electric grid.[13]

These Benefits Add Up

Each EV in Maryland will contribute over $10,000 in benefits to people living in Maryland. Turning some of these benefits into EV incentives saves Maryland money and helps it meet important policy goals. Funding point-of-sale rebates for EVs will help Maryland improve public health, meet climate change goals, grow the economy, and promote energy security.

EVADC www.evadc.org

Read the full report "*The Far-reaching Benefits of Electric Vehicles*" at: https://evadc.org/EVInfo

[1] Based on motor fuel gallons sold FY 2020: https://www.marylandtaxes.gov/reports/static-files/revenue/motorfuel/gallonssold/gallonsoldFY2019-2020.pdf multiplied by gas price in MD for 11/23/20 https://gasprices.aaa.com/?state=MD

[2] https://www.eia.gov/petroleum/gasdiesel/

[3] Based on motor fuel gallons sold FY 2020: https://www.marylandtaxes.gov/reports/static-files/revenue/motorfuel/gallonssold/gallonsoldFY2019-2020.pdf multiplied by gas price in MD for 11/23/20 https://gasprices.aaa.com/?state=MD. Daily cost multiplied by 80%.

[4] Based on driving 12,000 miles a year with 30 mpg fuel efficiency and paying $2.23 per gallon of gas compared with a comparable EV driving the same mileage with 27kWh/100mile efficiency and electricity costs of 12.48 cents/kWh from https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a. Over 8 years of driving vehicle.

[5] https://mde.maryland.gov/programs/Air/ClimateChange/Pages/GreenhouseGasInventory.aspx

[6] https://climate.nasa.gov/effects/#:~:text=Increased%20heat%2C%20drought%20and%20insect,coastal%20areas%20are%20additional%20concerns.

[7] Calculated by using the inflation-adjusted Social Cost of Carbon ($53.34 per metric ton) multiplied by the tons of carbon equivalent emitted from driving a conventional gasoline vehicle vs. the carbon equivalent emitted from electricity generation of driving an EV in MD: https://afdc.energy.gov/vehicles/electric_emissions.html.

[8] https://www.nps.gov/subjects/air/sources.htm#:~:text=Mobile%2C%20stationary%2C%20area%2C%20and,to%20the%20Environmental%20Protection%20Agency.

[9] https://gispub.epa.gov/air/trendsreport/2018/#effects

[10] Based on values in National Academies Hidden Costs of Energy cost per ton and multiplied by emissions from average vehicle emissions rates and eGRID emissions factors for electricity generation in MD.

[11] Securing America's Energy Future. 2018. The Military Cost of Defending the Global Oil Supply. http://secureenergy.org/wp-content/uploads/2020/03/Military-Cost-of-Defending-the-Global-Oil-Supply.-Sep.-18.-2018.pdf

[12] Based on cost per barrel of oil energy security from https://19january2017snapshot.epa.gov/sites/production/files/2015-08/documents/ornl-tm-2007-028.pdf multiplied by imported barrels of oil added to mileage values for military costs of defending global oils supply: . http://secureenergy.org/wp-content/uploads/2020/03/Military-Cost-of-Defending-the-Global-Oil-Supply.-Sep.-18.-2018.pdf.

[13] Based on an average value of ratepayer benefits from the following studies:
https://rmi.org/wp-content/uploads/2017/10/RMI-From-Gas-To-Grid.pdf
http://www.b-e-f.org/wp-content/uploads/2020/06/BEF_EV-cost-benefit-study_2020.pdf
Benefit-Cost Analysis of Electric Vehicle Deployment in New York State Final Report | Report Number 19-07 | February 2019

SB477_IndivisibleHoCoMD_FAV_RuthAuerbach.pdf
Uploaded by: Ruth Auerbach
Position: FAV

SB477 – Residential Construction or Significant Renovation – Electric Vehicle Charging

Testimony before
Education, Energy, and the Environment Committee
February 14, 2023
Position: Favorable

Dear Education, Energy, and the Environment Committee Members,

My name is Ruth Auerbach, and I represent the 750+ members of Indivisible Howard County. We are providing written testimony today to ***support SB477***, requiring the installation of electric vehicle [EV] charging infrastructure during the construction or significant renovation of certain housing units and increasing the number of electric vehicle parking spaces under certain circumstances. Indivisible Howard County is an active member of the Maryland Legislative Coalition (with 30,000+ members). We are grateful for the leadership of Senator Feldman in sponsoring this bill.

For environmental and health reasons, Maryland should be hastening the transition from internal combustion vehicles to EVs. However, one of the obstacles for this transition is charging infrastructure. Fred Meier's cars.com article, "Do I Need a Home Charger to Own an Electric Car?", replies to the question in the title with, "The answer for now (and for the foreseeable future) is probably yes…. By home charging, we mean a Level 2 charger (…) that you control…." Many Marylanders will require access to EV charging at their homes to be willing to switch to owning an EV. SB477 is a step towards upgrading Maryland housing for EVs, especially town houses and multifamily residences.

I currently live in a town house with off street communal parking and without access to EV charging. My town home owner association currently does not have plans to install EV charging. However, with the passage of this bill, if the association needed a parking upgrade involving trenching in or around parking spaces, the association would be required to install EV charging, which would make it much more likely that my next car, and probably many of my neighbors, would be an EV.

Thank you for your consideration of this important legislation. **We respectfully urge a favorable report on this bill.**

Ruth Auerbach, Ph.D.
9455 Clocktower Lane
Columbia, MD 21046

SB 477 - AOBA - FWA .pdf
Uploaded by: Brian Anleu
Position: FWA

Bill No: **SB 477 – Residential Construction or Significant Renovation - Electric Vehicle Charging**

Committee: **Education, Energy, and the Environment**

Date: **February 14, 2023**

Position: **Favorable with amendments**

The Apartment and Office Building Association of Metropolitan Washington (AOBA) represents members that own or manage more than 23 million square feet of commercial office space and 133,000 apartment rental units in Montgomery and Prince George's Counties.

AOBA supports efforts to expand electric vehicle charging capacity throughout the state. However, AOBA members are concerned about the cost of adding EV charging stations to existing housing units that undergo significant renovations. The bill defines significant renovations as any renovation that includes electric panel upgrades that increase capacity of the panel or parking upgrades that involve trenching in or around parking spaces.

While electric panel upgrades may increase capacity to meet new appliance or building system requirements, the new capacity may not be sufficient for a level 2 EV charging station. Thus, this bill could require significantly higher capital investments than housing providers had intended when deciding to make such upgrades. These costs come at a time when the rental housing industry is already under significant strain due to increased operating costs, such as utilities, labor, and insurance; increased delinquencies due to the pandemic; and new legal mandates, such as the Building Energy Performance Standards.

For these reasons, AOBA urges the committee to amend out existing housing units from the bill and only apply it to new construction. For further information, contact Brian Anleu, AOBA Vice President of Government Affairs for Maryland at (240)381-0494 or banleu@aoba-metro.org.

MMHA_FWA_SB477 .pdf
Uploaded by: Lauren Graziano
Position: FWA

Date: February 14, 2023

Committee: Finance

Bill: Senate Bill 477- Residential Construction or Significant Renovation - Electric Vehicle Charging

Position: Favorable with Amendments

This testimony is offered on behalf of the Maryland Multi-Housing Association (MMHA). MMHA is a professional trade association established in 1996, whose members consist of owners and managers of more than 210,000 rental housing homes in over 958 apartment communities. Our members house over 538,000 residents of the State of Maryland.

Senate Bill 477 (SB 477) prescribes new requirements for electric vehicle supply equipment for both newly constructed and significantly renovated housing units. The bill amends the statute to require existing housing units undergoing significant renovation to install one electric vehicle supply space for every garage, carport, or driveway. New construction residential buildings with communal off-street parking must have one electric vehicle supply parking space for every 25 units, however, local jurisdictions are expressly permitted to increase this requirement.

It is predicted that electric vehicles will make up more than half of all U.S. car sales by 2030.[1] As such, many property owners have already started to respond to the anticipated need by installing charging stations at their properties. However, it is universally accepted that the best time to install an electric vehicle charging station is during construction. As RCLCO Real Estate Consulting notes, "owners who neglect to deploy EVC during construction if the opportunity is available will incur significantly higher installation costs post-development." [2] In fact, costs for installation post development can be three to five times more for retrofitting projects.

For these reasons, MMHA recommends amending the bill to limit the proposed electric vehicle installation requirements to new construction projects only.

Amendment:

On page 2, line 20, strike in their entirety lines 20 through 23.

On page 3, strike beginning with "and" in line 1, through "units" in line 2

On page 3, strike beginning with "or" in line 5, through "shall" in line 7

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[1] https://www.naahq.org/powering-providing-charging-stations-evs-your-property

[2] https://www.rclco.com/wp-content/uploads/2020/03/Electric-Vehicle-Charging-Station-Strategy-for-Real-Estate-Implementation-in-the-US.pdf

MBIA letter of support with amendment SB 477.pdf
Uploaded by: Lori Graf
Position: FWA

MARYLAND BUILDING INDUSTRY ASSOCIATION
11825 West Market Place | Fulton, MD 20759 | 301-776-6242

February 14, 2023

The Honorable Brian Feldman
Senate Education, Health & Environmental Affairs Committee
Miller Senate Office Building,
2 West Wing 11 Bladen St.,
Annapolis, MD, 21401

RE: Letter of Support with Amendments for SB 477 - Residential Construction or Significant Renovation - Electric Vehicle Charging

Dear Chairman Feldman:

The Maryland Building Industry Association, representing 100,000 employees statewide, appreciates the opportunity to participate in the discussion surrounding **SB 477 Residential Construction or Significant Renovation - Electric Vehicle Charging**. MBIA **Supports with Amendments** the Act in its current version.

While MBIA Supports the concept of creating the infrastructure for Elective Vehicles, we have some concerns about the current language in the bill. This bill imposes significant costs on families undergoing major renovations and may discourage renovations all together. A family that wants to finish their basement or expand their home could be put in the position of having to spend thousands of extra dollars for putting an EV charging station in that they don't need and can't use.

In 2020, the National Association of Home Builders conducted a study that shows for every $1000 increase in the cost of a new house, 2,881 Marylanders are priced out of housing. This bill also drives up the costs of new construction. There may not be a need in that community for that much EV charging capability and those costs are going to be passed on to renters and homebuyers.

MBIA requests that the committee evaluates the following when considering SB477:

- The definition of "Major Renovation" is overly broad.
- Consider "Electric Vehicle Ready" requirements as opposed to "Electric Vehicle Supply Equipment"
- Many projects take years to complete, grandfathering should be considered
- Ensure that Electric Vehicle parking spaces are included in local parking requirements
- Allow for local code officials to change requirements based on feasibility or other issues
- Provide a cap or limit on preemption allowed by local jurisdictions

For these reasons, MBIA respectfully requests the Committee give this measure adopt amendments to ensure housing affordability and making these requirements more feasible. Thank you for your consideration.

For more information about this position, please contact Lori Graf at 410-800-7327 or lgraf@marylandbuilders.org.

cc: Members of the Senate Education, Health & Environmental Affairs Committee

SB 477 - MoCo_Elrich_SWA (GA 23).pdf
Uploaded by: Marc Elrich
Position: FWA

OFFICE OF THE COUNTY EXECUTIVE

Marc Elrich
County Executive

February 14, 2023

TO: The Honorable Brian J. Feldman
Chair, Education, Energy, and the Environment Committee

FROM: Marc Elrich
County Executive

RE: Senate Bill 477, *Residential Construction or Significant Renovation - Electric Vehicle Charging*
Support with Amendment

I am writing to express my support for Senate Bill 477, *Residential Construction or Significant Renovation – Electric Vehicle Charging,* and to request an amendment to the bill.

Electric vehicles (EVs) powered by a clean, renewable energy grid will play a critical role in achieving our state and local climate goals. EVs can also reduce local air pollution and improve public health. Owning an EV necessitates having parking spaces available where the vehicle can be charged.

This bill would establish requirements for the installation of electric vehicle charging equipment or EV-ready parking spaces in new construction and significant renovation of residential properties.

I support the requirements of the bill as they relate to new construction. These requirements will ensure that new homes are built ready to support the EV transition, with necessary infrastructure included in a manner that is most cost-effective and least disruptive to building owners and occupants.

I also support and appreciate language in the bill that would allow individual local governments to require a greater number of parking spaces to be constructed with installed EV charging equipment in certain circumstances.

I request one amendment to the way the bill would address existing buildings. As written, the bill states that any renovations that include electric panel upgrades that increase capacity of the panel (or parking upgrades that involve trenching in or around parking) would trigger the requirements of the bill related to ensuring the presence of EV-installed or EV-ready parking spaces. I agree that renovation projects involving electric panel upgrades often offer a cost-effective opportunity

to also install EV charging equipment. However, I am concerned that this language would impose additional costs on homeowners whose budgets may already be stretched as they complete an upgrade to the electric panel and, for example, conversion from a gas furnace to a high efficiency electric heat pump.

There is a cost to adding a circuit and running wiring to a parking space, especially if that space is not immediately adjacent to the electric meter. In some instances, this requirement may increase the scope and cost of a renovation project such that it would dissuade from the homeowner from accomplishing their originally intended project, such as the heat pump installation example.

I suggest that, in the event of a renovation involving an upgrade to the electric panel, the property owner should be required to ensure that conduit is in place and there is space available in the electric panel to accommodate a new circuit for EV charging. However, the requirement to make the associated parking space(s) EV-ready with the addition of a circuit and wiring should only be triggered if the renovation project also involves the parking area.

We will continue to encourage property owners to make all of these upgrades to the extent feasible.

I respectfully request that the Education, Energy, and the Environment Committee give this bill a favorable report with the inclusion of the suggested amendment.

cc: Members of the Education, Energy, and the Environment Committee

20230214 MD SB 477 Support Letter Final Tesla.pdf

Uploaded by: Shatorah Roberson

Position: FWA

3500 Deer Creek Road, Palo Alto CA 94304
P 650 681 5100 F 650 681 5101

TESTIMONY REGARDING SB 477
being heard by the Maryland Senate Education, Energy, and the Environment Committee
on Tuesday, February 14, 2023, at 1:00 PM

Dear Chair Feldman, Vice Chair Kagan, and Members of the Committees:

Thank you for the opportunity to provide input on SB 477, which will increase the deployment of electric vehicle (EV) charging equipment in new home construction and significant home renovation.

Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles, energy storage, solar energy systems, and charging infrastructure. In 2022, Tesla delivered over 1.3 million EVs globally, accounting for about 65% of all EVs sold in the US market last year.[1] This experience gives us unique insight into what it takes to deploy electric vehicles at volume, and which policy mechanisms are most effective in furthering adoption.

Maryland has set an ambitious goal of 300,000 zero emission vehicles (ZEV) on the road by 2025 and 600,000 by 2030. To meet this goal, it is important for the state to develop policies that encourage ZEV adoption, including those that make it easier and less expensive to deploy charging equipment wherever those vehicles are, whether it be at home, work, or during recreation. SB 477 is a sensible approach to increase the availability of home charging and will reduce the cost of home charging installation. It is significantly more cost-effective to install an EV charger when homes are under construction, rather than retrofitting homes later. Retrofits often require significant electrical work that will well exceed the cost of the actual charger[2].

Tesla supports SB 477 and recommends the below additions and amendments to reduce barriers to EV adoption by providing buyers with access to charging options where needed most, at home and while on the go.

1. In addition to the construction of new housing units and the significant renovation of existing housing units in §12-205 (b)(1)(2), **Tesla recommends the addition of new construction and significant renovation of commercial-designated properties that have more than 50 parking spaces.** Application of this legislation to larger facilities increases access to EV charging options at work, during recreation, and while shopping, without imposing undue burden on small businesses.

2. Under §12-205 (c)(D)(1)(I), relating to multifamily residential buildings with off-street communal parking, SB 477 requires at-least one (1) EVSE-installed space for each 25 residential units—a rate of only 4% EVSE-installed. To ensure that jurisdictions are not under planning for future EV adoption, a baseline of 20% EV-readiness for multifamily parking spaces is recommended. Thus, **Tesla recommends inclusion of at least four (4) parking spaces per 25 units be EV-Ready,**

[1] https://www.spglobal.com/mobility/en/research-analysis/new-ev-entries-nibbling-away-at-tesla-ev-share.html
[2] Minezaki, T, Et al. *Electric Vehicle Infrastructure Cost Analysis Report for Peninsula Clean Energy & Silicon Valley Clean Energy* (Energy Solutions, 2019), 14-16.

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meaning full circuit installations include 208/240V, 40-amp panel capacity, raceway, wiring, receptacle, and overprotection devices, in addition to the EVSE-Installed requirement.

3. Section 12-205 (c)(D)(2) gives municipalities the authority to pass more inclusive and ambitious EV-readiness requirements for multifamily buildings and townhomes, but does not mention single family homes. **Tesla recommends the inclusion of single-family homes in this section**.

Thank you for the opportunity to provide this testimony.

Shatorah Roberson
Staff Policy Advisor
Tesla

SB 477- Residential Construction or Significant Re

Uploaded by: Tom Ballentine

Position: FWA

NAIOP
MARYLAND CHAPTERS
THE ASSOCIATION FOR COMMERCIAL REAL ESTATE

February 13, 2023

The Honorable Brian J. Feldman, Chair
Education, Energy, and the Environment Committee
Miller Senate Office Building, 2 West
Annapolis, MD 21401

Support w Amendment: SB 477 – Residential Construction or Significant Renovation – Electric Vehicle Charging

Dear, Chair Feldman and Committee Members:

The NAIOP Maryland Chapters represent 700 companies involved in development and ownership of commercial, mixed-use, multifamily, and light industrial real estate, including some of the largest property owners in the state. NAIOP's membership is comprised of a mix of local firms and publicly traded real estate investment trusts that are invested in the future of Maryland but also have experience in national and international markets.

NAIOP supports adoption of pragmatic strategies and technically sound, least-cost approaches to the reduction of greenhouse gas emissions on schedules and using methods that minimize economic disruption and result in a managed, orderly energy transition for building owners and occupants.

The building, fire and electric codes adopted by the state contain provisions to ensure the safe design and construction of electric vehicle infrastructure. Senate Bill 477 proposes changes to the Maryland Building Performance Standards that would specify when and how many residential parking spaces must be fully equipped to charge electric vehicles or made ready to easily install charging equipment in the future. The legislation builds upon existing installation requirements for new single family and townhouse construction and, for the first time, applies requirements to residential renovations and to multifamily buildings.

Maryland's climate goals and the state's adoption of California's emissions standards for cars and light trucks necessitate installation of electric vehicle charging infrastructure at an accelerated rate. Removing the barriers to electric vehicle infrastructure installation in multi-family residential buildings is a key element to meeting these requirements. Beyond that, the bill takes a pragmatic and essential step forward by proposing the retrofitting of existing single family and townhouses. The importance of this issue makes NAIOP supportive of the goals of Senate Bill 477, but we are unable to support the bill as introduced.

NAIOP recommends the committee work to clarify and refine the bill by:

- Adopting a definition of significant renovation that aligns with the current building code.
- Refining and clarifying the definition of multi-family to align with the current building code.
- Clarify how EV-ready affects electric load calculations and building level power requirements.

U.S. Mail: P.O. Box 16280, Baltimore, Maryland 21210 **Phone:** 410.977.2053 **Email:** tom.ballentine@naiop-md.org

- Ensure the caps on state grant and rebate programs align with multifamily eligibility.
- Authorize local code officials to modify the requirements based on cost or feasibility.
- Optimize the ratio of EV charging to EV-ready spaces to limit instances of unused charging equipment.
- Include language to resolve potential conflicts with fire electric and accessibility codes.
- Adjust carbon accounting methodology to ensure transportation sector emissions are not shifted to building's sector
- Ensure that dedicated EV charging spaces are counted toward parking minimums in local zoning.
- Limit or preempt inconsistent local requirements related to EV infrastructure.

Thank you for the opportunity to offer comments and suggestions on SB 477. NAIOP appreciates your consideration of the industry's point of view.

Sincerely.

Tom Ballentine, Vice President for Policy
NAIOP Maryland Chapters -*The Association for Commercial Real Estate*

cc: Education, Energy and the Environment Committee Members
Nick Manis – Manis, Canning Assoc.

SB0477-EEE_MACo-OPP.pdf
Uploaded by: Dominic Butchko
Position: UNF

Senate Bill 477

Residential Construction or Significant Renovation - Electric Vehicle Charging

MACo Position: **OPPOSE**

To: Education, Energy, & Environment Committee

Date: February 14, 2023

From: Dominic J. Butchko

The Maryland Association of Counties (MACo) **OPPOSES** SB 477. The bill places strict requirements on the instillation of electric vehicle (EV) charging infrastructure for new and existing housing. While counties fully recognize and support the need to transition to a fully electric transportation infrastructure, counties have several concerns regarding how this legislation would be implemented.

Counties have long been testing policies to require EV charging infrastructure in new and existing housing with limited success. The complicating tradeoff is that requiring the installation of such infrastructure adds significant cost to the production and preservation of affordable housing. Frederick County's own foray into this field offers a possible middle ground solution, as the county currently requires the instillation of inexpensive tubing that can later be used to house much of the EV charging infrastructure. This largely negates the additional significant expenditure, and leaves open a conduit for future instillation. Under SB 477, however, this approach would be insufficient.

The bill raises further considerations around public safety. Private electrical wires, including those obligated under SB 477, are not marked or mapped like public utilities. However, these wires would lay within or beneath the same section of street. It is very possible that public works or private utility employees may need to access these underground utility connections, e.g. a water main break, and inadvertently strike one of these unmarked private electrical lines. Furthermore, there is no requirement for an easily accessible shut-off switch for these lines, so such a scenario could be made even more dangerous. The bill could be strengthened by adding language requiring private electrical lines to be marked and mapped just like public utilities, as well as requiring shut-offs that can be easily accessed by public works or private utility employees – but these considerations add to affordability concerns.

Finally, while counties agree with the spirit of the legislation, there are concerns that this bill may step into areas long seen as the purview of local governments. Maryland's uniquely tailored political system has – appropriately - left specifics regarding building requirements and regulations to the discretion of its counties.

SB 447 mandates a rigid, potentially costly, and conceivably dangerous obligation on home builders, setting aside practical efforts underway locally to accomplish similar goals, creating the surely unintended consequence of making Maryland's affordable housing crisis that much more difficult to overcome. Accordingly, MACo urges the Committee to issue an **UNFAVORABLE** report for SB 294.

SB0477-2023-Electric Vehicle Charging Final.pdf
Uploaded by: Ella Ennis
Position: UNF

Ella Ennis, Legislative Chairman
Maryland Federation of Republican Women
PO Box 6040, Annapolis MD 21401
Email: eee437@comcast.net

The Honorable Brian Feldman, Chairman
And Members of the Committee on Education, Energy and Environment
Senate of Maryland

Re: **SB 0477** – Residential Construction or Significant Renovation – Electric Vehicle Charging - **OPPOSE**

Dear Chairman Feldman and Committee Members,

The Maryland Federation of Republican Women opposes SB 0477 which requires that every new housing unit or any home that installs an upgraded electric panel must install electric vehicle supply equipment (EVSE) at an estimated cost of $600 to $2,000.

Marylanders' rights are being stripped away. The General Assembly is working to limit citizens' ability to choose the home heating system of their choice, whether they can use a wood or gas fireplace, the type of vehicle they can own, the cooking range of their choice, the kind of emergency generators they can own -- all in the name of a perceived climate crisis. SB 0477 will now mandate installation of an EVSE at their home, whether they own an electric vehicle or not.

ENOUGH! Smoke detectors and carbon monoxide alarms mandated in Maryland homes were enacted for safety reasons – to prevent loss of life. There is no safety rationale for an EVSE requirement. This mandate is neither necessary nor justified.

Maryland is leading the nation in responding to climate change. According to the U.S. Energy Information Administration, Maryland's per capita petroleum consumption is the second lowest among the states. We are doing our part to lower pollution emissions. No one should be forced to install an EVSE if they don't own an electric vehicle.

Maryland should not duplicate the California Air Resources Board's vehicle standards as revised and updated (as required in SB 224 Heavy Duty Trucks). California is not a success story. They experience rolling blackouts during extreme weather events. Massive wildfires caused by failed and inadequate electric transmission systems have destroyed communities. California is not the ideal to emulate.

Maryland needs an energy mix of nuclear, renewable and, yes, fossil fuels. A goal of reliance almost exclusively on a single resource (e.g. renewable energy) is ill-advised. The renewable energy supply can be intermittently diminished or totally unavailable. Thirty-eight percent of all energy currently produced in Maryland is nuclear energy that runs continuously. This is very important during extreme weather events.

Maryland is lacking transmission system capacity sufficient to go all-electric. Offer an incentive to those who want an EVSE but do not mandate installation of an EVSE. Substantial effort must be directed to upgrading Maryland's electric transmission system before mandating EVSEs.

Please vote an **UNFAVORABLE** report for **SB 477**.

Sincerely,
Ella Ennis