

AchiEVe: Transition to EVs

POLICY TOOLKIT



Version 1.0 August 2017



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As the electric vehicle (EV) market moves from the early adopter phase to the mass market stage, smart and supportive policies can help to accelerate the widespread adoption of EVs at the local and state levels.

The most effective policies driving adoption of these vehicles today are listed in the table of contents on the right, with links to states or cities with that policy as an example. Please note that these example states or cities is not an exclusive list of the states or cities with these policies. In order to build an electric future today, a template for these seven policies is also linked that can be downloaded and modified to fit the precise needs for your particular state or community. This template is based off of the current best practice for that particular policy.

As the EV market and EV policy evolves, this toolkit will be updated to continually reflect the best practices for EV policy.

This toolkit was a collaborative effort between Plug In America and the Sierra Club. For additional inquiries, please contact authors Katherine Stainken at info@pluginamerica.org or Mary Lunetta at mary.lunetta@sierraclub.org.

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HOV Lane Access

Programs that allow EVs to use highway lanes designated for high occupancy vehicles (HOV lanes) are an important element in the suite of policies that promote vehicle electrification. For many drivers, HOV lane access is a powerful incentive that can save an hour or more daily from a commute and thus can be an effective driver for EV purchases.

[HOV Lane Access Template](#)



SAMPLE STATES WITH HOV LANE ACCESS POLICIES

Arizona: BEVs qualify for HOV lanes at any time, regardless of number of passengers, as long as the BEV has a [special license plate](#). See statute: [28-2416, Alternative](#)

[fuel vehicle special plates; stickers; use of high occupancy vehicle lanes; definition.](#)

Florida: PHEVs are eligible for the HOV lane after applying for the [Florida HOV decal](#). Use of the I-95 Express lane requires [another specific decal](#) from SFCS. Statute: [316.0741, High Occupancy-Vehicle Lanes.](#)

Georgia: PHEVs are [eligible for the HOV lane](#) with the [correct license plate displayed](#). See Statute: [Georgia Code 32-9-4, 40-2-86.1, and 40-6-54](#)

Hawaii: PEVs are [eligible for the HOV lane](#) with the [correct license plate](#) displayed. See Statute: [SB 2746 CD-1 A Bill for an Act Relating to Electric Vehicles.](#)

New Jersey: PEVS are [eligible for the HOV lanes](#) on the NJ Turnpike. See Statute: [New Jersey Administrative Code 19:9-1.24](#)

Tennessee: PEVS are eligible for the HOV lane but must apply for the [Smart Pass program](#) and display the decal in the lower right side of the rear window. See Statute: [Public Chapter 1121 and Tennessee Code Annotated 55-8-188](#)



Vehicle Fleet Mandates

The ideal vehicle fleet mandate programs require all battery electric vehicles (BEVs) in order to maximize cost savings and greenhouse gas emission reductions, though many are more flexible to include various types of AFVs.

[Vehicle Fleet Mandates Template](#)

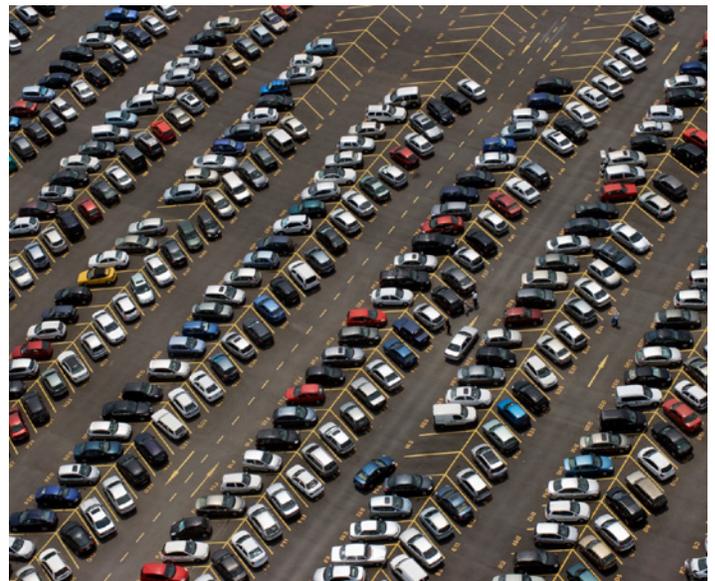
SAMPLE STATES WITH VEHICLE FLEET MANDATES

Rhode Island: [Executive Order 15-17](#) requires at least 75% of state motor vehicles must be Alternative Fuel Vehicles (AFVs), and the remaining 25% must be Hybrid Electric Vehicles (HEVs) to the greatest extent possible. By 2025, 25% of state motor vehicles must be Zero Emission Vehicles (ZEVs).

New York: The New York State Energy Research and Development Authority (NYSERDA) provides [vouchers](#) for public, private, and nonprofit fleets for the purchase or lease of all-electric vehicles operating 70% of the time.

Massachusetts: Newly purchased state fleet vehicles must consist of HEVs or AFVs to the maximum extent feasible.

HEVs and AFVs must be acquired at a rate of at least 5% annually for all new motor vehicle purchases so that not less than 50% of state vehicles will be HEVs or AFVs by 2018. (Reference [Massachusetts General Laws](#) Chapter 7, Section 9A; [Executive Order 388](#), 1996)





Building Codes

In order to prepare for the growing EV market, some cities and states are updating their building codes to ensure that new or renovated buildings will have the proper wiring in place for EV charging infrastructure, avoiding expensive retrofit costs. A [report](#) conducted by the California Air Resources Board in 2015 provides a summary of recent reports on avoided retrofit costs; these costs can range between \$3,750 and \$6,975.

[Building Codes for EVs Template](#)

SAMPLE STATE AND CITIES WITH EV BUILDING CODES

California: Building codes for EVs can be found in the California Green Building Standards Code - [5.106.5.3 and A5.106.5.3 Electric vehicle \(EV\) charging](#). The required number of parking spots and EV Chargers vary depending on the number of available spots within the parking lot. There are also stricter voluntary standards under tier 1 and tier 2 for installing EVSE parking. This standard applies to new buildings in California designated as “green” buildings.

Palo Alto, California: Building codes for EVs can be found here: [Electric Vehicle Ordinance for Residential and Non-Residential Construction](#). The ordinance requires all new single-family residences and commercial buildings (including multi-family dwellings, mixed-use facilities, and hotels) to be EV ready. The non-residential EV additions

to the ordinance will require a three-tier combination of Electric Vehicle Supply Equipment (EVSE), EVSE ready outlets, and EVSE ready circuitry for new multi-family and commercial construction. In terms of retrofit costs, [a study found that electrifying](#) existing single-family homes cost between \$2,500 - 5,000 and associated costs (such as for conduit and wiring) add an additional \$1,000 - \$2,000.

San Francisco, California: Beginning January 2018, the [Electric Vehicle Readiness Ordinance](#) will require all [new residential and commercial buildings to configure 10 percent of parking spaces](#) to be “turnkey ready” for an EV charger installation, and an additional 10% to be “EV flexible” for potential charging and upgrades. The remaining 80% of parking spaces will be “EV capable,” ensuring conduit is run in the hardest to reach areas of a parking garage to avoid future cost barriers.

Washington: The Washington Administrative Code, [Title 51 - WAC 51-50-0427](#) requires 5% of parking spaces to be provided with electric vehicle charging infrastructure in compliance with Sections 427.3, 427.4 and 427.5 for new buildings. When the calculation of percent served results in a fractional parking space, the applicant shall round up to the next whole number. The exception is Group B and R occupancies with less than twenty parking spots. The electrical room must be designed to accommodate 20% of total parking spaces with 208/240 V 40-amp.



EVSE Installation At Multi-Unit Dwellings (MUDs)

EV Drivers who live in multi-unit dwellings should not be discouraged from purchasing an EV because the homeowner association prohibits the installation of charging stations. The policy removing any restrictions at MUDs for EVSE installation is crucial to further EV adoption by this market segment.

[EVSE Installation at MUDs Template](#)



SAMPLE STATE AND CITIES THAT ALLOW FOR EVSE INSTALLATION AT MUDS

California: A MUD, such as a community apartment, condominium, and cooperative development, may not prohibit or restrict the installation or use of EVSE in a homeowner's designated parking space. If installation in the homeowner's designated parking space is not possible, with authorization, the homeowner may add EVSE in a common area for their use. The homeowner must obtain appropriate approvals from the MUD owner or association and agree in writing to comply with applicable architectural standards, engage a licensed installation contractor, provide a certificate of insurance, and pay for the electricity usage associated with the EVSE. If EVSE is installed in a common area for use by all members of the association, the common interest development must develop terms for use of the EVSE. (Reference [California Civil Code 4745](#) and [6713](#))

Sales Tax Exemptions

Financial incentives for EVs help to move the market from the early adopter stage to the mass market phase. A sales tax exemption for an EV works best to stimulate the consumer purchase of an EV, and is the preferred financial incentive for the vehicle purchase over rebates, tax credits or refundable tax credits. A sales tax exemption is a simple policy to understand and works best for policymakers, auto dealers and consumers. For policymakers, funding does not need to be appropriated with a sales tax exemption and there are minimal administrative costs to implement such as policy. For auto dealers, a sales tax exemption is easy to explain and administer, with no additional steps to take on behalf of the consumer. For the consumer, a sales tax exemption requires no eligibility

requirement and is easy to understand, and doesn't require the consumer to have additional cash or a higher loan upfront, as would be needed with a rebate.

[Sales Tax Exemption Template](#)

SAMPLE STATES WITH A SALES TAX EXEMPTION

New Jersey: A [sales tax exemption](#) is available for the purchase or lease of BEVs. See Statute: [N.J.S.A. 54:32B-8.55 Sales Tax Exemption - Zero Emission Vehicle](#)

Washington: BEVs and qualifying PHEVs are eligible for a [sales tax exemption](#) for the purchase or lease of the vehicle. The exemption is available until July 1, 2019. See Statute: [RCW 82.08.809](#) and [RCW 82.12.809](#) Exemptions - Vehicles using Clean Alternative Fuel and Electric Vehicles.



Registration Fees

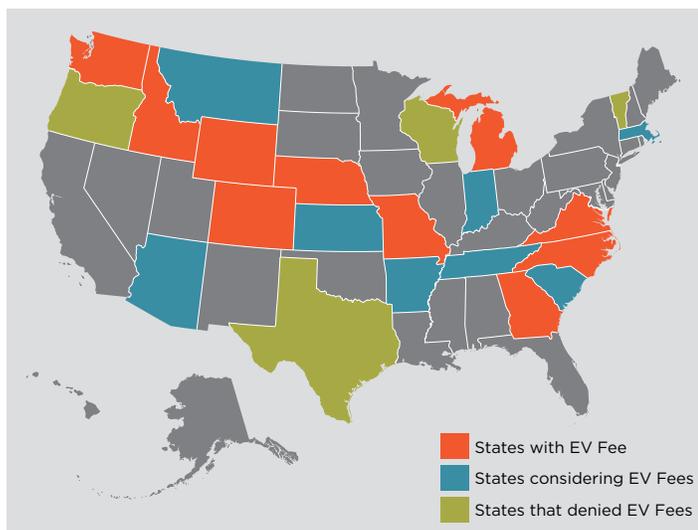
Annual registration fees for EVs are on the rise. Before 2017, fewer than 10 states had EV fees, most of which were reasonable and not punitive to the driver. Now, [twenty states](#) have EV registration fees, with the highest fee upwards of \$180. Just when EVs are starting to gain more traction among all consumers, and more states are considering supportive policies to increase adoption,

imposing hefty annual registration fees could hinder the adoption of EVs.

Lawmakers who introduce bills that would raise the EV registration fees claim the fees will make up for the lost revenue from the gas tax, since EVs use less or no gas compared to their conventional counterparts. The gas tax revenue to the state is usually used for maintaining roads,

which EVs of course utilize. On the one hand, this makes sense for EVs to pay registration fees, as long as the fees are reasonable and take into account the benefits the vehicles bring to the state, too. But, these EV registration fees are rarely reasonable or fair.

See more information on the [Plug In America EV Road Usage Fee page](#) and the [Sierra Club blog post](#).



ARGUMENTS AGAINST EV FEES

- States often do not impose similar fees on trucks, despite their far greater weight and impact on roads. EVs are typically lighter than conventional vehicles.
- The average driver pays \$71 in gas tax each year, but the average EV fee is significantly higher. Such disproportionate fees threaten to deter potential buyers at a time when EV technology is just starting to gain a foothold.
- States often subsidize natural gas and liquified petroleum vehicles and don't require owners to pay an annual fee, despite these vehicles not contributing to gas tax revenue.
- Not only are EVs lighter weight, reducing road wear, but their lack of tailpipe emissions improves air quality and benefits public health.
- Most EV fees force owners to pay more than their fair share of the transportation fund. In some states, EV owners already pay electricity taxes to utilities.
- Adjustments in state and federal gasoline taxes, implementing a fair carbon pricing system, and vehicle weight fees would be more equitable alternatives to

provide funding for roads, bridges, transit, and other infrastructure.

- These transportation fund deficits average in the tens to hundreds of millions of dollars, which EVs can barely make a dent in since they average less than 1% of a state's total registered vehicles.
- Now is the time to incentivize, not penalize, people to drive cleaner, greener vehicles that benefit all of us by reducing air pollution dangerous to our health and climate.

STATES THAT PROVIDE A WAIVER OR REDUCTION IN EV REGISTRATION FEES

Connecticut

- Offers a [reduced registration fee](#) from \$80 for a passenger car, to \$38 for an electric vehicle passenger car. (Reference [Chapter 246](#) Sections 14-31 and 14-49 of General Statutes of Connecticut)

District of Columbia

- A new motor vehicle with a U.S. EPA estimated average city fuel economy of at least 40 miles per gallon is eligible for a [reduced registration fee](#) of \$36 for first time registration only. [Other passenger vehicles](#) face a fee of \$72-\$155 based on weight.

Illinois

- Registration fees for passenger vehicles vary from [\\$101-\\$114](#). However, [HB 4717](#) lowered the yearly max for an electric vehicle registration fee to \$18.

Iowa

- Yearly [registration fees](#) for electric automobiles (battery powered) made before 2014 vary from [\\$15-\\$25](#). Multipurpose vehicles (ex. Chevrolet Blazer, Ford Bronco, Dodge Ramcharger) made 1992 and older face a yearly fee of \$55-\$60. For all passenger cars made after, (including electric vehicles made after 2014), fees are based on an equal [weight fee](#). (Reference Iowa Code, [321.116](#), [321.124](#), [321.159](#))

Vermont

- The [registration fee](#) for electric-powered vehicles is \$74 for one year, or \$136 for two- nearly half of what gas/ diesel vehicles pay at \$132 for one year, or \$242 for two.
- In 2016, Vermont's Agency of Transportation released a [study](#) of whether it would be fiscally effective to charge EV owners a higher registration fee. Leaders have recommended holding off on an EV fee until EVs are at least 15% of the state's vehicles.

Vehicle Purchase Rebates

Financial incentives for EVs help to move the market from the early adopter stage to the mass market phase.

Vehicle Purchase [Rebate Template](#)



SAMPLE STATES WITH A VEHICLE PURCHASE REBATE

California: Clean Vehicle Rebate Project ([CVRP](#)) offers rebates for the purchase or lease of qualified new light-duty EVs and PHEVs on a first-come, first-served basis to individuals, business owners, and government entities of up to \$5,000. For individuals with low and moderate incomes, rebates are increased by \$1,500, for a total rebate amount of up to \$6,500. (Reference: California Health and Safety Code 44274 and [44258](#)) The [Public Fleet Pilot Project](#) (Statewide): Rebate of up to \$10,000 for BEV and \$5,250 for PHEV for purchase; available to state and local entities (Reference: California Health and Safety Code [44274](#) and [44258](#)) The [Drive Clean! Rebate Program](#) (San Joaquin Valley): Rebate of up to \$3,000 for purchase or lease of qualified new EVs; available to businesses and individuals. The [Plus- Up Program](#) (Greater Los Angeles and San Joaquin Valley): Rebate of up to \$12,000 for purchase of an EV; available to low-income families.

Connecticut: The Hydrogen and Electric Automobile Purchase Rebate Program ([CHEAPR](#)) offers rebates up to \$5000 for purchase or lease of an EV and a \$300 dealer incentive.

Delaware: [The Delaware Clean Vehicle Rebate Program](#) provides up to \$3,500 for BEVs and \$1,500 for PHEVs for purchase, lease or conversion; available to businesses, individuals and government.

Massachusetts: [MOR-EV](#): Rebates of up to \$2,500 for purchase or lease of an EV; available to residents.

New York: [Drive Clean Rebate](#) offers up to \$2,000 for purchase or lease of an EV with a battery capacity of at least 4-kilowatt hours.

Oregon: [Zero Emission Vehicle Rebate Program](#) will be available for purchases of new electric vehicles subject to certain criteria established by DEQ. Rebates will be \$1,250-\$2,500 for certain EVs with battery capacities of 10 kWh or greater and \$750-\$1,500 for EVs with battery capacities less than 10 kWh. Additional rebates of \$1,250-\$2,500 will be offered for low- and moderate-income households buying or leasing new or used zero-emission vehicles and will be offered for households that voluntarily retire or scrap vehicles at least twenty years old

Pennsylvania: The Alternative Fuels Incentive Gas Program ([AFIG](#)) offers rebates of \$1,750 for BEVs and \$1,000 for PHEVs available to residents (Reference: [Title 73, Pennsylvania Statutes, Chapter 18E, Section 1647.3](#))

Rhode Island: The Rhode Island Public Sector Vehicle Electrification Incentive Program ([Charge Up!](#)) offers public entities rebates of up to \$15,000 for the purchase or lease of EVs for a fleet.



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