



# OLR RESEARCH REPORT

May 2, 2011

2011-R-0211

## **ELECTRIC VEHICLE INITIATIVES IN OTHER STATES**

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You asked for a description of initiatives in other states to promote electric vehicles. This report covers Arizona, California, Virginia, and Washington, which have the broadest range of initiatives. Much of the information in this report is taken from the Alternative Fuels Data Center website, [www.afdc.energy.gov/afdc/](http://www.afdc.energy.gov/afdc/).

### **SUMMARY**

All of these states provide financial incentives to promote the use of electric vehicles. These include tax credits in Arizona, rebates in California, loans and grants in Virginia, and tax exemptions in Washington. All four states allow electric vehicles to use high occupancy vehicle (HOV) lanes regardless of how many people are in the vehicle. California and Virginia have initiatives to support research and development of electric vehicles. Washington is developing the nation's first electric highway by developing public recharging stations on Interstate 5. In addition to incentives provided by the states, electric utilities in California have time of use rates that are designed to reduce the cost of recharging electric vehicles. In many cases, these initiatives also apply to other alternative fuel vehicles (AFVs), such as those powered by natural gas.

## **ARIZONA**

### ***Consumer Financial Incentives***

Arizona provides an income tax credit of up to \$75 to individuals who install an electric vehicle charging outlet in a house the taxpayer constructs. To qualify, the outlet must meet certain codes and standards ([Ariz. Rev. Stat. §§ 43-1090](#) and [43-1176](#)).

The initial annual vehicle license tax on an AFV is lower than the license tax on a conventional vehicle. The vehicle license tax on an AFV is \$4 for every \$100 in assessed value. The assessed value of the AFV during the first year after initial registration is 1% of the manufacturer's base retail price (as compared to 60% for conventional vehicles); during each succeeding year, the value of the AFV is reduced by 15%. The minimum amount of the license tax is \$5 per year for each vehicle subject to the tax ([Ariz. Rev. Stat. §§ 28-5805](#) and [28-5801](#))

### ***HOV Access***

Electric vehicles and specified other AFVs may use HOV lanes, regardless of the number of passengers. Qualified vehicles must display AFV special plates or stickers, which are available from the Arizona Department of Transportation, Motor Vehicle Division ([Ariz. Rev. Stat §§ 28-337](#) and [28-2416](#)).

### ***Other Initiatives***

A person may not stop, stand, or park a vehicle in any parking space designated for parking and charging electric vehicles unless it is an electric vehicle that has been issued an AFV special plate or sticker. Violation is subject to a civil penalty of at least \$350 ([Ariz. Rev. Stat. § 28-876](#)).

New motor vehicle dealers must make information about AFVs and Arizona's incentives for purchasing or leasing them available to the public ([Ariz. Rev. Stat. § 28-4414](#)).

## **CALIFORNIA**

### ***Consumer Financial Incentives***

In California, rebates are available through the [Clean Vehicle Rebate Project](#) to buy or lease of electric and other qualified vehicles. The rebates offer up to \$5,000 for light-duty zero emission and plug-in hybrid vehicles and up to \$20,000 for zero emission commercial vehicles that the California Air Resources Board (ARB) has approved or certified. The rebates are available on a first-come, first-served basis to individuals,

business owners, and government entities in California that purchase or lease new eligible vehicles on or after March 15, 2010. Manufacturers of zero emission vehicles must apply to ARB to have their vehicles included in the project.

The ARB provides vouchers to eligible fleets to reduce the incremental cost of qualified medium- and heavy-duty hybrid electric vehicles at the time of purchase. Vouchers are available on a first-come, first-served basis and range from \$10,000 to \$45,000. Only fleets that operate vehicles in California are eligible.

### ***HOV Access***

Electric and other alternative fuel vehicles meeting California and federal emissions standards that have a California Department of Motor Vehicles clean air vehicle sticker may use HOV lanes even if they are being driven alone. White clean air vehicle stickers, expiring January 1, 2015, are available to an unlimited number of qualifying electric vehicles. Yellow stickers, expiring July 1, 2011, were issued to a limited number of qualifying hybrid electric vehicles (drivers of these vehicles registered in the San Francisco Bay region must also obtain a Bay Area FasTrak account before using HOV lanes). Beginning January 1, 2012, a new sticker will be available for a limited number of qualified plug-in hybrid electric vehicles. This sticker will expire January 1, 2015.

### ***Utility Incentives***

The state's major electric companies and the two largest municipal utilities have rates designed to promote electric vehicles. Specifically:

1. Pacific Gas & Electric offers a discounted experimental residential time-of-use rate for electricity used to charge battery electric vehicles and plug-in hybrid electric vehicles;
2. Southern California Edison offers a discounted rate to customers for electricity used to charge electric vehicles, with two rate schedules available for charging these vehicles during on- and off-peak hours;
3. San Diego Gas & Electric offers lower rates to customers for electricity used to charge electric vehicles, with three time-of-use rates;

4. the Los Angeles Department of Water and Power offers a 2.5 cent per kilowatt discount for electricity used to charge electric vehicles during off-peak times; and
5. the Sacramento Municipal Utility District offers a rate credit to residential customers who own a licensed passenger electric vehicle and sign up for the residential time-of-use rate.

### ***Other Incentives***

The [Motor Vehicle Registration Fee Program](#) funds projects that reduce air pollution from on- and off-road vehicles. Eligible projects include purchasing electric and other alternative fuel vehicles and developing alternative fueling infrastructure.

### ***Research and Development***

The California Energy Commission administers the [Alternative and Renewable Fuel and Vehicle Technology Program](#) to increase the use of alternative and renewable fuels and innovative technologies. Grants and loans are available for projects that:

1. develop and improve alternative and renewable low carbon fuels;
2. optimize alternative and renewable fuels for existing and developing engine technologies;
3. produce alternative and renewable low carbon fuels in California;
4. decrease the overall impact of an alternative and renewable fuel's lifecycle carbon footprint and increase sustainability;
5. expand fuel infrastructure, fueling stations, and equipment;
6. improve light-, medium-, and heavy-duty vehicle technologies;
7. retrofit medium- and heavy-duty on-road and non-road vehicle fleets;
8. expand infrastructure connected with existing fleets, public transit, and transportation corridors; and
9. establish workforce training programs, conduct public education and promotion, and create technology centers.

The [California Alternative Energy and Advanced Transportation Financing Authority](#) provides financing for property used to develop and commercialize advanced transportation technologies that reduce pollution and energy use and promote economic development. Eligible technologies include electric vehicles. The authority may provide financial incentives in the form of sales and use tax exclusions on qualified property.

### ***Other Initiatives***

The law ([Cal. Public Utilities Code](#) Sec. 740.2) requires the Public Utilities Commission (PUC), in consultation with the Energy Commission, ARB, electric companies, and the motor vehicle industry, to evaluate policies to develop infrastructure sufficient to overcome barriers to the widespread deployment and use of electric vehicles and plug-in hybrid electric vehicles. By July 1, 2011, the PUC must adopt rules to address the:

1. impacts on electrical infrastructure and any infrastructure upgrades necessary for widespread use of these vehicles, including the role and development of public charging infrastructure;
2. impact of these vehicles on grid stability and the integration of renewable energy resources;
3. technological advances needed to ensure the widespread use of these vehicles and what role the state should take to support the development of this technology;
4. existing code and permit requirements that will affect the widespread use of these vehicles and any recommended changes to existing policies that may be barriers to their widespread use;
5. role the state should take to ensure that technologies employed work harmoniously and across service territories; and
6. impact of widespread use of these vehicles on achieving the state's greenhouse gas emissions reductions goals and renewables portfolio standard program, and what steps should be taken to address the possibility of shifting emissions reductions responsibilities from the transportation sector to the electrical industry.

## **VIRGINIA**

### ***Consumer Financial Incentives***

The Alternative Fuels Revolving Fund provides loans and grants to municipal, county, and state governments to support AFV programs; pay for AFV maintenance, operation, evaluation, or testing; pay for vehicle conversions; or improve alternative fuel infrastructure. Eligible alternative fuels include electricity as well as hydrogen and natural gas. Projects with a funding match are given priority in the evaluation process ([Va. Code §§ 33.1-223.4](#) and [33.1-223.7](#)).

### ***Financial Assistance for Manufacturers***

Businesses involved in AFV and component manufacturing and AFV conversions are eligible for a job creation tax credit of up to \$700 per full-time employee. The credit is allowed in the taxable year in which the job is created and in each of the two succeeding years in which the job is continued. This credit is effective for taxable years through December 31, 2011 ([Va. Code § 58.1-439.1](#)).

### ***HOV Access***

Electric and other AFVs displaying the Virginia clean special fuels license plate may use Virginia HOV lanes, regardless of the number of occupants, until July 1, 2011. For HOV lanes serving the I-95/I-395 corridor, only registered vehicles displaying clean special fuels license plates issued before July 1, 2006 are exempt from HOV lane requirements. Dedicated AFVs and some hybrid electric vehicles may qualify for the license plate and HOV exemption. The annual fee for these license plates is \$25 in addition to the prescribed fee for commonwealth license plates ([Va. Code §§ 33.1-46.2](#) and [46.2-749.3](#))

### ***Research and Development***

The Virginia Universities Clean Energy Development and Economic Stimulus Foundation helps identify, obtain, disburse, and administer funding for electric and other alternative fuels and related technology research, development, and commercialization. The funds may be distributed as grants, loans, or through other methods ([Va. Code Secs. 23-299](#) through [23-302](#)).

### ***Other Initiatives***

The [Virginia Get Ready: Electric Vehicle Plan](#) aims to establish Virginia as a leader in electric vehicle adoption. The plan describes techniques to overcome potential barriers associated with electric vehicle adoption and charging infrastructure, specifically codes, standards and processes. It also includes a (1) communication strategy to educate appropriate partners, stakeholders, and the general public and (2) description of potential incentives to encourage businesses and individuals to buy electric vehicles.

## **WASHINGTON**

### ***Tax Exemptions***

New passenger cars, light-duty trucks, and medium-duty passenger vehicles that use alternative fuels, including electric vehicles, are exempt from the state vehicle sales and use taxes. The exemption also applies to qualified used vehicles that are modified with a U.S. Environmental Protection Agency certified aftermarket conversion, as long as the vehicle is being sold for the first time after modification. The converted vehicle must be part of a fleet of at least five vehicles owned by the same person and have an odometer reading of less than 30,000 miles. This tax exemption expires July 1, 2015 (Wash. Rev. Code §§ [82.08.809](#) and [82.12.809](#)).

Public lands used for installing, maintaining, and operating electric vehicle infrastructure are exempt from leasehold excise taxes until January 1, 2020. In addition, the state sales and use taxes do not apply to electric vehicle batteries; labor and services for installing, repairing, altering, or improving these batteries and electric vehicle infrastructure; and the sale of related infrastructure property (Wash. Rev. Code §§ [82.29A.125](#), [82.08.816](#), and [82.12.816](#)).

The Department of Commerce administers the Vehicle Electrification Demonstration Grant Program. State agencies, public school districts, public utility districts, or political subdivisions of the state are eligible for grants for projects to buy or convert existing vehicles to plug-in and battery electric vehicles for use in an applicant's fleet or operations. However, funding for this program has not been provided to date.

### ***Other Consumer Incentives***

Battery electric and other alternative fuel vehicles are exempt from state emissions control inspections. Hybrid electric vehicles that obtain a U.S. Environmental Protection Agency fuel economy rating of at least 50

miles per gallon during city driving are also exempt from these inspections (Wash. Rev. Code. § [46.16.015](#)).

### ***Infrastructure***

The departments of commerce and transportation are implementing the nation's first "electric highway," a basic network of public access electric vehicle recharging locations along Interstate 5. Once fully implemented, Washington will have the first border to border highway to offer fast charge technology. The electric highway will support mass-produced plug-in electric vehicles. In the first stage of the project, level-2 "medium-speed" chargers will be installed at rest areas on the state's borders with Canada and Oregon for public education and outreach. The public will be able to charge up at these locations starting in early 2011.

The Department of Commerce also administers the Energy Freedom Program, which includes the Green Energy Incentive Account that provides financial assistance for alternative fueling infrastructure along Interstate corridors. However, funds have yet to be appropriated for this account, which is set to expire after June 30, 2016 (RCW § [43.325](#)).

### ***Other Initiatives***

The law (RCW § [47.80.090](#)) requires the regional transportation planning organization for Seattle to collaborate with state and local governments to promote electric vehicle use, invest in electric vehicle infrastructure, and seek federal or private funding for these efforts. Collaborative planning efforts may include:

1. developing short- and long-term plans outlining how state, regional, and local governments may construct charging locations and ensure that the infrastructure can be electrically supported;
2. supporting public education and training programs on electric vehicles;
3. developing an implementation plan for counties with a population greater than 500,000 to have 10% of public and private parking spaces ready for electric vehicle charging by December 31, 2018; and
4. developing model ordinances and guidance for local governments for site assessment and installing infrastructure.

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