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GEORGIA'S TAX CREDIT FOR ZERO- AND LOW-EMISSION VEHICLES

Introduction

In 1998, Georgia adopted three income tax credits for the purchase of low- and zero-emission vehicles. These include the Zero Emission Vehicle (ZEV) tax credit, the Low-Emission Vehicle (LEV) tax credit, and the Electric Vehicle Charger (EVC) tax credit. This brief describes these credits and estimates the revenue loss to the state. It also includes a more in-depth analysis of the ZEV tax credit by showing the geographic distribution of the credit, describing similar programs in other states, and highlighting the loss in gas tax revenue and increase in sales tax revenue from electricity consumption through increased use of all-electric vehicles.

Georgia ZEV Tax Credit

The ZEV tax credit is the most utilized of the three credits and is specifically geared toward the purchase of full-size electric vehicles. The allowable credit is either 20 percent of the cost of the vehicle or \$5,000, whichever is less, and is applicable either to the purchase or lease of a new vehicle. It is not applicable to the purchase of used vehicles. Taxpayers are eligible for a credit for each qualifying vehicle. Although the value of the tax credit may not exceed a taxpayer's Georgia state income tax liability, purchasers are allowed to carry the credit forward for five years after the end of the taxable year in which the purchase or lease was made.

Eligibility for the ZEV credit is determined by the Environmental Protection Division of the Georgia Department of Natural Resources after review of a mandatory certification form. A notable aspect of the ZEV credit is that eligible vehicles must be powered solely by an alternative fuel (Table I).

This means that the most popular electric vehicle models, such as the Nissan Leaf, Tesla Model S, and the BMW i3 without range extender, are eligible for the ZEV credit (Udi 2015). However, because plug-in hybrid electric vehicles, such as the Toyota Prius and Chevrolet Volt, are powered by a combination of an internal combustion engine and an electric motor, they are not eligible for the ZEV tax credit. Flex-fuel and bi-fuel cars, as well as low-speed electric vehicles, are also ineligible (Georgia Department of Natural Resources, Environmental Protection Division 2014).

Table I. ZEV Eligible Vehicles, 2014

ELECTRIC VEHICLE		HYDROGEN FUEL CELL	
MAKE	MODEL	MAKE	MODEL
BMW	i3 (Electric)	Honda	FCX Clarity
Fiat	500e	Hyundai	Tucson FCV
Ford	Focus (Electric)	Mercedes-Benz	B-Class F-Cell
Chevrolet	Spark EV		
Honda	Fit		
Kia	Soul EV		
Mercedes-Benz	B-Class Electric		
Mitsubishi	MiEV		
Nissan	Leaf		
Smart	ForTwo Cabriolet		
Tesla	Model S		
Scion	iQ EV		
Toyota	RAV4-EV		

Source: Georgia Department of Natural Resources: Environmental Protection Division, Air Protection Branch

Additional Purchase Incentives

In addition to the state’s \$5,000 credit, there is a federal Qualified Plug-in Electric Drive Motor Vehicle Credit of up to \$7,500 for which electric vehicles qualify. The federal tax credit can be claimed by any purchaser of a vehicle, including leasing companies. Qualifying models eligible for this credit are subject to a phase-out after 200,000 vehicles have been sold in the United States. However, as of November 2014, Nissan had sold only 69,220 Leafs nationally, and its electric vehicle sales are not expected to reach the federal phase-out cap until approximately 2017 (Voelcker 2014).

The combination of Georgia’s \$5,000 ZEV tax credit and the \$7,500 federal credit creates a significant subsidy for the purchase of qualifying vehicles. Estimates vary, but with a leasing firm claiming the \$7,500 federal credit, the full Georgia tax credit could lower the cost of a three-year, \$199 per month Nissan Leaf lease (including taxes and fees and after a \$2,399 down payment) to approximately \$60 per month (Halvorsen 2014; Ramsey 2014; White 2013).

Georgia offers other non-tax incentives that may increase demand for electric cars. For instance, Georgia is one of 23 states that grants drivers of alternatively fueled cars, including electrics, an exemption from High Occupancy Vehicle (HOV) and High Occupancy Toll (HOT) lane passenger requirements if they display a special license plate.¹ In addition, Georgia Power offers discounted off-peak electricity rates to residential customers for charging electric vehicles (U.S. Department of Energy, Alternative Fuels Data Center 2014).

ZEV Tax Credit Effects

As Table 2 shows, Georgia’s ZEV credit has seen a rapid increase in use in the past several years. Total utilized revenue rose from \$2,222 in 2009 to \$14.2 million in 2013.

Table 2. ZEV Credit: Georgia’s Utilized Tax Credit (calendar years)

2009	2010	2011	2012	2013
\$2,222	\$5,131	\$194,008	\$1,100,436	\$14,204,873

Source: Georgia Department of Revenue, as of January 21, 2015.

¹ O.C.G.A. § 40-2-86.1

Table 3 shows the estimated state tax expenditures on Georgia’s ZEV, LEV, and EVC tax credits. Some 93 percent of the total cost shown in Table 3 is attributable to the ZEV credit.

Table 3. Georgia Estimated Tax Expenditure

	FY 2014	FY 2015
	-----(\$ MILLIONS)-----	
Tax Expenditure Estimate	\$23	\$43

Source: Georgia Tax Expenditure Report for FY 2016
Note: Estimate includes cost of ZEV, LEV, and EVC tax credits.

In 2014, the legislature debated limiting or even eliminating both the LEV and ZEV credits. House Bill 257 proposed ending both credits starting April 1, 2014.² Amended by the Senate Natural Resources and Environment Committee, the legislation proposed a \$10 million cap on disbursement for both credits, which would have effectively limited them to a maximum of 2,000 vehicles per year.³ Other considered reforms included providing a credit for plug-in hybrid electric vehicles, and adopting a gradual phase-out of the existing credit (Chirico 2014). Although an amended version of the original proposal passed in the House, it ultimately died without passage in the Senate in the 2013–2014 legislative session. In the 2015–2016 legislative session, elimination of the ZEV and LEV credits was included in House Bill 170, the Transportation Funding Act of 2015. With the passage of HB 170, both credits will be eliminated as of July 1, 2015.

Geographic Distribution in Georgia

The geographic distribution of the ZEV tax credit has predominantly favored metro-Atlanta counties. Most rural counties have between zero and 10 electric vehicle registrations each year (see Figure 1). In 2014, Fulton County had the most registrations of Nissan Leafs and Teslas (2,145), followed by Cobb County (1,301), Gwinnett County (1,126), DeKalb County (1,093), and Forsyth County (896). Adjusted for population, Forsyth County has the highest proportion of electric vehicles among its residents, followed by Fulton, Cobb, and DeKalb counties (Table 4).

² LC 34 4194S
³ LC 40 0629S

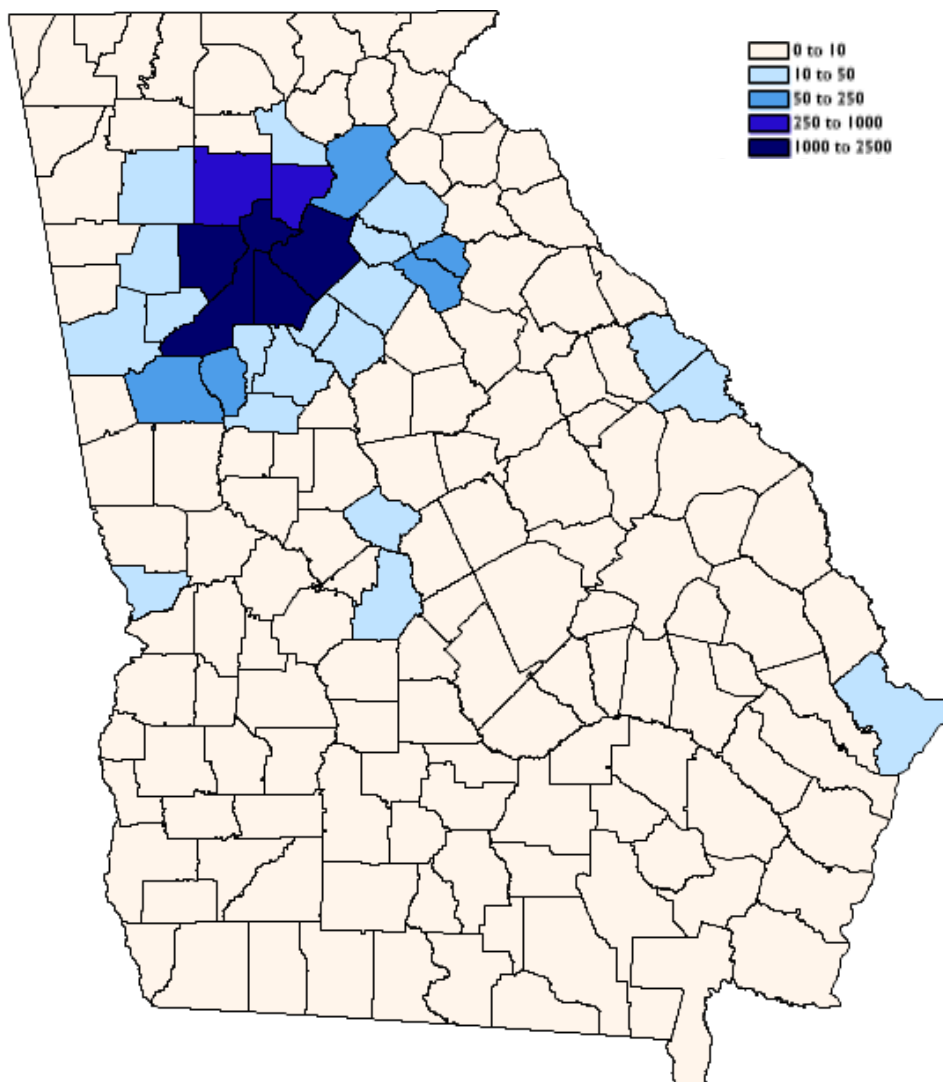
Table 4. Top 10 Electric Vehicle Counties in Georgia, 2014

COUNTY	ELECTRIC CARS PER 1,000 RESIDENTS
Forsyth	4.39
Fulton	2.07
Cobb	1.78
DeKalb	1.49
Oconee	1.47
Gwinnett	1.29
Cherokee	1.19
Fayette	0.84
Dawson	0.48
Coweta	0.48

Source: Georgia Department of Revenue, U.S. Census Bureau

Several factors may explain this geographic distribution. Because electric vehicles are relatively high-priced, even after federal and state tax incentives, they are harder to acquire for lower-income individuals. Such individuals also may not have sufficient tax liability to qualify for all or part of the tax credit. Metro-Atlanta counties have a relatively greater proportion of higher-income earners; therefore, it follows that these counties would have a greater share and number of ZEVs. Furthermore, range-anxiety might play a role in the geographic distribution. Current Nissan Leaf models have a range of 64 to 84 miles, which favors shorter commutes; this could be a complicating factor for adoption by rural commuters (Atiyeh 2014; Robinson 2014).

Figure 1. New Electric Vehicle Registrations by County, 2014



Source: Georgia Department of Revenue, mapped by CSLF

State Comparison of Electric Vehicle Incentives

Until the elimination of its ZEV credit on July 1, 2015, Georgia is one of 11 states to offer tax incentives for the purchase of electric cars. Georgia’s tax credit is sizeable compared to those offered by other states and is second in size only to the incentives offered to Colorado residents. As shown in Table 5, states like Illinois, Louisiana, and California also offer tax incentives to electric vehicle purchasers.

Table 5. Electric Vehicle Incentives by State, 2013

STATE	TAX INCENTIVE	EVS AS A % OF NEW CAR SALES
Colorado	\$6,000	0.33%
Georgia	\$5,000	0.94%
Illinois	\$4,000	0.25%
Louisiana	\$3,000	0.01%
California	\$2,500	1.28%
Pennsylvania	\$2,000	0.1%
Texas	\$2,500	N/A
Utah	\$605	0.31%

Source: Alternative Fuels Data Center; IHS Automotive

Six of the 11 states, including Pennsylvania, Texas, and Illinois, offer incentives in the form of sales tax rebates. Some have adopted a cap on their rebate programs, imposing a maximum number of vehicle rebates. Texas, for instance, limits its \$2,500 rebate program to 2,000 electric vehicles per fiscal year, and Pennsylvania’s \$2,000 rebate for electric vehicles ends after 500 have been sold in the state (Pennsylvania Department of Environmental Protection 2015; Edelstein 2014).

New Jersey, Washington, and Washington, D.C. offer exemptions to their sales or excise taxes on the purchase or lease of electric vehicles. For a mid-level Nissan Leaf, for example, these savings amount to around \$2,250 in New Jersey, and \$2,080 in Washington and the District of Columbia (Nissan USA 2015). For a mid-level Tesla Model S, these savings would amount to \$6,125 in New Jersey, and \$5,690 in Washington and the District of Columbia (Edmunds.com 2015).

Georgia has seen a strong increase in electric vehicle sales over the past several years, particularly compared to other states. Electric vehicle sales accounted for 0.94 percent of all new vehicle sales in 2013, the third-highest share in the country after Washington (1.4

percent) and California (1.28 percent) (Jin, Searle, and Lutsey 2014). In March 2014, Atlanta (2.15 percent) ranked second in electric vehicle registrations in major U.S. metropolitan areas for the preceding 12 months. The San Francisco-Oakland-San Jose metropolitan area, where 3 percent of all newly registered cars were electric, ranked first. Additionally, Atlanta was Nissan Leaf’s top U.S. market for eight out of the 10 months preceding June 2014 (Ramsey 2014). Finally, during the first six months of 2014, Georgia had the highest electric vehicle sales share in the country (1.6 percent), surpassing both California (1.41 percent) and Washington (1.13 percent).

Georgia Gas Tax Revenue Effect

Electric vehicles consume no gasoline; therefore, their owners pay no gas tax, the revenues from which are used to fund transportation projects throughout the state.

Even after elimination of the ZEV credit in FY 2016, gas tax revenue losses to state and local governments will likely grow in coming years, as the share and number of electric vehicles on Georgia’s roads increases. The introduction of more electric vehicle models with greater ranges and lower prices is expected to exacerbate this effect. Applying the new motor fuels rate structure enacted as part of the 2015 Transportation Funding Act, Table 6 shows the estimated loss of state and local gas tax revenues for fiscal year (FY) 2016 attributable to electric vehicles.⁴

Table 6. Estimated State and Local Gas Tax Revenue Loss

	FY 2016 (\$ MILLIONS)
State	\$4.9
Local	\$1.3

Sales Tax Revenue on Additional Electricity Consumption

Because electric cars require electricity to operate, the increased fleet of electric vehicles on Georgia’s roads will lead to increased revenues from the state sales tax levied on electricity consumption. Georgia Power

⁴ The 2015 Transportation Funding Act eliminated the 1 percent portion of the prepaid state sales tax dedicated to the state general fund and increased the state motor fuel excise tax to \$0.26.

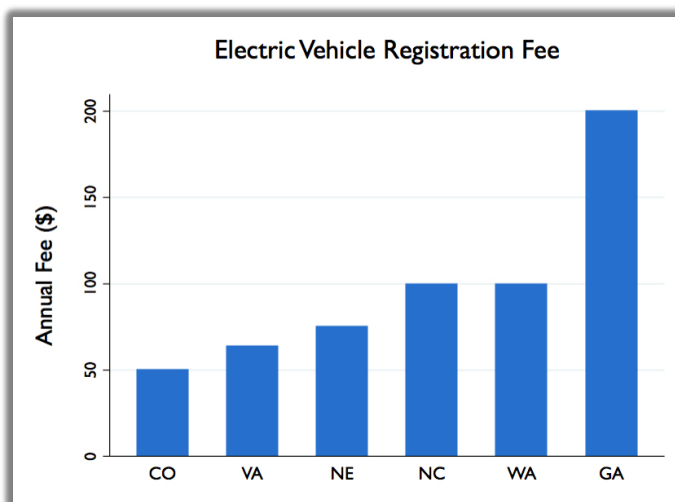
estimates that total household electricity consumption for electric car owners increases by about a third, to an average of 16,000 kilowatt hours per year. Although Georgia Power offers reduced rates for electric vehicle owners, they nevertheless face increased electricity costs. Associated taxes from the additional electricity consumption related to electric cars are estimated to raise approximately \$258,000 in state revenue and \$194,000 in local revenues in FY 2016.

Electric Vehicle Registration Fee

To compensate for reduced gas tax revenues, Washington, Virginia, Colorado, Nebraska, and North Carolina have implemented an annual registration fee for electric vehicles in addition to regular vehicle registration fees (see Figure 2). Other states, including Arizona, South Carolina, Wisconsin, Wyoming and Texas, have debated implementing a similar policy. South Carolina legislators, for example, debated implementing a \$120 annual fee (Kittle 2014). The proposed 2015 Wisconsin transportation budget similarly includes a \$50 annual fee for electric car owners, which if adopted by the legislature, would go into effect in 2016, and Michigan will vote on a ballot measure implementing a \$75 annual fee in May 2015 (Milwaukee-Wisconsin Journal Sentinel 2014; Hartman 2015). Oregon instead initiated a vehicles-miles-traveled tax pilot program in 2015, in which motorists pay tax on the number of miles traveled, rather than per gallon of fuel purchased (Laing 2014). This taxation method would, when fully implemented, include electric vehicle owners.

With the implementation of the Transportation Funding Act of 2015, Georgia will impose a \$200 annual license fee for the registration of non-commercially operated alternatively fueled vehicles, such as electric cars. Assuming an average of 23 miles per gallon, the \$200 fee means Georgia's electric drivers would have to travel 14,000 miles to break even on what would otherwise have been their state and local gas tax liability.

Figure 2. State Comparisons of Electric Vehicle Registration



Note: Georgia's \$200 electric vehicle registration fee begins July 1, 2015.

Low-Emission Vehicle Tax Credit

Georgia's LEV tax credit equals 10 percent of vehicle cost, or \$2,500, whichever is less, for individuals purchasing or leasing LEVs that are powered solely by an alternative fuel. This credit specifically subsidizes vehicles running on compressed natural gas or propane (Table 7), and its utilization has steadily increased in the past few years, growing from \$11,619 in 2009, to \$15,294 in 2010, \$116,269 in 2011, before more than doubling to \$228,756 in 2012, and increasing to \$1,010,712 in 2013.⁵ However, the LEV credit remains significantly smaller in size compared to the ZEV credit, both in terms of revenue and in the number of applications to Georgia's Department of Natural Resources, which recognizes just six vehicle models as eligible for this credit.

⁵ Credits compiled from Georgia Department of Revenue returns processed through January 21, 2015.

Table 7. LEV Eligible Vehicles, 2014

-----COMPRESSED NATURAL GAS VEHICLES-----	
MAKE	MODEL
Chevrolet	Express 2500/3500
GMC	Savana 2500/3500
GMC	Savana Cutaway 3500/4500
Honda	Civic GX
-----PROPANE VEHICLES-----	
MAKE	MODEL
Chevrolet	Express 4500 Cutaway
GMC	Savana 4500 Cutaway

Source: Georgia Department of Natural Resources: Environmental Protection Division, Air Protection Branch

Electric Vehicle Charger Tax Credit

The EVC tax credit allows businesses to claim an income tax credit for the purchase or lease of electric vehicle chargers located in Georgia. The credit can be claimed for a “minimum of five consecutive years and the charger must be installed for the purpose of charging on-road electric vehicles,” and must remain in Georgia for five consecutive years (Secretary of State 2015). This tax credit requires a certification issued by the seller stating where the charger was purchased or leased.⁶ The credit is limited to 10 percent of the cost of a charger, up to a maximum of \$2,500, and it is not available for individuals or residential installation. For residential customers, Georgia Power offers a \$250 rebate for installation of an electric vehicle charger.

The EVC credit has seen relatively limited utilization compared with the other two credits. Its use amounted to \$1,813 in 2009, \$1,546 in 2011, and \$2,551 in 2013.⁷ However, electric vehicle numbers have rapidly grown over the past several years, and the use of this tax credit is expected to increase as more employers and businesses opt to install charging stations.

Future Trends

Further increases in the number of electric vehicles on Georgia’s roads are likely as new electric models, such as BMW’s i3, Mercedes Benz’s B-Class Electric, and VW’s e-Golf, join the car market. Most other manufacturers have seen increases in their U.S. electric

vehicle sales between 2013 and 2014 (Shahan 2014). Other developments, such as the announcement of the Chevrolet Bolt and Tesla’s Model 3 in 2017, both with a 200-mile range and an expected price of \$30,000 and \$35,000, respectively, are expected to further boost electric vehicle sales in the coming years (Stoll 2015). Higher ranges, lower price tags, and improvements in battery technology are expected to make these cars more affordable for an increasing number of households; however, lower gas prices and the elimination of Georgia’s ZEV credit may temper electric vehicle growth in the short term.

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⁶ O.C.G.A. § 48-7-40.16

⁷ Credits compiled from Georgia Department of Revenue returns processed through January 21, 2015. The 2013 amount is preliminary.

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