KEYBRIDGE
Public Policy Economics

Commissioned by:
Securing America's Future Energy

Impact of Elimination of the Electric Vehicle Tax Credit on the Georgia State Economy:

Summary of Results

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Background

Georgia currently offers a $5,000 tax credit to support the purchase of electric vehicles (EVs). The credit has played a significant role in boosting Georgia's EV penetration rate to one of the highest rates in the country—1.9 percent of all light-duty vehicle sales in 2014. This study, commissioned by Securing America's Future Energy (SAFE) in partnership with the Electrification Coalition, and prepared by Keybridge Research LLC, a Washington, DC-based economic analysis firm, examines the economic effects of a possible elimination of the tax credit on the Georgia state economy. The study, under the direction of Keybridge's Robert F. Wescott, Ph.D., relies upon an economic model of Georgia developed by REMI, Inc., a leading supplier of regional economic models that are widely used to perform state-level economic impact studies.

Key Findings

The study finds that elimination of the Georgia EV tax credit would reduce state GDP (equal to aggregate state income and also aggregate state output) each year between 2015 and 2030 relative to what it would have been if the credit remained in effect through 2019.

- The cumulative 5-year loss of state GDP in Georgia would be $107 million and the cumulative 16-year loss of state GDP would be $252 million, assuming that people who do not purchase EVs instead purchase conventional vehicles.
- The study further finds that without the tax credit, Georgia car owners would pay an additional $155 million in gasoline bills over the next 5 years (only partially offset by saving $60 million in electricity bills), and an additional $714 million in gasoline bills over the next 16 years (only partially offset by saving $261 million in electricity bills.)
- It also finds that without the tax credit, Georgia drivers would pay $33 million more in auto maintenance bills over the next 5 years, and $208 million more in such bills over the next 16 years.
- Additionally, it finds that if the EV tax credit were eliminated, there would be roughly 44,000 fewer EVs on Georgia roads by 2019, and that if gasoline prices were to suddenly spike by $1.50 a gallon in 2020, Georgia drivers in aggregate would have to spend $28 million more a year for fuel. That is, by eliminating the current EV tax credit, Georgia would be giving up a type of future economic insurance policy for its consumers.
- Two key factors would drive most of the drop in Georgia's state GDP:
    - Lost fuel savings: Due to the drop in EV sales, Georgia consumers would spend more on fuel because conventional vehicles cost substantially more per mile to drive than EVs. Consumers therefore would have less money to spend on other goods and services.

- Lost federal tax credits: An important negative impact on the state economy of Georgia would be the loss of the $7,500 federal EV tax credits flowing to Georgia households purchasing EVs.

Key Assumptions

- The study assumes gasoline prices in 2015 and 2016 match the Energy Information Administration's (EIA) Short-Term Economic Outlook predictions released in January 2015, and then move gradually upward between 2017 and 2030 in the same manner as expected in EIA's 2014 Annual Energy Outlook. These forecasts translate into baseline assumptions of gasoline prices of $2.31 a gallon in 2015, $2.74 in 2016, $2.92 in 2020, $3.40 in 2025, and $3.87 in 2030.

- The study also looks at low- and high-gasoline price scenarios that assume that gasoline prices average $1 a gallon less than the baseline assumptions and $1 a gallon more than the baseline assumptions. It finds that the study's the main conclusion—that Georgia state GDP declines materially with the elimination of the EV tax credit—remains solidly intact in all gasoline price scenarios. In the lower gasoline-price scenario, state GDP declines by $225 million over the 16-year horizon and in the higher gasoline-price scenario state GDP declines by $280 million.

- In response to the removal of the $5,000 tax credit, the study assumes that Georgia consumers would purchase 8,700 fewer electric vehicles each year—a nearly 90% reduction in EV sales from 2014 levels. This estimate was derived by assuming that if the Georgia EV tax credit were eliminated, the EV penetration rate in new sales in Georgia would match the EV penetration rate in a group of three comparison states in the region—Virginia, North Carolina, and Florida. The fact that the Georgia EV tax credit does not apply to EVs that contain a gasoline engine, such as the Chevrolet Volt, and the fact that the Volt penetration rate in Georgia sales is very similar to the Volt penetration rates in Virginia, North Carolina, and Florida, suggests this is a reasonable assumption.

- Economic assumptions about EVs are based upon the Electric Power Research Institute's (EPRI)'s 2013 and 2014 studies of the total cost of ownership of EVs, which provide detailed estimates of the capital, electricity, gasoline, and maintenance costs of EVs and a group of comparator conventional and hybrid electric vehicles (HEVs).

- Importantly, the study assumes that the elimination of the EV tax credit allows the state of Georgia to ramp up its purchases of other goods and services by the same amount as the "saved" EV tax expenditures. That is, the study explicitly assumes that the net budget position of state of Georgia is unchanged with or without the EV tax credit. The overall loss of Georgia GDP occurs despite the recycling of "saved" EV tax credits on other forms of state spending.

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