WEST VIRGINIA ALTERNATIVE-FUEL MOTOR VEHICLES CREDIT REPORT

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Submitted by:

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Introduction

During the 2011 Regular Session, the West Virginia Legislature enacted Senate Bill 465, a bill known as the Marcellus Gas and Manufacturing Development Act of 2011. The purpose of this Bill was to encourage and facilitate "the development of oil and gas wells and the downstream uses of natural gas in this state and economic development in this state associated with production and various downstream uses." Among numerous other provisions, Senate Bill 465 reenacted the original Alternative-Fuel Motor Vehicle Tax Credit with various updates and changes.

Initial Alternative-Fuel Motor Vehicle Tax Credit

The original West Virginia Alternative-Fuel Motor Vehicle Tax Credit was in effect from June 5, 1996 to June 5, 2006. The program generally provided a tax credit of up to $3,750 per qualified motor vehicle based on either (1) the difference in cost between a new alternative-fuel motor vehicle and the cost of a comparably-equipped vehicle using traditional fuel or (2) the cost of retrofitting a conventional vehicle to use alternative fuel. Alternative fuel was defined to include compressed natural gas, liquefied natural gas, liquefied petroleum gas, methanol, ethanol, coal-derived liquid fuels, electricity, and gasoline fuel mixtures containing 85 percent or more methanol, ethanol, or other alcohols. Per statutory requirements, a report on this tax credit was issued by the State Tax Department on June 4, 2007. The findings of that report included the following:

- Credit claims had been made by 310 taxpayers, or roughly 0.04 percent of the total resident Personal Income Tax returns filed for tax year 2005.

- **The majority of credit claims came in the latter years as a result of the increased availability of original equipment qualifying vehicles.** The availability of original equipment qualifying vehicles increased significantly after 2004 in response to higher gasoline prices, increased consumer demand, and the availability of the Federal Alternative Fuel Motor Vehicle Credit as enacted by the Energy Policy Act of 2005.

- The total cost of the credit in terms of foregone State revenue was $737,801.85. Taxpayers received an equivalent amount of revenue in terms of tax liability offset.

Due in large part to market demand and supply effects stemming from higher conventional fuel prices and the federal credit mentioned above, more than half of all tax credit claims over the 10-year period occurred in the last full year of the program. In fact, the final cost of the program when all returns were filed grew to more than $1.3 million. The number of qualifying original equipment vehicles registered with the West Virginia Department of Motor Vehicles increased from just 260 vehicles in 2004 to 4,113 vehicles by 2006 due to the growing supply of such vehicles to the public.

The U.S. Energy Information Administration (EIA) survey on the supply of new alternative fuel vehicles revealed a significant rise in available supply between 2004 and 2011[1]. The U.S. supply of new ethanol flex-fuel vehicles capable of running on a fuel mixture including 85 percent ethanol rose from more than 670,000 units in 2004 to more than 2.1 million units in 2011. The supply of new electric hybrid cars increased from fewer than 89,000 in 2004 to more

[1] See http://www.eia.gov/renewable/afv/supply.cfm.

than 430,000 in 2011. The supply of vehicles running on compressed natural gas or liquefied natural gas was more limited to 5,674 and 101, respectively.

Current Alternative-Fuel Motor Vehicle Tax Credit

The introduced version of Senate Bill 465 would have provided a tax credit equal to 35 percent of the purchase price up to a maximum of $7,500 for a qualified alternative-fuel vehicle or a credit equal to 50 percent of the cost of converting a conventional vehicle to an alternative-fuel vehicle up to a maximum of $7,500. In the case of vehicles weighing in excess of 26,000 pounds, the maximum credit was set at $25,000. The alternative fuel definition was limited to compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, coal-derived liquid fuel, and electricity. The Bill only required that a qualifying vehicle be capable of running on an alternative fuel.

The definition of alternative fuel in the final bill, per a House floor amendment adopted on the final day of the 2011 Regular Session of the West Virginia Legislature, was enhanced to also include methanol, ethanol, and fuel mixtures that contain 85 percent or more methanol, ethanol, or other alcohols. The final legislation also contained a 50 percent tax credit for the cost of qualified home alternative-fuel vehicle refueling infrastructure up to a maximum of $10,000 and a 50 percent tax credit for the cost of qualified commercial alternative-fuel refueling infrastructure up to a maximum of $250,000 if not for use by the public and a 62.5 percent tax credit up to $312,500 if available for use by the public.

Tax credit claims associated with this new Alternative-Fuel Motor Vehicle Tax Credit grew slowly at first, largely because car dealers and most others were initially not fully aware of the changes (e.g., including the addition of flex fuel vehicles in the definition of eligible alternative fuel vehicles) in the final version of legislation. By December 2012, the Tax Department had processed just 149 credit claims for Tax Year 2011 for a total of less than $750,000. However, by the end of Calendar Year 2012, information about the tax credit spread and the Tax Department began receiving numerous amended tax returns with claims for purchases made in 2011. Total Tax Year 2011 claims, including numerous amended tax returns, grew to 3,982 claims totaling more than $15.6 million. The projected cost of just the flex fuel vehicle credit option was roughly $50 million or more for each year in effect. In response to concerns about cost, Legislation was introduced at the beginning of the 2013 Regular Session to redefine eligibility for the tax credit program so that only vehicles capable of running on natural gas products and natural gas fueling infrastructure would qualify. This Legislation was subsequently enacted by the Legislature and made effective April 13, 2013.

The new Alternative-Fuel Motor Vehicle Tax Credit is scheduled to expire on December 31, 2017. Pursuant to Section 11-6D-8(c) of the West Virginia Code, this report details the utilization, benefit, and overall cost of the Alternative-Fuel Motor Vehicle Tax Credit from its reenactment in 2011.

Methods and Data Notes

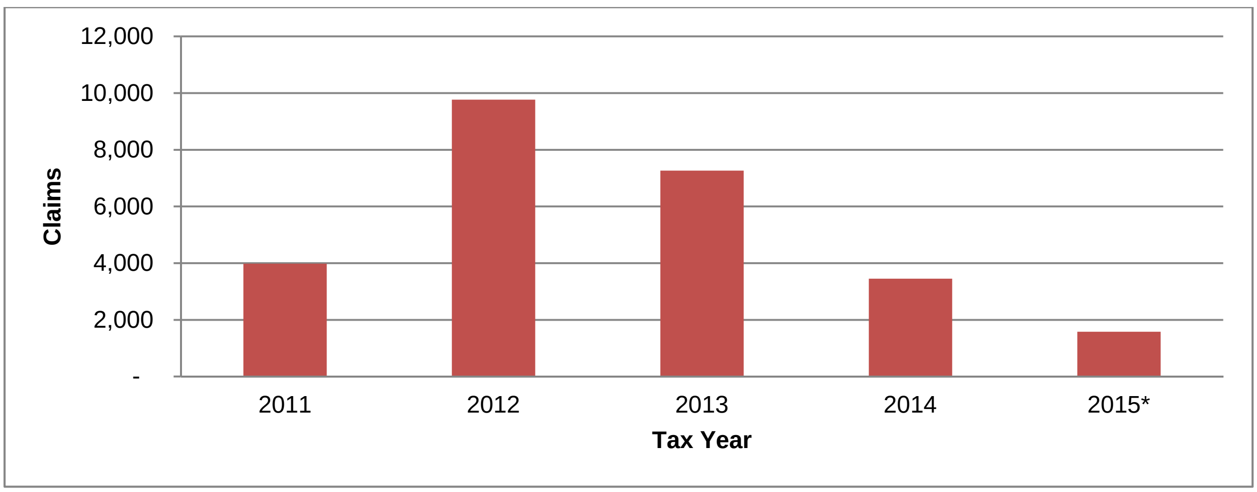
This report includes West Virginia tax returns received as of December 15, 2016. Due to timing, these data do not include Corporation Net Income Tax returns for Tax Year 2015 or any returns for Tax Year 2016. Because returns can be amended for up to three years after the original due date, the West Virginia State Tax Department cautions that these numbers are subject to revision.

The current analysis is completed with some data limitation. First, the Tax Department received a large influx of credit claims as a result of the reinstatement of this credit in 2011. In order to maintain adequate processing of returns and refunds given this unanticipated response, the Tax Department had to take alternate methods of record keeping and, as a result, much of the intricate detail related to this credit was forfeited. As such, data sufficient to deconstruct the types of alternative-fuel motor vehicles purchased and accurate counts of eligible motor vehicles related to these claims are sparse. Further, the Tax Department does not have the staff or ability to analyze the non-fiscal aspects of this credit and therefore cannot fully assess anticipated benefits, such as air quality improvement or reduced dependence on foreign oil. Despite limitations, efforts are made to address these items when possible.

Utilization of the Credit

Section 11-6D-3 of the West Virginia Code allows the Alternative-Fuel Motor Vehicle Tax Credit to be claimed against Personal Income Tax, Corporation Net Income Tax, and Business Franchise Tax[2] liabilities for purchases of qualifying vehicles on or after January 1, 2011 and no later than December 31, 2017. As of December 15, 2016, Tax Department records indicate that slightly more than 26,000 claims have been filed for the Alternative-Fuel Motor Vehicle Tax Credit. Of these claims, approximately 98 percent were claimed against Personal Income Tax liabilities. Figure 1 provides this data in detail.

Figure 1 – Total Claims Per Year for Tax Years 2011-2014



* Tax Year 2015 represents returns filed to date only.

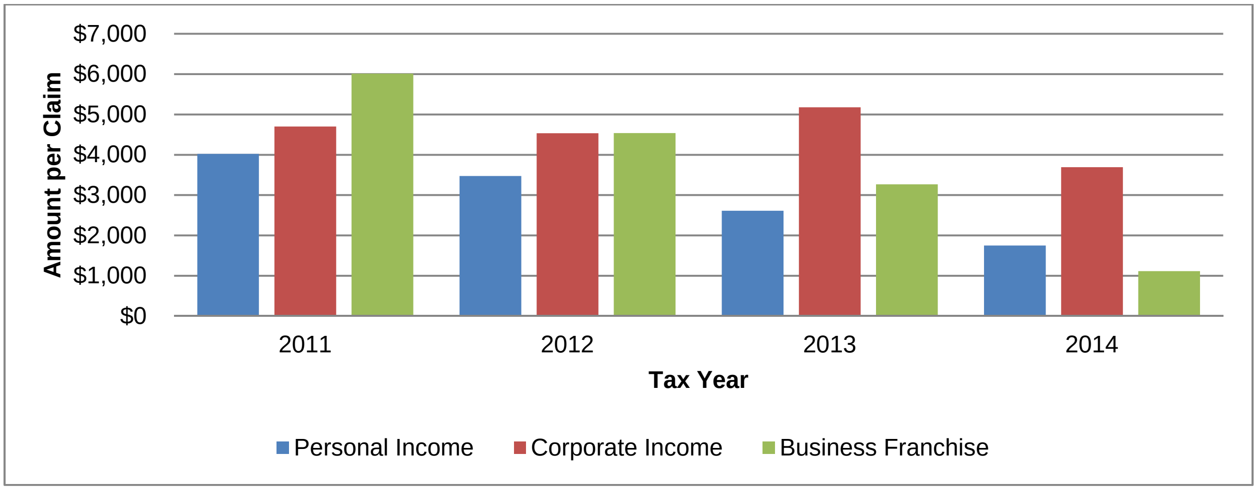
Individual Taxpayers may represent multiple claims in the above chart. It is conceivable that some Taxpayers could have purchased multiple qualifying vehicles during this time period. Further, the statute allows Taxpayers to carry forward any unused Alternative-Fuel Motor Vehicle Tax Credit for up to four succeeding tax years, which can account for several claims for a single Taxpayer. Tax Department records indicate that there were approximately 12,100 unique Taxpayers who claimed the Alternative-Fuel Motor Vehicle Tax Credit to offset Personal Income Tax liabilities from Tax Year 2011 through Tax Year 2015. As with the number of claims, these individual Taxpayers make up approximately 97 percent of all Alternative-Fuel Motor

[2] The Business Franchise Tax terminated on January 1, 2015 pursuant to West Virginia Code §11-23-6(b)(11).

Vehicle Tax Credit claimants. On average, data indicate there were 2.1 claims made per claimant among all tax types.

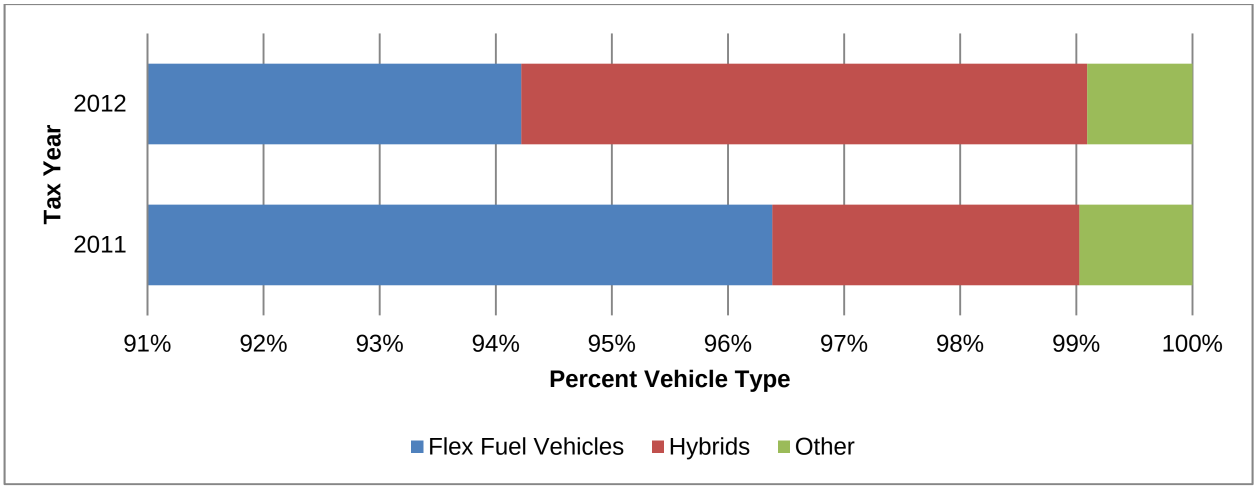
Generally speaking, the average amount per claim declined from Tax Year 2011 to Tax Year 2015, as illustrated in Figure 2. Average amount per claim offsetting Corporation Net Income Tax liabilities remained most stable, falling 21.4 percent from Tax Year 2011 to Tax Year 2014. Average amount per claim offsetting Personal Income Tax liabilities fell 56.5 percent during this time period.

Figure 2 – Average Amount Per Claim for Tax Years 2011-2014



As mentioned previously, data related to vehicle type claimed for the Alternative-Fuel Motor Vehicle Tax Credit is limited. However, some data is available per Tax Department records as of June 28, 2013, indicating flex fuel vehicles accounted for more than 94 percent of total vehicles qualifying for tax credits in Tax Year 2012 (see Figure 3). Hybrid vehicles represented roughly 5 percent of total qualifying vehicles and other vehicles, such as electric plug-in vehicles, natural gas, and CNG/LNG conversion vehicles accounted for the remaining 1 percent.

Figure 3 – Percentage Vehicle Type Claimed



Represents data as of June 28, 2013. “Other” category includes Plug-in, Natural Gas, and CNG/LNG Conversion vehicles.

These records also indicate that total gross credit claims exceeded $15.2 million in Tax Year 2011 and doubled to nearly $30.6 million in Tax Year 2012. For these returns, total net credit claims were more than $10.2 million for Tax Year 2011 and nearly $17.4 million for Tax Year 2012. The difference between gross claims and net claims represents the amount of credit carried forward for use in future tax years. More than 99 percent[3] of the value of claims was for the purchase of qualified vehicles and the remaining share was for home refueling infrastructure for the alternative fuel vehicles.

The original Legislative intent was to encourage more use of West Virginia natural gas through a vehicle tax credit for natural gas vehicles and conversion of conventional vehicles to use natural gas. However, such vehicles accounted for only slightly more than 0.1 percent of claims processed as of June 2013. Due to corrective changes enacted in 2013 that restricted claims for Alternative-Fuel Motor Vehicle Tax Credit claims to just natural gas vehicles for purchases made after April 13, 2013, it is likely this proportion has increased in recent years.

Benefit of the Credit

As with the original version, the reinstatement of the Alternative-Fuel Motor Vehicle Tax Credit was intended to encourage the purchase and use of alternatively-fueled motor vehicles to help alleviate environmental concerns (e.g., by improving air quality) and reduce state and national dependence on foreign oil while providing some assistance to Taxpayers who choose to buy these vehicles (see West Virginia Code §11-6D-1). The new Alternative-Fuel Motor Vehicle Tax Credit Law, in particular the 2013 revision, places a special emphasis on motor vehicles fueled by natural gas and liquefied petroleum.

The obvious beneficiaries of this program are the Taxpayers claiming the credit. There are some beneficiaries in most incentive programs who alter behavior, as intended, to take advantage of the incentive, while some beneficiaries learn after the fact that a purchase qualifies. Due to the noted availability increase of alternative-fuel vehicles, the latter case is more plausible with respect to the Alternative-Fuel Motor Vehicle Tax Credit. The benefit of this credit to Taxpayers is essentially the cost of the credit (i.e., the tax liability offset) for eligible purchases. This cost is discussed in the “Overall Cost of the Credit” section.

It is plausible that the increase in the use of alternative-fuel vehicles in the State likely decreased demand for (and thus some reliance on) foreign oil. Further, qualifying vehicles such as hybrids that are able to operate at least partially without the use of carbon-based fuels most likely contributed to a reduction in air pollution and improvement in air quality in the State. However, beyond this likelihood, it is impossible to accurately quantify whether and to what extent this credit has benefited West Virginia or its citizens. Sufficient information on factors such as mileage, environmental benchmarks, and other related data would be needed in order to adequately evaluate this benefit. Such data is not currently available for this type of analysis.

Overall Cost of the Credit

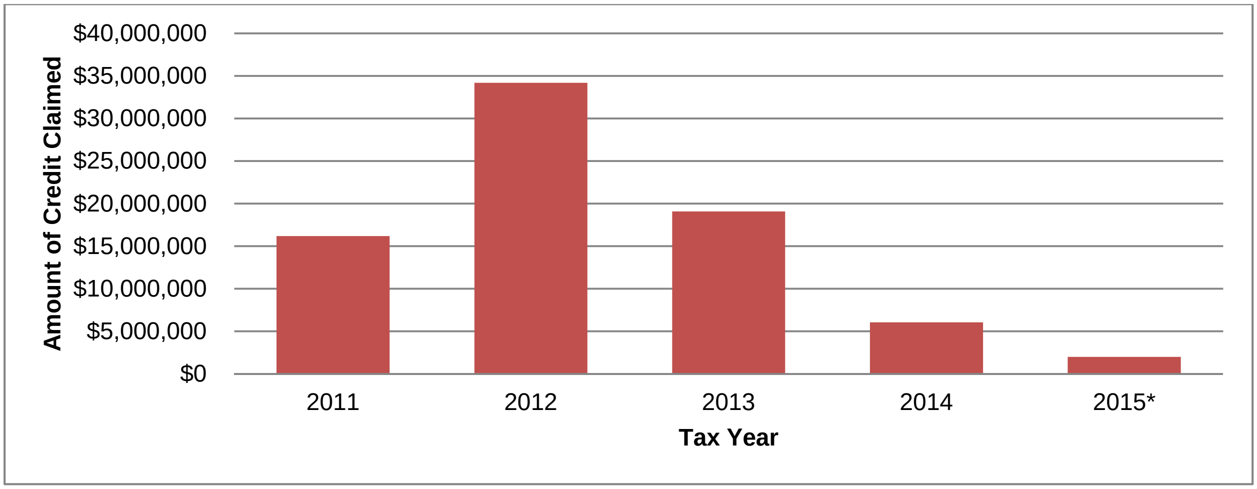
Credit claims for the Alternative-Fuel Motor Vehicle Tax Credit have overwhelmingly offset the Personal Income Tax since 2011, with records indicating at least 96 percent of total claims each year offsetting this liability to date. Claims against Business Franchise Tax liability made up the

[3] This figure does not take into account the share attributable to commercial refueling infrastructure, which cannot be disclosed due to confidentiality reasons.

second largest portion of offsets for Tax Years 2011 through 2013.[4] Among tax types, the amount of credit claimed over this period peaked in Tax Year 2012 for Personal Income Tax (43.9 percent), Corporation Net Income Tax (40.6 percent), and Business Franchise Tax (54.2 percent) liability offsets.

In total, credit claims to date have reduced State revenues and Taxpayer liabilities by more than $77.5 million (see Figure 4). Approximately 44 percent of this credit was claimed in Tax Year 2012 alone, and 89.7 percent of total credits to date were claimed in Tax Years 2011 to 2013. As noted previously, Tax Year 2015 credits only include offsets to Personal income Tax liabilities. The inclusion of Corporation Net Income Tax credits in Tax Year 2015 may affect this number.

Figure 4 – Total Amount Claimed Per Year for Tax Years 2011-2014



* Tax Year 2015 represents returns filed to date only.

The amount of credit claimed in Tax Years 2014 and 2015 receded substantially, particularly among Personal Income Tax offsets. It is likely this regression could have occurred due to Taxpayers exhausting available credit; the four-year carryover limit; and/or the 2013 restriction of eligible vehicles to those powered by compressed natural gas, liquefied natural gas, or liquefied petroleum gas effective April 15, 2013 (see West Virginia Code §11-6D-7(6)). Due to the four-year carryover provision, additional costs may accumulate through Tax Year 2020. Unless consumer behaviors in Calendar Year 2017 deviate from recent trends, the remainder of this credit is unlikely to accumulate substantial additional cost for the State.

Other Considerations

In addition to an analysis of the utilization and cost of the Alternative-Fuel Motor Vehicle Tax Credit, this report would be remiss without an overview of additional considerations related to this credit. Table 1 illustrates Taxpayer choice of qualifying alternative fuel motor vehicles. The top 10 models accounted for roughly 80 percent of total tax credit claims according to Taxpayer-provided information captured by the Tax Department. Readily available and popular flex-fuel capable trucks and SUVs dominated sales of qualifying vehicles.

[4] Corporation Net Income Tax and Business Franchise Tax liability offsets were nearly equal in Tax Year 2014.

Table 1 – Taxpayer Choice of Alternative-Fuel Vehicles Tax Years 2011-2012

Make	Model	Share
Chevrolet	Silverado	31.5%
Ford	F150	16.0%
GMC	Sierra	11.8%
Chevrolet	Tahoe	4.4%
Ford	Escape	3.8%
Jeep	Grand Cherokee	3.1%
GMC	Yukon	2.6%
Chevrolet	Equinox	2.6%
Ford	F250	2.0%
GMC	Terrain	1.7%
	All Others	20.4%

According to the U.S. Department of Energy, there are less than 10 flex-fuel fueling stations in West Virginia as of December 20, 2016.[5] These stations comprise slightly more than 30 percent of the non-electric alterative fueling stations in the State. There are also only three CNG fueling stations, all of which opened in 2013. In addition, most consumers opt to fuel their flex-fuel capable vehicles with conventional fuel because conventional fuel is more economical.

Conclusion

The number of claims and amount of liability offsets for the Alternative-Fuel Motor Vehicle Tax Credit exhibited decline after peaking in Tax Year 2012. Much of this decline can be attributed to exhaustion of the four-year carryover provision for eligible Taxpayers, along with the cost (relative to conventional-fuel motor vehicles) and durability of motor vehicles compared to the tax benefits the credit offers. Considering four Tax Years from 2011 to 2014, the costs of this credit to the State have exceeded $75.5 million. Yet the extent of the intended benefits, such as improving air quality or reducing dependence on foreign oil, has yet to be determined.

Further, as of 2011, total vehicle registrations in West Virginia made up approximately 0.6 percent of U.S. registrations and a scant 0.3 percent of alternative-fuel vehicles registered nationwide.[6] By 2013, the West Virginia share of alternative-fuel vehicles declined to 0.2 percent. More than 78 percent of U.S. states and the District of Columbia offer some type of alternative-fuel tax incentive for the purchase of alternative-fuel motor vehicles.[7] Yet on average from 2011 to 2013, the number of alternative-fuel vehicles registered in those states declined by 0.01 percent. For comparison, the number of alternative-fuel vehicles registered in states without such an incentive increased by 0.04 percent. These statistics indicate that the presence of the alternative-fuel tax credit incentives have made little impact on consumer purchases of alternate-fuel vehicles.

[5] See http://www.afdc.energy.gov/fuels/stations_counts.html.
[6] See http://www.rita.dot.gov/bts/publications/state_transportation_statistics.
[7] Tax incentives may be restricted to electric or hybrid only, natural gas or related only, or a combination of eligible alternative-fuel types.