F I S C A L I M P A C T R E P O R T

SPONSOR SCORC **ORIGINAL DATE** 2/8/2020 **LAST UPDATED** 2/18/2020 **HB**

SHORT TITLE Electric Vehicle Income Tax Credit **SB** CS/2/aSFC

ANALYST Graeser

REVENUE (dollars in thousands)

Estimated Revenue					Recurring or Nonrecurring	Fund Affected
FY20	FY21	FY22	FY23	FY24		
	(1,600.0)	(2,400.0)	(2,390.0)	(2,390.0)	Recurring	General Fund (PIT) EV Credit
	(110.0)	(155.0)	(150.0)	(145.0)	Recurring	General Fund (PIT) Charging Unit Credit
	138	335	392	450	Recurring	State Road Fund
	41.0	100.0	1170.0	134.0	Recurring	Local Governments Road Fund

Parenthesis ( ) indicate revenue decreases

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY20	FY21	FY22	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total	16.0	76.0	51.0	143.0	Recurring	TRD operating

Parenthesis ( ) indicate expenditure decreases.

Note: see ADMINSTRATIVE INPACT for details.

Previous introductions:
2014 HB136
2015 SB09
2015 HB40
2019 HB185
2019 SB333

SOURCES OF INFORMATION
LFC Files

Responses Received From
Department of Transportation (NMDOT)
Taxation and Revenue Department (TRD)

SUMMARY

Synopsis of SFC Amendments

Senate Finance amendments are primarily technical in nature and affect the timing of applications for credit. Essentially, if an electric vehicle is leased, then only one-third the full amount of the credit can be claimed in each year of the three years of lease. This would prevent the taxpayer from leasing in year one, claiming the full credit amount, then buying out of the lease prior to the full three years.

Synopsis of Original Bill

SCORC Committee Substitute for Senate Bill 2 proposes a pair of personal income tax credits to incentivize the purchase or lease of plug-in hybrid and 100 percent battery electric vehicles. The electric vehicle income tax credit is $2,500 for most vehicle purchases, but is increased to $5,000 for

- Single taxpayers with adjusted gross income of $50 thousand or less,
- Married filing separately with adjusted gross income $37.5 thousand or less, and
- Married filing jointly or heads of household with adjusted gross income of $75 thousand or less.

SFC amends section 1 which enacts the EV credit. Essentially, if an electric vehicle is leased, then only one-third the full amount of the credit can be claimed in each year of the three years of lease. This would prevent the taxpayer from leasing in year one, claiming the full credit amount, then buying out of the lease prior to the full three years.

The credit may be claimed for each taxable year, beginning January 1, 2020, and prior to January 1, 2025, in which the taxpayer purchases a qualified electric vehicle or begins a new lease for a qualified electric vehicle with a term of at least three years.

The maximum aggregate amount of personal income tax credits that will be paid in any year is $10 million. If any claim is denied because of the cap, that claim is extinguished. The credit is refundable.

SB2 Substitute defines an electric vehicle to include both vehicles that run exclusively on a battery (also called battery electric vehicles or BEVs) and those that derive part of their power from electricity stored in a battery, which is capable of being recharged from an external source of electricity (also called plug-in hybrid electric vehicles or PHEVs).

Electric vehicles eligible for the electric vehicle income tax credit are only those with a before-tax (and federal credit amount) manufacturer suggested retail price of $48 thousand or less.

The second credit is an electric vehicle charging unit income tax credit. This credit is a maximum of $300 or the actual cost of purchasing and installing an electric vehicle charging unit. The aggregate annual credits to be paid are limited to $1 million and will be paid in the order received by the department. There is no rollover feature; claims will be paid by TRD on a first-come, first-paid basis. If any claim is denied because of the cap, that claim is extinguished. These credits are refundable but not transferable. As with the EV credit, charging units must be installed between January 1, 2020, and January 1, 2025.

SB2 Substitute requires the Taxation and Revenue Department to compile an annual report on the two tax credits, and to present the report to the Revenue Stabilization and Tax Policy Committee and the Legislative Finance Committee.

The bill also imposes an additional annual registration fee of $100 for an electric vehicle and $50 for a plug-in electric vehicle. The proceeds of this additional registration fee will be distributed 77 percent to the state road fund and 23 percent to the local governments road fund. This fee is imposed whether the vehicle owner is allowed an electric vehicle income tax credit or not. It should be emphasized that this $50 or $100 annual registration fee is in addition to the regular registration fee of 66-6-2 or 66-6-4 NMSA 1978.

Section 4 of SB 2/s distributes 77 percent of the new revenue collected from these two additional annual fees to the State Road Fund, and the remaining 23 percent to the Local Governments Road Fund.

The effective date of the additional registration fee is January 1, 2021. This results in one-half year revenue for FY21. The applicable date of the income tax credit is for income tax years beginning on or after January 1, 2020. The purchasers of any electric vehicle or plug-in hybrid vehicle registered in the state after that date will be able to claim the credits on a 2020 income tax return filed by April 15, 2021. The income tax credit portion of the bill does not carry a delayed repeal, but vehicle purchases must be consummated by January 1, 2025

FISCAL IMPLICATIONS

This bill creates a tax expenditure with a cost that is difficult to determine but likely significant. LFC has serious concerns about the significant risk to state revenues from tax expenditures and the increase in revenue volatility from erosion of the revenue base. The committee recommends the bill adhere to the LFC tax expenditure policy principles for vetting, targeting and reporting or be held for future consideration.

In its analysis of 2014's HB136, TRD interpreted the provisions of that bill to include plug-in hybrid electric vehicles, electric vehicles, and conventional gas and electric hybrid vehicles. According to Motor Vehicle Division records, there were approximately 7,164 registered vehicles that met the requirement and the definitions of electric vehicle provided by the bill during fiscal year 2013. This bill, however, redefines eligible vehicles to exclude gas and electric hybrids, in favor of a clear definition of plug-in hybrid (although the phrase "plug-in hybrid" vehicle is used in the title but not defined explicitly for the purpose of the tax credit). Whether this bill satisfactorily excludes conventional gasoline electric hybrid vehicles or not from the vehicle credit is critical to the analysis. Apparently the key to restricting this credit to electric vehicles and plug-in hybrids is that the battery must have a capacity of 6 kilowatt-hours[1] and must be "capable of being recharged from an external source of electricity." This reduces the number of new vehicles to about 700 per year and a current inventory of about 2,700 vehicles, about equally divided between 100 percent electric vehicles and plug-in hybrids.

With the advent of >200+ mile range vehicles, with MSRP (manufacturer's suggested retail price) before federal credits of under $48 thousand, including the Nissan Leaf, the Tesla Model 3 and the Chevrolet Bolt, plug-in electric cars and plug-in hybrids may become more popular. However, gasoline prices will continue around $2.50 to $3 per gallon for some time. This will put a damper on growth of plug-in electric vehicles and pure battery vehicles. In addition, TRD

[1] Apparently, a conventional gasoline-electric hybrid has a battery with a capacity of about 6 ampere hours. Even at 300 volts (DC), a typical hybrid battery has a capacity of less than half the required 6 Kilowatt-Hours.

estimates a slow growth in the adoption of the technology for the following reasons:

- Lack of consumer education is a significant barrier to the adoption of the technology since people have little understanding of electric vehicles; and
- Introducing a new technology into a very competitive and established automotive market is a herculean effort.
- The federal electric vehicle tax credits of up to $7,500 have expired for some manufacturers will expire soon.[2] There are some manufacturers that retain credits.

LFC staff, TRD, and NMDOT each independently estimated to fiscal impact of the three sections of this bill: (1) BEV and PHEV tax credits, (2) charging unit tax credit, and (3) additional annual registration fee for BEVs and PHEVs.

LFC's model will be presented first:
For the purposes of this estimate, it is assumed the inventory of vehicles will grow as forecast by the U.S. Energy Information Administration (EIA) – averaging 17 percent annually for plug-in hybrids and 26 percent for battery electric vehicles. Based on data from California, where only 5 percent of electric vehicle purchasers qualify by income for the higher tax credit amounts, the model assumes that 10 percent of electric vehicle purchasers would qualify for the $5,000 credit and that 20 percent of the newly purchased vehicles in any year would be pre-owned. In addition, the model assumes that 10 percent of battery vehicles and plug-in hybrids would not qualify for the credit because the MSRP would exceed $48 thousand. With respect to the charging station, the model assumes that 25 percent of EV owners would purchase a home charging unit roughly contemporaneously with the purchase of the vehicle and 10 percent of the existing owners that had not already purchased and installed a unit would do so each year.

The EV tax credits are limited to $10 million per fiscal year, while the charging station tax credits are limited to $1 million per fiscal year. The model estimate is shown in the table. It is unlikely that the annual statutory limit will be reached before the credit provisions expire.

	FY19	FY20	FY21	FY22	FY23	FY24
Plug-in Hybrids	1,317	1,608	1,909	2,234	2,563	2,895
New Plug-in Hybrids		231	241	255	259	262
Used Plug-in Vehicles		60	60	70	70	70
Vehicles disqualified by MSRP		23	24	26	26	26
Battery Electric Vehicles	1,395	2,038	2,643	3,228	3,807	4,395
New BEVs		513	485	465	459	468
Used BEVs		130	120	120	120	120
Vehicles disqualified by MSRP		51	49	47	46	47
New Small Scale Charging Stations*		460	410	370	340	300
$2,500 tax credits	0	$0.0	$1,510.0	$1,470.0	$1,460.0	$1,450.0
$5,000 tax credits	0	$0.0	$340.0	$330.0	$320.0	$320.0
$300 charging station credits	0	$0.0	$120.0	$110.0	$100.0	$90.0
$50 annual registration fee	0	$0.0	$50.0	$110.0	$130.0	$140.0
$100 annual registration fee	0	$0.0	$130.0	$320.0	$380.0	$440.0

[2] Both GM and Tesla have been lobbying Congress for more than a year to extend or expand the **EV tax credit**. GM's **credit** drops to $1,875 in October and **will** completely disappear by April 2020, while Tesla's **credit** falls to $1,875 in July and **expires** at the end of the year. (Apr 10, 2019)_
www.reuters.com › article › u-s-bill-to-boost-electric-car-tax-credits-cou...

* Assumes 25% of new EV owners would purchase and install charging stations, and 10% annually of the remaining fleet would purchase and install

This LFC model results in the following Fiscal Impact table

	FY20	FY21	FY22	FY23	FY24		
EV Tax Credits	$0.0	($1,850.0)	($1,800.0)	($1,780.0)	($1,770.0)	R	General Fund (PIT)
Charging Station Tax Credits	$0.0	($120.0)	($110.0)	($100.0)	($90.0)	R	General Fund (PIT)
Additional Registration Fees	$0.0	$140.0	$330.0	$390.0	$450.0	R	State Road Fund
Additional Registration Fees	$0.0	$40.0	$100.0	$120.0	$130.0	R	Local Governments Road Fund

The model does not assume any reduction in the growth rates as estimated by EIA (and modified for New Mexico income and experience) attributed to the increased annual cost attributed to $50 or $100 additional annual registration fee. It should be emphasized that the additional fee adds to the regular registration fee that ranges from $22.50 per year to $57.50 for passenger cars and higher amounts for trucks.

NMDOT has estimated the revenue derived from the additional PHEV and BEV annual registration fee. This estimate is shown below and in the corresponding rows in the table on page 1.

Estimated Revenue					Recurring or Nonrecurring	Fund Affected
FY20	FY21	FY22	FY23	FY24		
	138	335	392	450	Recurring	State Road Fund
	41.0	100.0	117.0	134.0	Recurring	Local Governments Road Fund

About 74 percent of this revenue is attributable to the $100 additional fee imposed by SB2 Substitute on BEVs, and the remaining 26 percent is attributable to the $50 additional fee imposed on PHEVs.

This analysis does not account for the possibility that those who will register an electric vehicle, or renew a registration for an electric vehicle in calendar year 2020, might register the vehicle for a two-year term in order to avoid the new additional registration fee that will take effect on January 1, 2021.

The table below reports the number of BEVs and PHEVs currently registered in New Mexico and estimates for the following years.

Table: Number of light electric and plug-in hybrid electric vehicles registered in New Mexico as of June 30, 2019

FISCAL YEAR	PHEV	BEV
2019*	1,317	1,395
2020	1,608	2,038
2021	1,909	2,643

2022	2,234	3,228
2023	2,563	3,807
2024	2,895	4,395

*****Values are stock of noncommercial vehicles weighing no more than 26,000 lbs., registered in New Mexico as of June 30, 2019. The numbers were derived from the Motor Vehicle Division (MVD) data extract of all vehicles registered in New Mexico. The Vehicle Identification Number (VIN) information of the registered vehicles in the MVD data extract was decoded using the National Highway Traffic Safety Administration (NHTSA) Product Information Catalog Vehicle Listing (vPIC) Application Programming Interface (API) to accurately classify the registered vehicles according to their electrification level.

The growth rates applied to data for projections were obtained using data from the Annual *Energy Outlook 2019* (on EIA.gov website) on national vehicle stock for PHEVs and BEVs under the "low oil price" scenario. This scenario assumes that low oil prices result from a combination of lower demand for petroleum and other liquids in the non-Organization for Economic Co-operation and Development (OECD) nations and a higher global supply.

The U.S. Energy Information Administration (EIA) provides a forecast for the national vehicle stock of HEVs; two types of PHEVs (plug-in 10 and plug-in 40) and three types of BEVs: 100 mile, 200 mile and 300 mile BEVs.

Using an average of the growth in the two types of PHEVs to arrive at the growth rate for PHEVs stock in the United States and using the average of the growth in the three types of BEVs to arrive at the growth rate in BEV stock for the United States. The national growth rate forecasts can be adjusted to reflect the trend observed in New Mexico thus far. The resulting ratio of the actual FY19 New Mexico growth in stock of PHEVs and BEVs (obtained using information on AutoAlliance.com) over the FY19 national growth (from EIA) can then be used to appropriately scale the future growth rates to reflect the tastes and preferences of New Mexico drivers compared with those of national drivers. For example, in FY 2019 the national growth in BEV stock and PHEV stock was 119 percent and 34 percent, respectively; while, in New Mexico, for the same period, the growth was only 88 percent and 32 percent, respectively. The national growth rate is impacted by states like California, Washington, and Oregon, which have seen a considerable growth in the share of electric vehicles in total vehicle sales in the last few years. For instance, according to data from evadoption.com, in 2018 electric vehicles accounted for about 8 percent of the new vehicle sales in California, while in New Mexico, their share was significantly smaller at 0.8 percent. As a result, it is imperative to adjust any national forecasts to account for these differences.

TRD has also estimated the general fund cost of the two tax credits and the increase in annual registration fee. These estimates follow[3]:

Estimated Revenue Impact*					R or NR**	Fund(s) Affected
FY2020	FY2021	FY2022	FY2023	FY2024		
	($1,400)	($3,000)	($3,000)	($3,000)	NR	General Fund (vehicle purchase/lease credit)
	($100)	($200)	($200)	($200)	NR	General Fund (charger tax credit)

[3] The table as submitted by TRD had an entry for FY2020 for the two tax credits. These amounts were moved to FY2021 since the credits would be claimed on 2020 Tax Year personal income tax returns filed in the spring of 2021.

--	$140	$340	$410	$470	R	State Road Fund
--	$40	$100	$120	$140	R	Local Governments Road Fund

TRD assumes 50 percent of the BEV or PHEV purchasers or lessees would qualify for the $5,000 credit. Based on California's experience where only 5 percent of claimants for a similar California credit qualified for the $5,000 credit based on income, LFC's model used a 10 percent higher-credit qualification percentage. On the other hand, TRD's methodology is in all other respects credible.

> Beginning with NMDOT estimates for the total stock of battery electric vehicles (BEVs) and plug-in electric vehicles (PHEVs), TRD calculated sales of new vehicles, and adjusted[4] for the price reduction as given in Sections 1 and 2 of the bill, assuming an average final price for new electric vehicles of $50 thousand[5]. The price reduction was itself reduced by the new registration fees assuming six years of ownership. The result is that the overall electric fleet will increase slightly over the NMDOT estimates. This was then adjusted by the approximately 80 percent of vehicles that would still qualify[6] given the base price limitation in section 1-K (2) (c) of the bill.
>
> Based strictly on income, 75 percent of filers would qualify for the higher credit. However, research has shown that these vehicles have been bought by those with higher incomes[7]. As a compromise, it was assumed that half of purchasers would qualify for the higher $5,000 credit.
>
> Effects of the charger credit in Section 2 are assuming that all purchasers of full electric vehicles and half of plug-in electric vehicles will also buy a qualifying charger. Full electric vehicles require a higher speed charger to fully access their capabilities, while plug-in electric vehicles can frequently get by with the standard wall socket charger usually included with the vehicle.
>
> The fiscal impact is uncertain especially farther into the future but cannot exceed the caps. As shown, neither credit is expected to reach its limitation during the forecast period.
>
> The first year of both the credits and new fees only affect half of a fiscal year.

The table on page 1 reflects the average of the LFC staff and TRD estimates for the two tax credits and the NMNMDOT estimate for the additional registration fees.

SIGNIFICANT ISSUES

For the purpose of the tax credit an "electric vehicle" has a number of restrictions and requirements. The vehicle must

- Be new,

[4] http://econweb.umd.edu/~sweeting/kspringel_ev.pdf
[5] https://www.bloomberg.com/graphics/2019-tesla-model-3-survey/market-evolution.html
[6] https://afdc.energy.gov/data/10567
[7] https://www.researchgate.net/publication/269694568_Studying_the_PEV_market_in_california_Comparing_the_PEV_PHEV_and_hybrid_markets

- Have a purchase price of less than $48 thousand before taxes, destination charges and options,
- Have an unloaded base weight of not less than 2,200 pounds and not more than 8,500 pound,
- Not be homemade or significantly modified from a stock manufactured vehicle,
- Have a maximum speed in excess of 65 mph,
- Have a battery capacity of not less than six kilowatt hours, and
- Have a battery capable of being recharged from an external source of electricity.

This definition ensures electric motorcycles and golf carts will not be eligible for the credit. It is not absolutely clear, however, that this definition will disqualify conventional gasoline electric hybrid vehicles from the credit. The difficulty may be with the phrase" capable of being recharged from an external source of electricity." This is a qualification on the battery, not on the vehicle. Apparently, this definition has been used in other states and the quibble has not surfaced in either debate or protests. The combination of the battery capacity and the requirement that "the battery be capable of being recharged from an external source of electricity" clearly and cleanly excludes conventional gasoline-electric hybrid vehicles from this credit.

The charging unit credit is available to any electric vehicle owner without regard to whether the vehicle is new or used or less expensive than $48 thousand.

TRD previously noted "Even with this credit, the consumer incurs the initial expense before realizing the benefit, which is often the tax year after the purchase or the leasing period. Considering the average household income in New Mexico, most families cannot afford to make such a big investment while they have other basic needs to meet."

New in this year's bill, the electric vehicle tax credit is fully refundable. A married couple with less than $75 thousand adjusted gross income qualifies for a $5,000 tax credit.

This bill may be counter to the LFC tax policy principles of adequacy, efficiency, and equity. Due to the increasing cost of tax expenditures revenues may be insufficient to cover growing recurring appropriations.

The bill requires taxpayers applying for the electric vehicle income tax credit and the electric vehicle charging unit income tax credit to provide information to TRD which may include a receipt of lease or purchase of the vehicle, a receipt of purchase of a charging station and a copy of data sheet specifying connector type, plug type, voltage, and current of the purchased electric vehicle charging unit.

The bill includes reporting requirements. TRD must compile a report that includes the number of taxpayers approved to receive the tax credits and the aggregate amount of tax credits approved and an analysis of the effectiveness and cost of the tax credit and of whether the tax credit is performing the purpose for which it was created.

TRD discusses some of the policy issues involved with the provisions of this bill:

> The increased credit for lower income taxpayers helps ensure that New Mexicans of lower income levels are able to exercise their conservation priorities through their purchase of these vehicles. The social benefit of reducing pollution and accelerating the development

of a cleaner transportation system continues in either case

A negative externality is cost suffered by a separate third party as a result of an economic transaction. Gasoline and diesel vehicles impose negative externalities possibly globally, but (more importantly for state level policy and) with a higher degree of certainty they definitely impose negative externalities locally: evidence has long shown air pollution's impact on human respiratory, cardiovascular and other physical health outcomes. However more recently additional evidence indicates other costs that have broader economic consequences. Studies have found that air pollution exposure in children leads to long term impairments to cognitive development and intelligence.[8]

The yearly registration fees in the bill are an attempt to maintain funding for roads in a market with rising sales of electric vehicles. However, the percentage of such vehicles in the state is still so small as to have little effect on road funding. Overall, increasing mileage efficiency of all vehicles and increasing sales of larger vehicles have been shown to have much greater effects on the road fund.

It should be noted that electric vehicle "fuel" is already taxed, as gross receipts tax on electricity. From a percentage standpoint, the current state gasoline tax (distributed to the road fund) of $17 cents is 7.8 percent of the current average untaxed price of $2.19. This compares closely with the statewide average GRT rate of 7.7 percent (distributed to the general fund and to local governments) that electric vehicles owners are already paying for electricity. Because of this, the yearly registration fee in the bill functions as an additional tax solely on electric vehicles. Therefore, to adhere more closely to tax policy principles, an alternative to the fee method in the bill could be a distribution from GRT to the state road and local governments road fund, similar to the GRT distribution to the aviation fund contained in 7-1-6.7. The size of the distribution could be linked to the number of electric and plug-in vehicles registered with MVD.

Because the yearly fixed registration fee does not measure the actual distance driven, contribution to congestion, or wear and tear on the road by a given vehicle, the added registration fee is an estimated replacement for fuel taxes. An example alternative is used in Oregon, which offers a fixed per mile fee for distance traveled by electric vehicles; however, the compliance and administration costs to implement a fee similar to Oregon's may be hundreds of dollars per vehicle exceeding the fee itself. A proxy tax that increases and decreases with usage is the gross receipts taxes received on electricity to charge the battery. In New Mexico this electricity is subject to gross receipts tax both under current and proposed law.

PERFORMANCE IMPLICATIONS

The LFC tax policy of accountability is met with the bill's requirement to report annually to an interim legislative committee regarding the data compiled from the reports from taxpayers taking the deduction and other information to determine whether the deduction is meeting its purpose.

ADMINISTRATIVE IMPLICATIONS

[8] https://www.who.int/ceh/publications/air-pollution-child-health/en/ , https://www.sciencedirect.com/science/article/pii/S0035378715009236

TRD reports the following:

> There are implementation impacts on various TRD divisions. The Revenue Procession Division will require an additional 0.5 FTE and also incur nonrecurring soft costs as shown below. The Information Technology Division will incur estimated soft costs of $21 thousand. Motor Vehicles systems development will incur estimated soft costs of $25 thousand.

Estimated Additional Operating Budget Impact				R or NR**	Fund(s) or Agency Affected
FY2020	FY2021	FY2022	FY 20-22		
--	$30	$30	$60	R	TRD Revenue Processing Division
$16	--	--	$16	NR	TRD Revenue Processing Division
--	$21	$21	$21	NR	TRD Information Technology Division
--	$25	--	$25	NR	TRD Motor Vehicle Division

LFC staff note that for ease of administration, TRD requires an application process for these credits prior to allowing the taxpayer to claim the credits. This application could be administered by MVD at the time the vehicle was initially titled and registered. While this provision is not explicit in the provisions of the bill, the bill does provide sufficient latitude and flexibility so that TRD can administer the credit in the most efficient manner.

TRD employees and taxpayers would need to be provided technical training on what a qualified electric vehicle and electric vehicle charging unit is. Regulations will need to be drafted for the rules and procedures.

An application and claim form will need to be developed. The forms, instructions and modifications to the income tax forms and publications can be performed with existing resources as part of the annual revision of the tax forms and publications.

TECHNICAL ISSUES

(1) LFC staff notes that making the credits refundable in excess of liability without reference to indigency might raise concerns regarding the anti-donation clause of the New Mexico Constitution. Article IX, Section 14.

(2) See discussion under fiscal implications regarding the $10 million cap. The state's experience with the film production credit cap creates concern regarding all caps. Judging from the sunset provided in the bill and the initial revenue estimate, the BEV/PHEV tax credit program is unlikely to create cap problems.

(3) Once the $1 million charging station cap is exceeded, taxpayers not awarded a tax credit simply lose the credit, since there is no provision in the bill for a rollover. There is significant possibility that the $1 million annual cap on charging stations credit would be exceeded. Once the state promises a benefit, it may be obliged to honor that promise.

(4) The substitute bill fixes a problem identified in the original bill. The substitute cleanly allows a charging unit credit, without regard to an underlying purchase of a new BEV or PHEV. However, since the two credits are cleanly separated, the charging unit may be subject to abuse.

OTHER SUBSTANTIVE ISSUES

The provisions of this bill do not conform to the first four of the Legislative Finance Committee's tax policy principles:

1. **Adequacy**: Revenue should be adequate to fund needed government services.
2. **Efficiency**: Tax base should be as broad as possible and avoid excess reliance on one tax.
3. **Equity**: Different taxpayers should be treated fairly.
4. **Simplicity**: Collection should be simple and easily understood.
5. **Accountability**: Preferences should be easy to monitor and evaluate

INSIDEEVs — **Plug-In Vehicle Comparisons - US**

Updated 2018-09-03 — Estimation

Brand	Model	Base Price (MSRP)	Dest. Charge	Tax Credit	Price After Tax Credit	Battery Size (kWh)	EPA EV Range (mi)	Total Range (mi)	Top Speed (mph)	Peak Power EV (kW)	Peak Power ICE (hp)	0-60 mph (sec)	Weight (lbs)	Price per kWh
Audi	A3 Sportback e-tron (2018)	$ 39,500	$ 975	$ 4,502	$ 35,973	8.8	16	400	130	75	150	7.6	3,616	$4,489
BMW	330e iPerformance (2018)	$ 45,600	$ 995	$ 4,001	$ 42,594	7.6	14	350	140	65	180	5.9	3,900	$6,000
BMW	530e iPerformance (2018)	$ 53,400	$ 995	$ 4,668	$ 49,727	9.4	16	370	87	70	184	6.0	4,266	$5,681
BMW	530e xDrive iPerformance (2018)	$ 55,700	$ 995	$ 4,668	$ 52,027	9.4	14	360	87	70	184	5.8	4,385	$5,926
BMW	740e xDrive iPerformance (2018)	$ 91,250	$ 995	$ 4,668	$ 87,577	9.2	14	340	155	80	255	5.1	4,409	$9,918
BMW	i3 (33.2 kWh) (2018)	$ 44,450	$ 995	$ 7,500	$ 37,945	33.2	114	114	93	125	---	7.2	2,961	$1,339
BMW	i3 REx (33.2 kWh) (2018)	$ 48,300	$ 995	$ 7,500	$ 41,795	33.2	97	180	93	125	34	8.0	3,234	$1,455
BMW	i3s (33.2 kWh) (2018)	$ 47,650	$ 995	$ 7,500	$ 41,145	33.2	107	107	100	135	---	6.8		$1,435
BMW	i3s REx (33.2 kWh) (2018)	$ 51,500	$ 995	$ 7,500	$ 44,995	33.2	97	180	100	135	34	7.6		$1,551
BMW	i8 Coupe (2019)	$ 147,500	$ 995	$ 5,669	$ 142,826	11.6	17	320	155	105	228	4.2	3,501	$12,716
BMW	i8 Roadster (2019)	$ 163,300	$ 995	$ 5,669	$ 158,626	11.6	17	320	155	105	228	4.4	3,671	$14,078
BMW	X5 xDrive40e (2018)	$ 63,750	$ 995	$ 4,668	$ 60,077	9.2	13	540	130	80	240	6.5	5,220	$6,929
Cadillac	CT6 PHEV (2018)	$ 75,095	$ 995	$ 7,500	$ 68,590	18.4	31	430	150	149	335	5.2	4,400	$4,081
Chevrolet	Bolt EV (2018)	$ 36,620	$ 875	$ 7,500	$ 29,995	60	238	238	90	150	---	6.5	3,580	$610
Chevrolet	Volt (2018)	$ 33,220	$ 875	$ 7,500	$ 26,595	18.4	53	420	98	111	101	8.4	3,543	$1,805
Chrysler	Pacifica Hybrid (2018)	$ 39,995	$ 1,395	$ 7,500	$ 33,890	16	33	570			248			$2,500
Fiat	500e (2017)	$ 32,995	$ 1,295	$ 7,500	$ 26,790	24	84	84	85	83	---	8.9	2,980	$1,375
Ford	Focus Electric (2018)	$ 29,120	$ 875	$ 7,500	$ 22,495	33.5	115	115		107	---		3,640	$869
Ford	Fusion Energi (2018)	$ 31,400	$ 875	$ 4,007	$ 28,268	7.6	21	610	104	88	141	8.6	3,984	$4,132
Ford	Fusion Energi - Titanium (2019)	$ 34,595	$ 875	$ 4,585	$ 30,885	9.0	25			88	141		3,986	$3,844
Honda	Clarity Electric (2018)	lease only		$ 7,500		25.5	89	89		120	---		4,024	
Honda	Clarity Plug-in Hybrid (2018)	$ 33,400	$ 895	$ 7,500	$ 26,795	17	47	340		135	103		4,052	$1,965
Hyundai	IONIQ Electric (2018)	$ 29,500	$ 885	$ 7,500	$ 22,885	28	124	124	102	88	---	9.9	3,164	$1,054
Hyundai	IONIQ Electric (2019)	$ 29,815	$ 885	$ 7,500	$ 23,200	28	124	124	102	88	---	9.9	3,164	$1,065
Hyundai	IONIQ Plug-in Hybrid (2018)	$ 24,950	$ 885	$ 4,543	$ 21,292	8.9	29	630		45	104			$2,803
Hyundai	IONIQ Plug-in Hybrid (2019)	$ 25,350	$ 885	$ 4,543	$ 21,692	8.9	29	630		45	104			$2,848
Hyundai	Kona Electric (2019)		$ 885	$ 7,500		64.0	258	258	104	150	---	7.6		
Hyundai	Sonata PHEV (2018)	$ 33,250	$ 885	$ 4,919	$ 29,216	9.8	28	600	75	50	154		3,787	$3,393
Karma	Revero (2018)	$ 130,000	$ 1,400	$ 7,500	$ 123,900	21.4	37	240	125	301	260	5.4	5,400	$6,075
Kia	Niro PHEV (2018)	$ 27,900	$ 940	$ 4,543	$ 24,297	8.9	26	560		45	104		3,391	$3,135
Kia	Optima PHEV (2018)	$ 35,210	$ 895	$ 4,919	$ 31,186	9.8	29	610	75	50	154	9.1	3,788	$3,593
Kia	Soul EV (2018)	$ 33,950	$ 895	$ 7,500	$ 27,345	30	111	111		81.4	---		4,321	$1,132
Land Rover	Range Rover P400e (2019)	$ 95,150	$ 995		$ 96,145	13.1	20		137	85	296	6.4	5,532	$7,263
Land Rover	Range Rover Sport P400e (2019)	$ 78,300	$ 995		$ 79,295	13.1	20		137	85	296	6.3	5,448	$5,977
Mercedes	C350e (2018)	$ 47,900	$ 995	$ 3,501	$ 45,394	6.2	8	410		60	241	5.8	4,057	$7,726
Mercedes	GLC 350e (2018)	$ 49,990	$ 995	$ 4,460	$ 46,525	8.7	9	350			320	6.2		$5,746
Mercedes	GLE 550e (2018)	$ 66,700	$ 995	$ 4,460	$ 63,235	8.8	8	460		85	329	5.3	5,456	$7,580
MINI	Cooper S E Countryman ALL4 (2018)	$ 36,900	$ 850	$ 4,001	$ 33,749	7.6	12	270	78	65	136	6.7		$4,855
Mitsubishi	Outlander PHEV 2018)	$ 34,595	$ 995	$ 5,836	$ 29,754	12.0	22	310		120	117			$2,883
Nissan	LEAF (40 kWh) (2018)	$ 29,990	$ 885	$ 7,500	$ 23,375	40	151	151	90	110	---	7.9	3,433	$750
Porsche	Cayenne S E-Hybrid (2018)	$ 79,900	$ 1,050	$ 5,336	$ 75,614	10.8	14	490	151	70	333	5.4	5,181	$7,398
Porsche	Cayenne E-Hybrid (2019)	$ 79,900	$ 1,050	$ 6,670	$ 74,280	14.1			157	100	340	4.7		$5,667
Porsche	Panamera 4 E-Hybrid (2018)	$ 99,600	$ 1,050	$ 6,670	$ 93,980	14.1	16	480	172	100	330	4.4	4,784	$7,064
Porsche	Panamera Turbo S E-Hybrid (2018)	$ 184,400	$ 1,050	$ 6,670	$ 178,780	14.1	14	450	192	100	550	3.2	5,093	$13,078
smart	fortwo ED Cabrio (2018)	$ 28,100	$ 750	$ 7,500	$ 21,350	17.6	57	57	81	60	---	11.7		$1,597
smart	fortwo ED Coupe (2018)	$ 23,900	$ 750	$ 7,500	$ 17,150	17.6	58	58	81	60	---	11.4	2,363	$1,358
Tesla	Model 3 Standard	$ 35,000	$ 1,200	$ 7,500	$ 28,700		220	220	130		---	5.5	3,549	
Tesla	Model 3 Long Range (2018)	$ 49,000	$ 1,200	$ 7,500	$ 42,700	80.5	310	310	140		---	5.1	3,814	$609
Tesla	Model 3 LR AWD (2018)	$ 54,000	$ 1,200	$ 7,500	$ 47,700	80.5	310	310	145		---	4.5		$671
Tesla	Model 3 LR AWD Performance (201	$ 64,000	$ 1,200	$ 7,500	$ 57,700	80.5	310	310	155		---	3.5		$795
Tesla	Model S 75D (2018)	$ 77,000	$ 1,200	$ 7,500	$ 70,700	75	259	259	140		---	4.2	4,769	$1,027
Tesla	Model S 100D (2018)	$ 96,500	$ 1,200	$ 7,500	$ 90,200	100	335	335	155		---	4.1	4,883	$965
Tesla	Model S P100DL (2018)	$ 135,000	$ 1,200	$ 7,500	$ 128,700	100	315	315	155		---	2.5	4,941	$1,350
Tesla	Model X 75D (2018)	$ 83,000	$ 1,200	$ 7,500	$ 76,700	75	238	238	130		---	4.9	5,307	$1,107
Tesla	Model X 100D (2018)	$ 99,500	$ 1,200	$ 7,500	$ 93,200	100	295	295	155		---	4.7	5,421	$995
Tesla	Model X P100DL (2018)	$ 140,000	$ 1,200	$ 7,500	$ 133,700	100	289	289	155		---	2.9	5,531	$1,400
Toyota	Prius Prime (2018)	$ 27,300	$ 920	$ 4,502	$ 23,718	8.8	25	640		68			3,365	$3,102
Volkswagen	e-Golf (2018)	$ 30,495	$ 895	$ 7,500	$ 23,890	35.8	125	125	93	100	---	9.6		$852
Volvo	S60 T8 Twin Engine (2019)	$ 54,400	$ 995							64	313			
Volvo	S90 T8 Twin Engine (2018)	$ 63,650	$ 995	$ 5,002	$ 59,643	10.4	21	410		64	313	4.7	4,579	$6,120
Volvo	XC60 T8 Twin Engine (2018)	$ 52,900	$ 995	$ 5,002	$ 48,893	10.4	17	370		64	313	4.9		$5,087
Volvo	XC90 T8 Twin Engine (2018)	$ 64,950	$ 995	$ 5,002	$ 60,943	10.4	19	380		64	313	5.9	5,059	$6,245

https://insideevs.com/over-50-plug-in-evs-compared-price-range-more-march-2018-us/

Understanding consumer's purchasing behavior may be key to designing a successful tax credit bill to promote battery electric and plug-in hybrid vehicles. As a contribution to this understanding, LFC staff downloaded the 2018 Consumer Expenditure Survey and the 2017_2018 Regional Consumer Expenditure Survey from the Bureau of Labor Statistics website. Two charts are shown later in this review. The first chart indicates that total transportation costs are not significantly regressive – the three lowest income deciles spend a lower percentage of their annual income after taxes than do the fourth through ninth deciles. The tenth decile of income spends a lower percentage of their annual income than most other deciles. Lower income individuals spend less on their vehicles and somewhat more for fuel than do higher-income individuals.

The second chart below indicates that individuals in the west spend about the same as the national average on vehicles, fuel and maintenance. Individuals in the south, however, are somewhat anomalous, spending significantly more for their vehicles and significantly less on public transportation than the national average.

There has been some concern regarding the $50 additional registration for plug-in hybrids and $100 for purely battery vehicles. There are five appropriate methods of determining the "right" additional registration fee for BEVs and PHEVs so that the overall sum of gasoline tax and annual registration fee fairly captures use of the state's roads and highways for all vehicles:

1) Use average vehicle gasoline mileage and annual mileage to calculate an average contribution of conventional vehicles to the state road fund. Per calculation from NMNMDOT, this amount would be about $100 per year per vehicle;
2) This could be separately calculated for passenger cars and light trucks, in which case, the passenger car amount would be about $80 per vehicle.
3) Compare plug-in hybrids and battery vehicles to conventional hybrid vehicles for annual mileage traveled and fuel efficiency. This calculation would result in an annual fee of about $53 for BEVs and about $40 for PHEVs.
4) Look at what other states charge for BEVs and PHEVs and average the amounts. This results in an amount that most observers calculate at $128 per vehicle per year.
5) (the nerd's calculation) determine a weighted average fee (using the number of BEVs and PHEVs in each state as the weight). Because California dominates with 49% of all electric vehicle registrations, this weighted average fee for 2020 is $105. Then adjust that fee to New Mexico based on a ratio between the 18.8 cents per gallon (New Mexico gasoline tax plus the petroleum products loading fee) equivalent New Mexico gasoline tax and the 53.44 cents per gallon of weighted average gasoline tax rate (again using as a weight, the electric vehicle registrations by state.) This highly technical calculation results in a "right" fee of $30 per electric vehicle per year.

CONFLICT, DUPLICATION, COMPANION, RELATIONSHIP

NMDOT has provided the following analysis:

> SB2 Substitute is similar to HB 217, which was a duplicate of SB 2, and which also introduces an electric vehicle income tax credit, an electric vehicle charging unit income tax credit and two additional annual registration fees for BEVs and PHEVs.

SB2 Substitute conflicts with SB 181, which also imposes an additional registration fee on BEVs, and PHEVs. Differently from SB 2/s, SB 181 introduces a registration fee of $100 to both BEVs and PHEVs, and an additional annual registration fee of $50 to conventional Hybrid Electric Vehicles (HEVs).

SB2 Substitute relates to HB 313, as both bills introduce a tax credit for installing motor vehicle charging stations. However, the tax credit, provided by SB 2/s, is for the installation of a motor vehicle charging unit in a residential property, while the tax credit provided by HB 313 is for installing new metered-for-fee public access stations.

ALTERNATIVES

Although both the EV tax credits and the charging station tax credits appear similar, the administrative consequences are quite different. Separating this bill into a clean EV tax credit bill, which clearly excludes conventional gasoline electric hybrids and a companion bill that includes the charging station tax credit and the increase in registration fees should be considered.

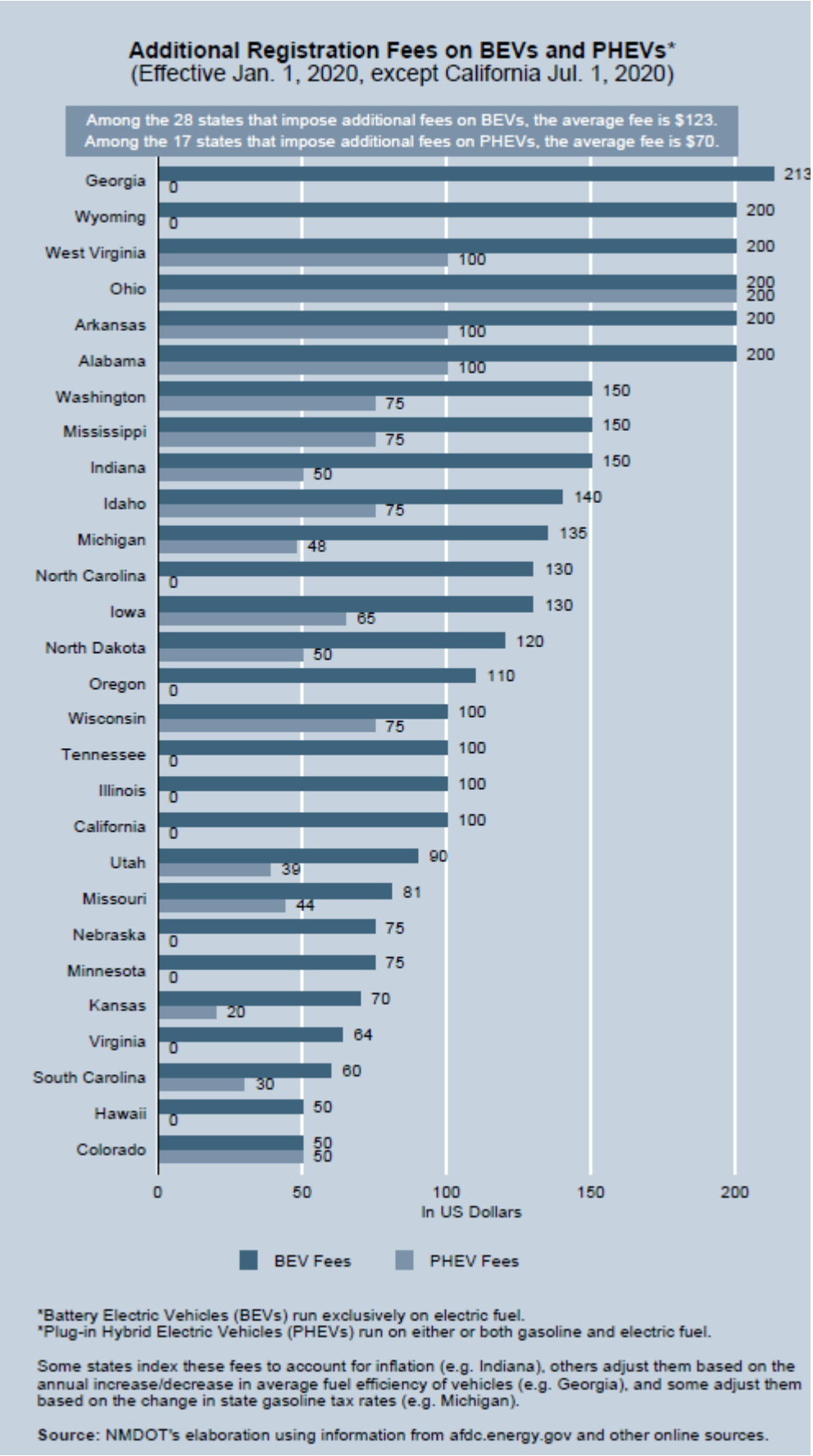
OTHER SUBSTANTIVE ISSUES

NMDOT comments on other substantive issues:

The merit of SB 2/s is that it establishes the precedent that owners of fuel efficient vehicles, such as PHEVs and BEVs, should contribute towards the goal of a safe and efficient roadway system in the state of New Mexico.

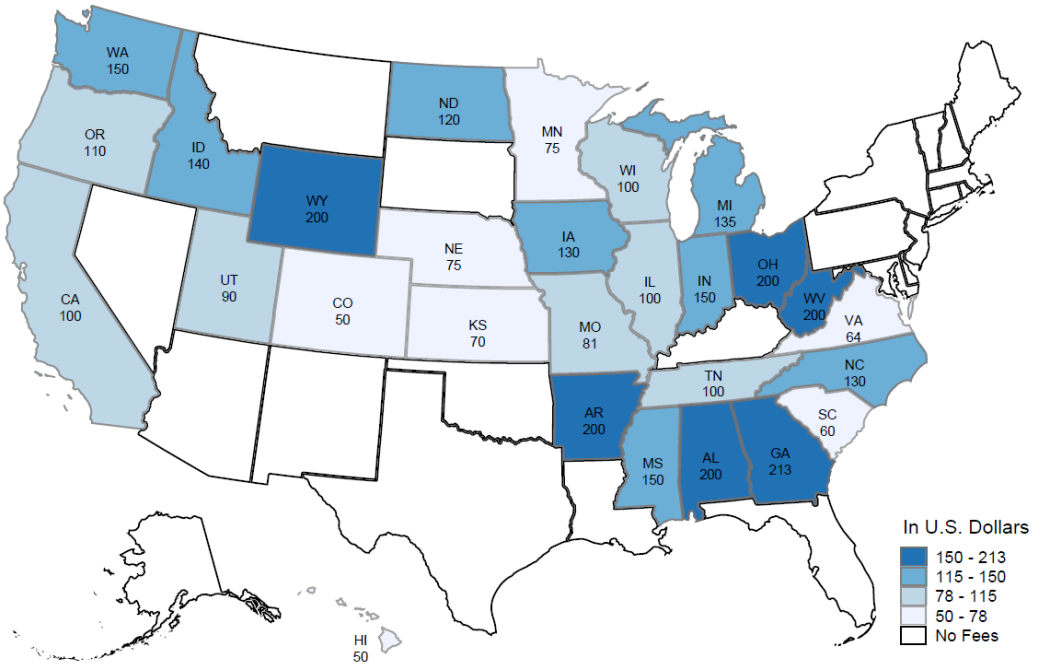
Owners of PHEVs and BEVs, due to the enormous fuel savings afforded by those vehicles, do not adequately contribute to the construction, maintenance and improvement of public roads and highways, in the same way as gasoline vehicle owners do via fuel taxes. As the number of PHEVs and BEVs increase on the roads of New Mexico, some mechanism is necessary to continue adequate funding for the maintenance and improvement of New Mexico's roads and highways. The additional annual fees proposed in SB2 Substitute introduce this mechanism.

As shown in the charts below, several other states have moved in this direction: 28 states impose an additional annual fee on BEVs, and 17 states impose an additional fee on PHEVs.


Additional Registration Fees on BEVs and PHEVs*
(Effective Jan. 1, 2020, except California Jul. 1, 2020)
Among the 28 states that impose additional fees on BEVs, the average fee is $123.
Among the 17 states that impose additional fees on PHEVs, the average fee is $70.
Georgia 213 0
Wyoming 200 0
West Virginia 200 100
Ohio 200 200
Arkansas 200 100
Alabama 200 100
Washington 150 75
Mississippi 150 75
Indiana 150 50
Idaho 140 75
Michigan 135 48
North Carolina 130 0
Iowa 130 65
North Dakota 120 50
Oregon 110 0
Wisconsin 100 75
Tennessee 100 0
Illinois 100 0
California 100 0
Utah 90 39
Missouri 81 44
Nebraska 75 0
Minnesota 75 0
Kansas 70 20
Virginia 64 0
South Carolina 60 30
Hawaii 50 0
Colorado 50 50
0
50
100
150
200
In US Dollars
BEV Fees
PHEV Fees
*Battery Electric Vehicles (BEVs) run exclusively on electric fuel.
*Plug-in Hybrid Electric Vehicles (PHEVs) run on either or both gasoline and electric fuel.
Some states index these fees to account for inflation (e.g. Indiana), others adjust them based on the annual increase/decrease in average fuel efficiency of vehicles (e.g. Georgia), and some adjust them based on the change in state gasoline tax rates (e.g. Michigan).
Source: NMDOT's elaboration using information from afdc.energy.gov and other online sources.

Additional Registration Fees Imposed on Battery Electric Vehicles*

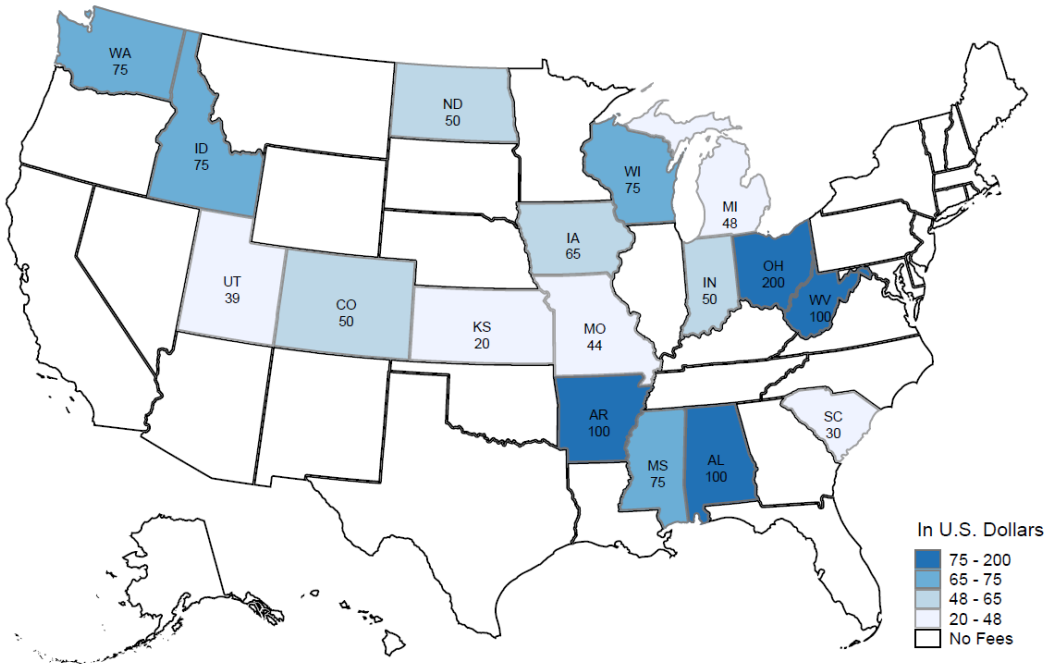
All fees are effective January 1, 2020, except CA which is effective July 1, 2020



*Battery electric vehicles (BEVs) run exclusively on electric fuel.
Average additional fees on BEVs imposed by 28 states is $123.
Source: NMDOT's elaboration using information from afdc.energy.gov and other online sources.

Additional Registration Fees Imposed on Plug-in Hybrid Electric Vehicles*

All fees are effective January 1, 2020



*Plug-in Hybrid Electric Vehicles (PHEVs) run on either or both gasoline and electric fuel.
Average additional fees on PHEVs imposed by 17 states is $70.
Source: NMDOT's elaboration using information from afdc.energy.gov and other online sources.

LG/sb/al/rl

Item	All consumer units	Lowest 10 percent	Second 10 percent	Third 10 percent	Fourth 10 percent	Fifth 10 percent	Sixth 10 percent	Seventh 10 percent	Eighth 10 percent	Ninth 10 percent	Highest 10 percent
Consumer unit characteristics:											
Income before taxes	$78,635	$5,724	$16,848	$26,306	$36,167	$47,738	$62,083	$79,250	$101,729	$138,383	$271,773
Income after taxes	$67,241	$5,947	$17,445	$26,592	$35,805	$45,489	$56,950	$71,072	$88,835	$117,022	$207,024
Average annual expenditures	$61,224	$25,309	$27,488	$37,164	$42,771	$49,241	$54,223	$64,029	$74,236	$95,056	$142,554
Transportation	$9,761	$3,483	$3,953	$6,169	$7,352	$7,891	$9,385	$10,324	$12,254	$16,427	$20,352
Vehicle purchases (net outlay)	$3,975	$1,195	$1,310	$2,329	$3,001	$2,944	$3,757	$3,981	$5,058	$7,647	$8,513
Gasoline, other fuels, and motor oil	$2,109	$967	$1,005	$1,396	$1,746	$1,968	$2,177	$2,439	$2,781	$3,240	$3,369
Other vehicle expenses	$2,859	$1,032	$1,417	$1,997	$2,176	$2,515	$2,814	$3,195	$3,384	$4,338	$5,719
Public and other transportation	$818	$288	$220	$447	$430	$464	$637	$710	$1,031	$1,203	$2,751
Percentage of Total Annual Expenditures											
Transportation	15.9%	13.8%	14.4%	16.6%	17.2%	16.0%	17.3%	16.1%	16.5%	17.3%	14.3%
Vehicle purchases (net outlay)	6.5%	4.7%	4.8%	6.3%	7.0%	6.0%	6.9%	6.2%	6.8%	8.0%	6.0%
Gasoline, other fuels, and motor oil	3.4%	3.8%	3.7%	3.8%	4.1%	4.0%	4.0%	3.8%	3.7%	3.4%	2.4%
Other vehicle expenses	4.7%	4.1%	5.2%	5.4%	5.1%	5.1%	5.2%	5.0%	4.6%	4.6%	4.0%
Public and other transportation	1.3%	1.1%	0.8%	1.2%	1.0%	0.9%	1.2%	1.1%	1.4%	1.3%	1.9%

Income Weighted Patterns

	Lowest 10 percent	Second 10 percent	Third 10 percent	Fourth 10 percent	Fifth 10 percent	Sixth 10 percent	Seventh 10 percent	Eighth 10 percent	Ninth 10 percent	Highest 10 percent
Consumer unit characteristics:										
Income before taxes	0.982	0.983	0.985	0.987	0.991	0.994	0.996	0.998	1.000	1.008
Income after taxes	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Average annual expenditures	1.177	1.055	1.042	1.026	1.016	1.004	0.999	0.993	0.991	0.978
Transportation	1.136	1.026	1.037	1.027	1.012	1.011	1.001	1.000	1.006	0.981
Vehicle purchases (net outlay)	1.094	0.986	1.021	1.024	0.999	1.008	0.995	1.004	1.028	0.992
Gasoline, other fuels, and motor oil	1.149	1.028	1.032	1.034	1.027	1.019	1.014	1.011	1.006	0.964
Other vehicle expenses	1.115	1.038	1.042	1.024	1.020	1.013	1.009	0.996	1.002	0.987
Public and other transportation	1.080	0.915	0.993	0.958	0.949	0.977	0.974	1.009	1.007	1.072

Data Source: Bureau of Labor Statistics, Consumer Expenditure Survey, 2018

						Income Weighted Spending Patterns			
Item	All consumer units	Northeast	Midwest	South	West	Northeast	Midwest	South	West
Transportation	$9,669	$9,095	$9,415	$9,570	$10,550	0.983	1.002	1.006	1.003
Vehicle purchases (net outlay)	$4,014	$3,204	$3,758	$4,309	$4,405	0.963	0.997	1.016	1.004
Gasoline, other fuels, and motor oil	$2,039	$1,797	$1,986	$2,034	$2,293	0.973	1.001	1.007	1.008
Other vehicle expenses	$2,850	$3,011	$2,997	$2,648	$2,931	0.996	1.011	0.998	0.997
Public and other transportation	$766	$1,083	$675	$579	$921	1.041	0.986	0.965	1.021

66-6-2. Passenger vehicles; registration fees.

For the registration of motor vehicles other than motorcycles, trucks, buses and tractors, the division shall collect the following fees for each twelve-month registration period:

A. for a vehicle whose gross factory shipping weight is not more than two thousand pounds, twenty-seven dollars ($27.00); provided, however, that after five years of registration, calculated from the date when the vehicle was first registered in this or another state, the fee is twenty-one dollars ($21.00);

B. for a vehicle whose gross factory shipping weight is more than two thousand but not more than three thousand pounds, thirty-nine dollars ($39.00); provided, however, that after five years of registration, calculated from the date when the vehicle was first registered in this or another state, the fee is thirty-one dollars ($31.00);

C. for a vehicle whose gross factory shipping weight is more than three thousand pounds, fifty-six dollars ($56.00); provided, however, that after five years of registration, calculated from the date when the vehicle was first registered in this or another state, the fee is forty-five dollars ($45.00); and

D. for a vehicle registered pursuant to the provisions of this section, a tire recycling fee of one dollar fifty cents ($1.50).