



MEMORANDUM

To: Patrick Murphy, VTrans
From: David Roberts, VEIC
Date: December 23, 2021
Subject: Report on State of Vermont Incentives for New Plug-in Electric Vehicles

VEIC is supporting VTrans in implementing the State of Vermont incentive program for new plug-in electric vehicles (“new PEV incentives”). Our work includes educating auto dealers and consumers on available incentives, supporting electric distribution utilities in processing the incentives and tracking spending to ensure the program does not exceed the funding appropriated by the State.

More information on current incentive program structure and offers is available on the Drive Electric Vermont website maintained by VEIC:

<https://www.driveelectricvt.com/why-go-electric/purchase-incentives>

The program was authorized by the 2019 Transportation Bill (Act 59, sec. 34) and was launched December 16, 2019. The initial incentive funds of \$1,100,000 were exhausted on October 1, 2020, and the program was suspended. The 2020 Transportation Bill (Act 121, sec. 14) made an additional appropriation of \$950,000 toward incentives, effective October 2, 2020, when the Governor signed the Appropriations Bill (Act 154). The program relaunched November 5, 2020, once VTrans was able to enter into new agreements with VEIC and the State’s electric distribution utilities to continue operating the program. Additional funding of \$2.7 million towards incentives was included in the 2021 Transportation Bill (Act 55, sec. 17) making a total of \$4.75 million in appropriations for incentives to-date.

The program has awarded a total of \$3,459,500 in incentives as of December 23, 2021, including \$173,500 set aside for pending “pre-approved” incentives. This leaves current funding available at \$1,293,000. The funds-remaining value also includes an additional \$2,500 available to the program due to an audit finding by VTrans which resulted in the repayment of a \$2,500 incentive to the State of Vermont.

Table 1 on the following page summarizes the number and value of incentives by quarter from the launch, with breakouts of the two delivery methods – at the dealership point-of-sale and customer direct incentives following a purchase. Approximately two-thirds of incentives distributed to date have been through participating dealerships at the point-of-sale.

Table 1. State of Vermont Quarterly PEV Incentive Spending by Type of Incentive

	Dealer Point-of-Sale Incentive		Customer Direct Incentive		TOTAL Incentive	
	Count	Funds	Count	Funds	Count	Funds
2019	12	\$ 34,500	7	\$ 18,500	19	\$ 53,000
Qtr4	12	\$ 34,500	7	\$ 18,500	19	\$ 53,000
2020	277	\$ 909,500	140	\$ 393,000	417	\$ 1,302,500
Qtr1	111	\$ 412,000	23	\$ 83,500	134	\$ 495,500
Qtr2	43	\$ 136,500	18	\$ 55,000	61	\$ 191,500
Qtr3	48	\$ 139,500	67	\$ 175,500	115	\$ 315,000
Qtr4	75	\$ 221,500	32	\$ 79,000	107	\$ 300,500
2021	494	\$ 1,412,500	210	\$ 518,000	704	\$ 1,930,500
Qtr1	123	\$ 363,500	50	\$ 115,000	173	\$ 478,500
Qtr2	166	\$ 481,500	97	\$ 244,500	263	\$ 726,000
Qtr3	117	\$ 301,500	41	\$ 101,000	158	\$ 402,500
Qtr4 to date	88	\$ 266,000	22	\$ 57,500	110	\$ 323,500
Pending Preapprovals			63	\$ 173,500	63	\$ 173,500
Grand Total	783	\$ 2,356,500	420	\$ 585,000	1,203	\$ 3,459,500

Economic issues associated with the COVID-19 pandemic continued to impact new PEV incentive activity over the past year. The new vehicle market continues experiencing supply chain challenges with very limited new vehicle inventory availability due to an industry-wide microchip shortage. In addition, one of the most popular models eligible for State incentives, the Chevrolet Bolt, is currently not available due to an ongoing battery recall.

Figure 1 below shows monthly spending for the new PEV incentive program from the start of the program in December 2019 through November 2021. Activity dropped precipitously at the start of COVID 19 shutdowns in March 2020, slowly recovering until program funding lapsed in October 2020. Once additional funding was made available in November 2020 incentive spending continued to grow until June 2021 when supply chain shortages began to severely impact new PEV availability, with recent months seeing incentive spending cut in half compared to May and June 2021.

Figure 1. Monthly Incentive Spending for the New PEV Program

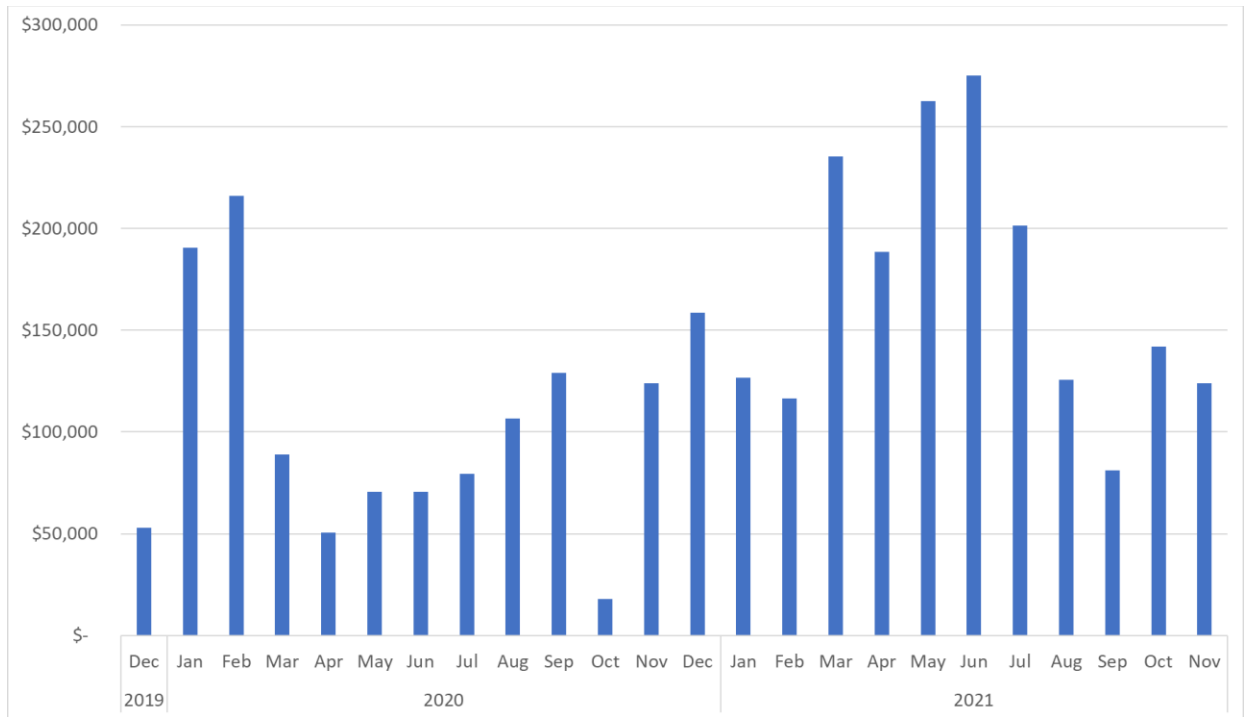


Table 2 below includes reporting on the number and value of incentives by income classification and PEV type. The State has offered higher incentives for low-income Vermonters since the start of the program. Initially the low-income eligibility was determined by whether a household’s total income was at or below the qualification for weatherization assistance programs (a common benchmark used in energy efficiency programs). This approach shifted following passage of Act 121 in 2020 to base low-income eligibility on having an adjusted gross income (AGI) of \$50,000 or less reported on the purchaser’s tax return¹. Act 121 also shifted the standard for moderate-income eligibility from total household income to tax filing AGI. The Drive Electric Vermont website linked above has details on current income eligibility requirements. Basically, purchasers with \$50,000 or less adjusted gross income (AGI) qualify for the higher incentives while standard incentive eligibility is capped at \$100,000 for individuals or \$125,000 for joint filers.

As of this report, low-income new PEV incentives comprise about 45% of the total quantity of incentives and 60% of spending.

¹ Act 121 - <https://legislature.vermont.gov/bill/status/2020/H.942>

Table 2. State of Vermont PEV Incentive Spending by Income Classification and Type of Vehicle

Income Classification	Vehicle Type					
	All-Electric		Plug-in Hybrid		Total	
	Count	Funds	Count	Funds	Count	Funds
Low Income	335	\$ 1,413,000	205	\$ 650,000	540	\$ 2,063,000
Weatherization-eligible	74	\$ 370,000	35	\$ 140,000	109	\$ 510,000
AGI \$50k or less	261	\$ 1,043,000	170	\$ 510,000	431	\$ 1,553,000
Moderate Income	402	\$ 1,005,000	261	\$ 391,500	663	\$ 1,396,500
Grand Total	737	\$ 2,418,000	466	\$ 1,041,500	1,203	\$ 3,459,500

Table 3 below includes reporting on the number and value of incentives by model. For a model to meet the current program eligibility requirements the base manufacturer's suggested retail price (MSRP) must be \$40,000 or less. The table is sorted in descending order of total incentives per model. Columns breaking out the lower income incentives as well as standard incentives for moderate income households are included.

Table 3. State of Vermont EV Incentives by Eligible Model and Income Level

Model	Vehicle Type	Low Income		Moderate Income		TOTAL	
		Count	Funds	Count	Funds	Count	Funds
Nissan LEAF	All-Electric	155	\$ 649,000	124	\$ 310,000	279	\$ 959,000
Chevrolet Bolt	All-Electric	80	\$ 330,000	151	\$ 377,500	231	\$ 707,500
Toyota Prius Prime	Plug-in Hybrid	82	\$ 259,000	92	\$ 138,000	174	\$ 397,000
Toyota RAV4 Prime	Plug-in Hybrid	43	\$ 129,000	92	\$ 138,000	135	\$ 267,000
Tesla Model 3	All-Electric	24	\$ 105,000	28	\$ 70,000	52	\$ 175,000
Hyundai Kona EV	All-Electric	19	\$ 79,000	32	\$ 80,000	51	\$ 159,000
Hyundai Ioniq PHEV	Plug-in Hybrid	24	\$ 82,000	14	\$ 21,000	38	\$ 103,000
Volkswagen ID4	All-Electric	9	\$ 36,000	26	\$ 65,000	35	\$ 101,000
Volkswagen e-Golf	All-Electric	24	\$ 118,000	2	\$ 5,000	26	\$ 123,000
Subaru Crosstrek Hybrid	Plug-in Hybrid	8	\$ 29,000	16	\$ 24,000	24	\$ 53,000
Kia Niro Electric	All-Electric	4	\$ 16,000	18	\$ 45,000	22	\$ 61,000
Ford Fusion Energi	Plug-in Hybrid	11	\$ 39,000	10	\$ 15,000	21	\$ 54,000
Mitsubishi Outlander PHEV	Plug-in Hybrid	8	\$ 24,000	6	\$ 9,000	14	\$ 33,000
Kia Niro PHEV	Plug-in Hybrid	4	\$ 12,000	6	\$ 9,000	10	\$ 21,000
Hyundai Ioniq EV	All-Electric	4	\$ 16,000	3	\$ 7,500	7	\$ 23,500
Chrysler Pacifica Hybrid	Plug-in Hybrid			4	\$ 6,000	4	\$ 6,000
Ford Escape PHEV	Plug-in Hybrid	3	\$ 9,000	1	\$ 1,500	4	\$ 10,500
Hyundai Sonata PHEV	Plug-in Hybrid	2	\$ 6,000	1	\$ 1,500	3	\$ 7,500
Mini Cooper SE all-electric	All-Electric			3	\$ 7,500	3	\$ 7,500
Honda Clarity PHEV	Plug-in Hybrid	2	\$ 6,000			2	\$ 6,000
Hyundai Santa Fe PHEV	Plug-in Hybrid	1	\$ 3,000	1	\$ 1,500	2	\$ 4,500
Chevrolet Volt	Plug-in Hybrid	1	\$ 4,000			1	\$ 4,000
Hyundai Tucson PHEV	Plug-in Hybrid			1	\$ 1,500	1	\$ 1,500
Mini Countryman SE All4	Plug-in Hybrid			1	\$ 1,500	1	\$ 1,500
<i>Pending Preapprovals</i>		32	\$ 112,000	31	\$ 61,500	63	\$ 173,500
Grand Total		540	\$ 2,063,000	663	\$ 1,396,500	1,203	\$ 3,459,500

Figure 2. Incentives Distributed by Model and Income

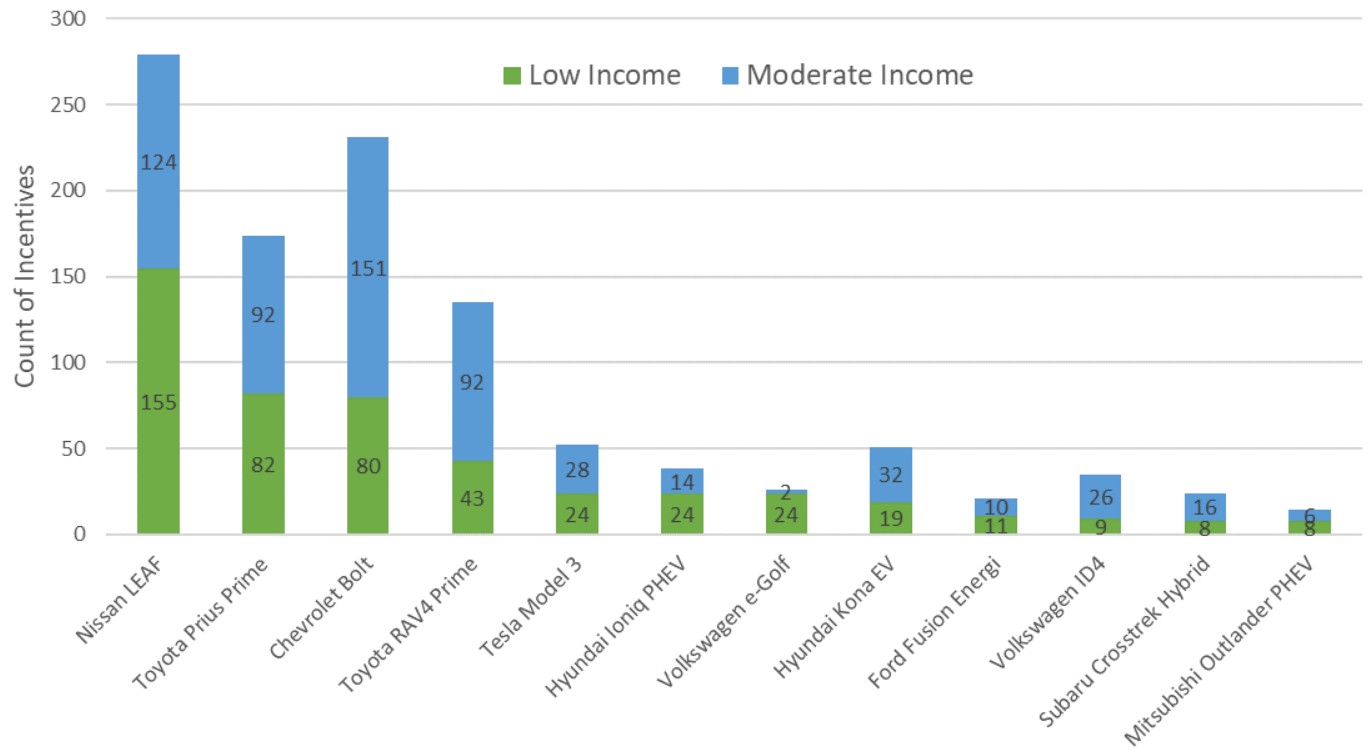


Figure 2 above shows the most incentivized eligible models sorted from left to right in order of those models receiving the greatest number of low-income buyers. The Nissan LEAF, Toyota Prius Prime and Chevrolet Bolt have the greatest number of low-income incentives, which is consistent with their more affordable purchase and lease pricing compared to other widely available PEV models.

The State PEV incentive program application process has not collected data on socio-economic characteristics of program beneficiaries to-date as the limited funding has been directed to maximize funds available for incentives rather than program evaluation activities. However, in response to interest on these issues, VEIC has calculated age and gender information for applicants based on information reported on driver’s licenses. A summary of the quantity of incentives provided by age group and gender is included in Table 4 and Figure 3 below. Note that age and/or gender information is missing from 162 incentive applications. Many of those “unknown” individuals have pending preapprovals and so have not provided the full package of information required for State PEV incentive applications.

VEIC is planning to undertake a survey of new PEV program beneficiaries in the first quarter of 2022 to provide more complete information on demographics and purchase considerations associated with program activity to-date.

Table 4. State of Vermont EV Incentives by Age Group and Gender

Age Range	Gender		Total
	Female	Male	
16-19	1	2	3
20-29	33	45	78
30-39	64	115	179
40-49	74	98	172
50-59	86	95	181
60-69	103	134	237
70-79	67	91	158
80-89	11	21	32
90-99		1	1
Unknown			162
Grand Total	439	602	1,203

Figure 3. Incentives by Age Group and Gender

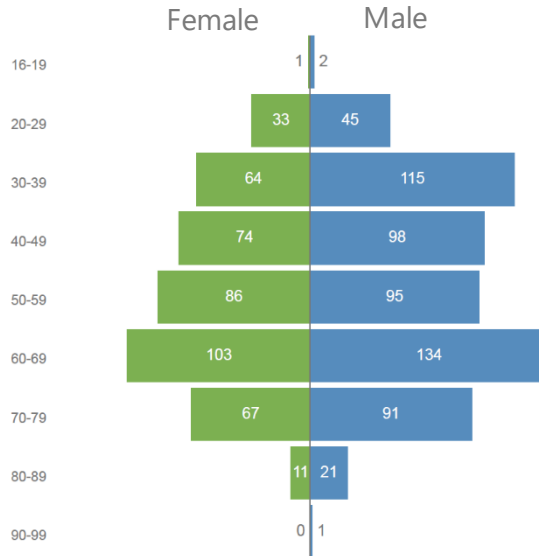


Table 5. State of Vermont EV Incentives by County²

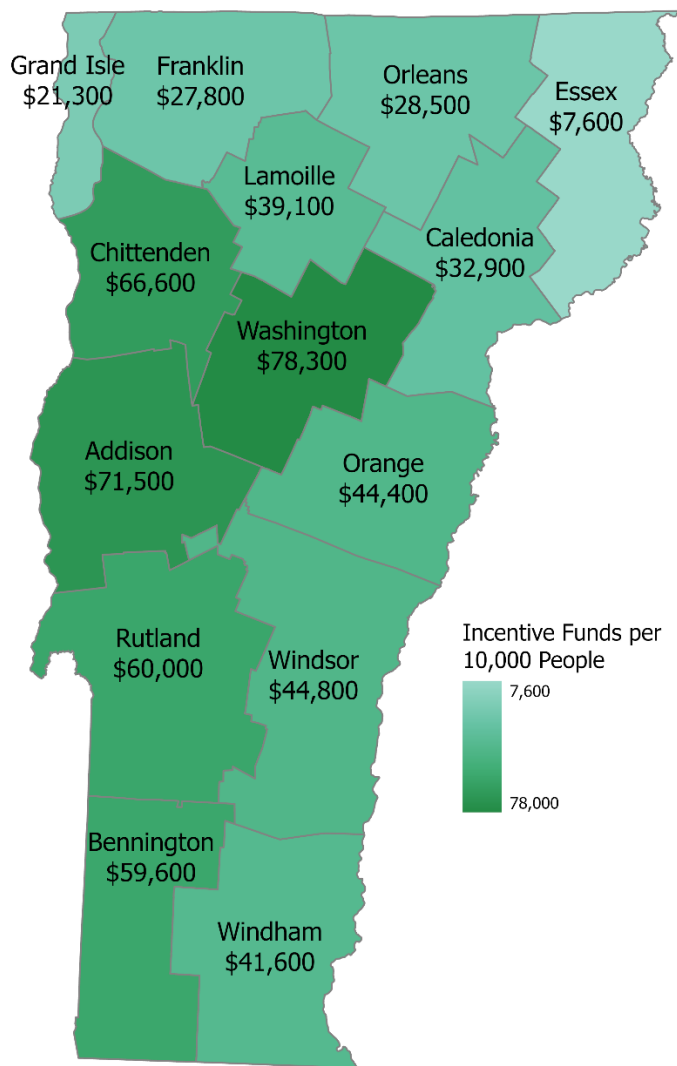
County	Count	Funds	Incentives		
			Population	per 10k Population	Incentive Funds per 10k Population
Addison	92	\$ 267,000	37,363	24.6	\$ 71,500
Bennington	69	\$ 222,500	37,347	18.5	\$ 59,600
Caledonia	35	\$ 99,500	30,233	11.6	\$ 32,900
Chittenden	394	\$ 1,120,500	168,323	23.4	\$ 66,600
Essex	3	\$ 4,500	5,920	5.1	\$ 7,600
Franklin	49	\$ 139,000	49,946	9.8	\$ 27,800
Grand Isle	6	\$ 15,500	7,293	8.2	\$ 21,300
Lamoille	36	\$ 101,500	25,945	13.9	\$ 39,100
Orange	45	\$ 130,000	29,277	15.4	\$ 44,400
Orleans	31	\$ 78,000	27,393	11.3	\$ 28,500
Rutland	119	\$ 363,500	60,572	19.6	\$ 60,000
Washington	153	\$ 468,000	59,807	25.6	\$ 78,300
Windham	69	\$ 191,000	45,905	15.0	\$ 41,600
Windsor	102	\$ 259,000	57,753	17.7	\$ 44,800
State Total	1203	\$ 3,459,500	643,077	18.7	\$ 53,800

² Incentive funds per 10,000 people are rounded to the closest hundred dollars. Population is from 2020 Census.

Table 5 above and Figure 4 below include information on the distribution of new PEV incentives by county. Chittenden County residents have received the largest quantity of incentives (394) and funding (\$1,120,500). Washington County has received the highest per capita distribution of incentives and funding at 25.6 incentives and \$78,300 in funding per 10,000 people. Essex County had the fewest number of incentives and the lowest funding per capita.

Factors contributing to geographic differences across the state likely include personal income, local awareness of EVs, availability of EV models for vehicle types preferred by residents (e.g. few options for PEV pick-up trucks to-date), and EV sales and service availability in the region.

Figure 4. Per Capita New PEV Incentive Spending by County



Observations

The program is working as intended to increase EV adoption in the State, due in large part to the efforts of electric utility partners who are processing the incentives and reimbursing dealers and consumers.

The following observations summarize key issues and feedback received over the past year based on VEIC's coordination and customer support activities:

1. **COVID-19** - supply chain issues continue to impact auto sales in Vermont, including new PEV inventory availability. PEV incentive spending slowed to about 50% of prior rates from August – December 2021.
2. **Incentive Delivery** - The dealership point-of-sale incentives are generally smoother and less labor intensive to process, but the consumer direct option allows Vermonters who purchase from out-of-state dealers or directly from the manufacturer to take advantage of the incentive program. There are also Vermont EV dealers who elected not to participate in offering point-of-sale incentives, requiring their customers to go the consumer direct route if they are eligible to claim an incentive.
3. **Dealer Participation** - The Vermont Vehicle and Automotive Distributors Association (VADA) has assisted in outreach to the dealer community to increase their awareness of PEV incentive offerings and encourage participation in the State program. 43 dealers have signed agreements to participate in the program, including many of the highest volume PEV dealers. Point-of-sale incentives are currently only available to dealers located in Vermont. Additional Vermont dealers have expressed interest, but many of them are not able to offer eligible models due to pricing of automaker offerings (e.g. all Volvo PEVs currently cost more than \$40,000).
4. **Funding Continuity** - The State was able to prevent a funding lapse over the past 12 month period, avoiding challenging issues that came up when the program was suspended in October 2020. At that point in time several PEV purchasers were deemed ineligible for a State incentive since they purchased when funding was not available and did not secure a preapproval to reserve funds in advance.
5. **Income Eligibility** - Many consumers continue to express confusion over the income eligibility requirements, including the requirement they use their most recent tax filing to determine AGI. This is necessary to allow VTrans the ability to audit recipient income, but means that if someone has had an income reduction compared to their last tax filing they may not be eligible for a State incentive for many months (until their next tax filing occurs).

Several inquiries have come through from individuals who are just above the income eligibility caps and dismayed they are ineligible for any State support, even if they are purchasing an eligible model.

6. **Vehicle Price Eligibility** - The most frequent complaints on the new PEV program relate to the vehicle model base price eligibility cap of \$40,000 or less. Many automakers have increased pricing in response to inflationary pressures and several models that were eligible for a new PEV incentive are no longer able to receive incentives. Table 6 below lists all models eligible for new PEV incentives since the program start. Models that are no longer eligible have a strike-through.

Table 6. Models Eligible for New PEV Incentives (\$40,000 or less base price)

	Make / Model	Electric Range (miles)	Total Range (miles)	Current Base MSRP	Eligible Model Year(s)	Eligibility Notes
Plug-in Hybrid Vehicles (Gasoline + Electric)						
1	Chrysler Pacifica Hybrid	32	520	\$ 44,920	2017-2020	Model year 2021 Pacifica ineligible
2	Ford Escape PHEV	47	340	\$ 33,400	2021	
3	Honda Clarity PHEV	47	340	\$ 33,400	2018-2021	Production ended Aug 2021
4	Hyundai Ioniq PHEV	29	630	\$ 26,700	2018-2021	
5	Hyundai Santa Fe PHEV	30	440	\$ 39,350	2022	
6	Hyundai Tucson PHEV	33	420	\$ 34,750	2022	
7	Kia Niro PHEV	26	560	\$ 29,590	2018-2022	
8	Mini Countryman SE All4	12	270	\$ 41,500	2018-2020	Model year 2021+ Countryman ineligible
9	Mitsubishi Outlander PHEV	24	310	\$ 36,995	2018-2022	
10	Subaru Crosstrek Hybrid	17	480	\$ 35,645	2019-2022	
11	Toyota Prius Prime	25	640	\$ 28,220	2017-2022	
12	Toyota RAV4 Prime	42	600	\$ 39,800	2021-2022	
All-Electric Vehicles						
13	Chevrolet Bolt	259	259	\$ 31,000	2017-2022	
14	Chevrolet Bolt EUV	247	247	\$ 33,000	2022	
15	Hyundai Ioniq EV	170	170	\$ 33,245	2017-2021	
16	Hyundai Ioniq 5	220-303	220-303	\$ 39,700	2022	
17	Hyundai Kona EV	258	258	\$ 34,000	2019-2022	
18	Kia Niro Electric	239	239	\$ 39,990	2019-2022	
19	Mini Cooper SE	110	110	\$ 29,900	2018-2022	
20	Nissan LEAF / LEAF Plus	149-226	149-226	\$ 27,400	2011-2022	
21	Tesla Model 3	263-353	263-353	\$ 44,990	n/a	Must have ordered on or before October 5, 2021 to be eligible. Tesla increased the price above the \$40,000 eligibility cap on October 6, 2021
22	Volkswagen ID.4	260	260	\$ 40,760	2021	Model year 2022+ ID.4 ineligible

There is currently only one all-electric, all-wheel drive (AWD) model eligible for a new PEV incentive, the Hyundai Ioniq 5. This offers standard rear wheel drive at the base price, but has an optional dual motor configuration. Similar to several other popular PEV models, the Ioniq 5 is expected to be in short supply over the next year.

All-wheel drive capability is strongly favored by Vermont vehicle purchasers so the current base price eligibility requirement is likely dampening PEV purchase consideration among some Vermont buyers.

7. **Electric Utility Support** - The electric distribution utilities are responsible for verifying incentive applications contain all the required documentation and they are paying out incentives to dealers and consumers. They are doing an excellent job supporting the program at no cost to the State. Some utility partners have expressed concerns over resource availability and their internal costs in providing this support and are anticipating phasing out of this role in 2022 as VTTrans brings on an administrative contractor for the new PEV program.

VEIC appreciates the opportunity to support the State of Vermont in transportation electrification programs. We look forward to continued partnership as the new PEV program continues in support of State transportation decarbonization and renewable energy goals.