MOST ELECTRIC VEHICLES ARE CHEAPER TO OWN OFF THE LOT THAN GAS CARS

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EXECTUIVE SUMMARY

Many studies show electric vehicles (EVs) are cheaper to operate than gasoline-powered vehicles with lower total cost of ownership (TCO) over the vehicle lifetime, due to fuel and maintenance savings outstripping purchase price differences. However, most consumers focus on how much they'll have to pay to own and operate a vehicle each month, not necessarily how much a vehicle will save them over its lifetime. And roughly half of Americans think EVs are too expensive to consider or aren't willing to pay more for an EV compared to a gasoline car.

This research finds that in most states, financing and owning an EV is cheaper on a monthly basis than financing and owning an equivalent gasoline car.

In other words, most new EVs are cheaper to own from the day they are driven off the lot, even when the sticker price is considerably higher. Consumer savings are even greater if the EV incentives currently proposed in Congress are included, making EVs cheaper in nearly every instance, and more affordable for all Americans looking to purchase a new car.

Since 85 percent of new vehicle buyers finance their cars, understanding how the monthly loan repayment compares to estimated fuel and maintenance costs is critical to understanding the monthly impact to consumers.

This study compares monthly ownership costs of six EV and gasoline equivalent vehicles, accounting for financing costs,



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98 Battery Street, Suite 202 San Francisco, CA 94111 policy@energyinnovation.org state taxes and fees, state and federal rebates and tax credits, fuel costs, maintenance costs, and insurance costs. For two of the vehicle comparisons we evaluated, the Hyundai Kona SEL and the Ford F-150, the EV version was cheaper to own per month in *every single state*.

For several others, including the Volvo XC40, the Nissan Leaf (compared to the Nissan Versa), and the Hyundai Kona Limited, it was cheaper to own the EV version in about half of states. Where those models did cost more, it was often by less than \$15 per month. For one model, the Kia Niro, the EV was only cheaper in a handful of states, due largely to the fact that the hybrid gasoline version achieves 50 miles per gallon.

While monthly EVs costs during loan repayment are lower in many states, savings grow dramatically after the loan is repaid, with nearly every state-vehicle comparison showing significant monthly cost savings, in line with other studies. Our modeling finds that **TCO is significantly lower for EVs than for gasoline cars,** with owners saving on average \$6,000 over the vehicle's lifetime. Though we did not explicitly look at the used car market, used cars have a lower purchase price (though higher financing rates), and cost savings are likely to be even more advantageous for EVs, especially if Congress passes a used EV tax credit.

These monthly savings are contingent on the existing \$7,500 federal EV tax credit. Without this tax credit, most models are no longer cheaper during the loan repayment period (even though operating costs and TCO remain lower than for gasoline cars). Notably, two of the vehicle manufacturers we evaluated in this study, Ford and Nissan, will likely exceed the federal tax credit cap of 200,000 EV sales this year, meaning the tax credit will unlikely last at current levels beyond 2022 without a modification to current policy.

Our modeling shows that increasing the tax credit amount as currently proposed in Congress, significantly improve EV ownership economics, with a \$10,000 tax credit making EVs cheaper in nearly every state-vehicle comparison. The tax credits take on even greater significance if gas prices decline, because the operating cost difference will shrink. These findings underscore why Congress must pass an extended and expanded EV tax credit in the coming months, or risk backsliding on EV deployment and consumer savings.

INTRODUCTION

EVs are an increasingly economic choice for consumers worried about pain at the pump. Many studies show EVs can save owners thousands of dollars relative to gasoline vehicle equivalents over a vehicle's lifetime.^{1,2,3,4,5,6} TCO are considerably lower due to fuel and maintenance savings from driving an EV relative to a gasoline vehicle. Fuel savings accrue because EVs are two to four times more efficient than gasoline vehicles, so driving the same distance costs considerably less, and have fewer moving parts requiring less maintenance than gasoline vehicles. Indeed, numerous studies demonstrate considerable operational savings from driving an EV.

Despite these savings, customers may be dissuaded from purchasing an EV because of higher upfront costs (though upfront EV costs, despite near-term supply chain challenges, are expected to reach price parity with gasoline vehicles in the mid-2020s)⁷, especially when state and federal rebates and tax credits are not clearly articulated to potential consumers. This sticker shock may discourage consumers from purchasing EVs, even when it is in their economic interest, given that TCO and operating costs are consistently lower for EVs than gasoline cars: A Cox Automotive study found that 51 percent of Americans believe EVs are "too expensive to seriously consider,"⁸ and nearly half of Americans aren't willing to pay more for an EV than a gasoline car.⁹

However, while EVs have higher upfront prices today than comparable gasoline cars, very few people pay for their new cars upfront: More than 85 percent of new vehicle purchases are financed,¹⁰ creating a

payment stream over several years (six years is the most common lease term).¹¹ Ultimately, consumers are focused on how much their monthly costs will change as a result of a new vehicle purchase. TCO and operational savings are often too intangible to overcome concerns about upfront purchase price differences.

This study evaluates monthly ownership costs of EVs compared to gasoline vehicle equivalents, including the cost of paying back vehicle financing. We include financing costs, taxes, rebates and tax credits, state fees, fuel costs, maintenance costs, and insurance costs. We selected six different EV-gasoline comparisons, identifying vehicles that are as similar as possible. This is challenging as many base EV models have more advanced features than equivalent base gasoline models. More information on the selected vehicles and methodology used to estimate monthly vehicle ownership costs is discussed below.

METHODOLOGY

We estimate the monthly and annual vehicle ownership costs over the loan repayment period to evaluate monthly EV ownership costs when the vehicle is purchased. We include purchase, financing, insurance, fuel, and maintenance costs, as well as state rebates and federal tax credits.

Vehicle Purchase Costs

We collected data on vehicle prices from manufacturer websites for six gasoline vehicles and six EVs, for six direct comparisons. We selected models reflecting the range of vehicle types on the market (e.g., compact, crossover, pickup, and SUV). Base model EVs often have more features than comparative base model gasoline cars. We assessed model variants to identify the closest comparison between gasoline and electric versions of vehicles with the closest matching set of features.

EPA Size Class	Gasoline Model	MSRP	EV Model	MSRP
Small SUV	Hyundai Kona SEL	\$24,745	Hyundai Kona Electric SEL	\$35,245
Small SUV	Hyundai Kona Limited	\$29,845	Hyundai Kona Electric Limited	\$43,745
Standard Pickup Truck	Ford F-150 XL	\$31,685	Ford F-150 Lightning Pro	\$41,669
Small Station Wagon	Kia Niro EX Premium	\$33,600	Kia Niro EV EX Premium	\$45,865
Small SUV	Volvo XC40 Inscription	\$41,945	Volvo XC40 Recharge Plus	\$56,395
Compact/Midsize	Nissan Versa S Xtronic CVT	\$17,875	Nissan LEAF	\$28,425

Table 1: Selected 2022 Gas and EV Models and MSRP used in this study

Financing Costs

Total financed amounts include state tax for each vehicle, accounting for states with discounted EV sales taxes, and subtracting the estimated down payment using the national average from J.D. Power of 12 percent per vehicle, for gasoline vehicles.¹² For EVs, we assume the same down payment as the gasoline equivalent as a conservative estimate, increasing monthly loan repayment costs for EVs but providing an apples-to-apples comparison of upfront costs. Annual financing charges are then estimated using the total

financed amount, the national average new vehicle loan term of six years as reported by Edmunds, and a financing rate of 3.86 percent, which is the 2021 national average reported by NerdWallet.

We also include estimated state rebates and federal tax credits for EVs. Currently, all the evaluated models qualify for the \$7,500 federal tax credit, though beginning in 2023 at least two of the vehicles will likely lose their tax credits unless Congress passes legislation extending existing credits or adding new ones.¹³ State rebates are often applied at the point of sale or within several months following the vehicle purchase. The federal tax credit is received during tax filing for the year the vehicle is purchased (e.g., for a consumer purchasing an EV in 2022, the tax credit wouldn't be received until taxes are filed in 2023). For simplicity, we levelize tax credits over the loan term. We sum the financing charges, inclusive of state taxes and down payments, then apply rebates and tax credits to determine annual financing charges, as shown in Figure 1.^{14,15}

 $Annual \ Financing \ Charges = \frac{i(1+i)^n}{(1+i)^n - 1} * MSRP * (1 + State \ Tax \ Rate - Down \ Payment \ Rate) - \frac{(State \ Rebate + Federal \ Tax \ Credit)}{n}$

Where: *i* = Average vehicle loan APR *n* = Average loan term *MSRP* = Manufacturer's suggested retail price

Figure 1: Formula for Calculating Annual Financing Charge

It is worth noting some manufacturers and dealers offer different financing rates for different vehicle types, which this analysis does not consider. For example, Nissan offers 3.39 percent financing¹⁶ for the Versa S Xtronic CVT but 0.9 percent financing¹⁷ for a LEAF purchase, a difference of around \$400 per year depending on state tax rates and available rebates. Different available financing rates could considerably impact annual financing costs and is an important policy consideration.

Operating Costs

Maintenance Costs

We estimate annual operating costs, including fuel and maintenance. For maintenance costs, we use U.S. Department of Energy (DOE) data on estimated maintenance costs per mile by vehicle type.¹⁸ This analysis found that monthly maintenance costs for EVs (\$0.061/mile) are roughly 40 percent lower than those for gasoline cars (\$0.101/mile). Annual maintenance costs are estimated using per-mile estimates from DOE and estimated average annual mileage of 13,469 over the loan term using data from the U.S. Environmental Protection Agency's (EPA) MOVES3 model.¹⁹

Fueling Costs

Vehicle fueling costs are estimated using annual mileage, fuel efficiency from FuelEconomy.gov, current average state gasoline prices from AAA as of May 4th, 2022²⁰ and 2021 average residential electricity rates for EVs. It is important to note EPA's fuel efficiency values reflect tested values, and that on-road efficiency is typically lower than rated values.

For EVs, we assume owners use Level 1 chargers. Although a high percentage of current EV owners have installed Level 2 chargers,²¹ data on average daily driving distance and Level 1 charging speed finds the vast

	State	State Regular
State	Electricity	Gasoline Price
State	Price (\$/kWh)	(\$/gal)
Alabama	\$0.13	\$3.88
Alaska	\$0.23	\$4.68
Arizona	\$0.13	\$4.59
Arkansas	\$0.11	\$3.82
California	\$0.23	\$5.76
Colorado	\$0.23	\$4.04
Connecticut	\$0.22	\$4.04
Delaware	\$0.13	\$4.26
District of Columbia	\$0.13	\$4.53
Florida	\$0.13	\$4.18
	\$0.12	\$3.75
Georgia	· ·	· · · · ·
Hawaii	\$0.33	\$5.27
Idaho Illinois	\$0.10	\$4.46
Illinois Indiana	\$0.13	\$4.52
	\$0.13	\$4.12
lowa	\$0.13	\$3.92
Kansas	\$0.13	\$3.82
Kentucky	\$0.12	\$3.88
Louisiana	\$0.11	\$3.89
Maine	\$0.17	\$4.26
Maryland	\$0.13	\$4.27
Massachusetts	\$0.23	\$4.24
Michigan	\$0.18	\$4.28
Minnesota	\$0.13	\$3.91
Mississippi	\$0.12	\$3.82
Missouri	\$0.11	\$3.82
Montana	\$0.11	\$4.18
Nebraska	\$0.11	\$3.95
Nevada	\$0.12	\$5.10
New Hampshire	\$0.20	\$4.17
New Jersey	\$0.16	\$4.28
New Mexico	\$0.14	\$4.11
New York	\$0.19	\$4.38
North Carolina	\$0.12	\$3.96
North Dakota	\$0.11	\$3.97
Ohio	\$0.13	\$4.02
Oklahoma	\$0.12	\$3.84
Oregon	\$0.11	\$4.71
Pennsylvania	\$0.14	\$4.40
Rhode Island	\$0.22	\$4.22
South Carolina	\$0.13	\$3.89
South Dakota	\$0.12	\$4.03
Tennessee	\$0.11	\$3.96
Texas	\$0.12	\$3.88
Utah	\$0.11	\$4.51
Vermont	\$0.19	\$4.29
Virginia	\$0.12	\$4.08
Washington	\$0.10	\$4.74
West Virginia	\$0.12	\$4.07
Wisconsin	\$0.15	\$3.99
Wyoming	\$0.11	\$4.17

 Table 2: Gasoline Prices as of May 4, 2022 and 2021 State Electricity Rates

majority of daily driving needs can be met without Level 2 chargers. For example, the average single-car American household drives about 30 miles per day.²² Level 1 chargers can charge about five miles per hour,²³ meaning just six hours of charge each day with a Level 1 charger could recharge an EV for an average daily drive. Even on a day with double the average distance, a 12-hour overnight charge would be sufficient. And since most drivers park their cars for more than six hours a day (e.g., overnight), any shortfall in battery charge could be made up by subsequent charging sessions.

Maintenance and fuel costs are added together to estimate annual operating costs:

Annual Operating Costs = $\left[Maintenance Cost per Mile + \left(\frac{1}{MPGe} * Fuel Price\right)\right] * Average Annual Distance Traveled$

Figure 2: Formula for Calculating Annual Operating Costs

Insurance Costs

Insurance costs (premiums) are based on many factors, but vehicle price is arguably the most important. Data on rates by vehicle types also suggest EVs receive a slightly higher rate even when vehicles are similarly priced (a variety of potential reasons exist for this trend). We estimated the difference in insurance premiums for different vehicle types using data from MoneyGeek.com. Using data provided on insurance premiums across several different gasoline and EV models, we estimate insurance premiums for the models covered in this study as a function of MSRP and vehicle type (gasoline vs electric vehicle). Figure 3 below shows the equations used for estimating insurance premiums:

Annual Insurance Costs for Gasoline Vehicle = (MSRP * 0.01497) + 995.327657

Annual Insurance Costs for Electric Vehicle = (MSRP * 0.01459) + 1033.847682

Figure 3: Formulas for Calculating Insurance Costs

Additional Fees

Many states levy an annual fee on EVs, partially to compensate for lost gasoline tax revenue. We include summarized state-specific EV fees in this analysis from the American Council for an Energy Efficient Economy.

Total Monthly Ownership Costs

Total monthly ownership cost sums annual financing costs, operating costs, insurance costs, and additional fees by vehicle and divides by 12 months.

 $Total Monthly Ownership Costs = \frac{Annual Financing Costs + Annual Operating Costs + Annual Insurance Costs + Annual EV Fees}{12}$

Figure 4: Formula for Calculating Total Monthly Ownership Costs

RESULTS

Monthly ownership costs, including several sensitivities, as well as TCO, are discussed below.

Monthly Ownership Costs During Financing Term

Estimated monthly ownership costs by state and vehicle model are shown in Table 3 with gasoline models on the left of each vehicle comparison.

Vehicle and state combinations where the EV model is cheaper on a monthly basis are shaded in green. EV models of the Hyundai Kona SEL and Ford F-150 are cheaper in *every single state* to finance and own today than the equivalent gasoline model. The Volvo XC40 and Nissan models are just slightly more expensive, on the order of a few dollars or less, in several of the states where it is cheaper to own the gasoline version. For example, the Nissan Leaf's monthly difference is less than \$15 in Alaska, Arkansas, Indiana, Iowa, Kansas, Minnesota, Mississippi, New Hampshire, Ohio, South Carolina, Tennessee, Vermont, West Virginia, Wisconsin, and Wyoming, and less than \$1 per month in some states. Yellow shaded cells below show combinations where EVs were \$15 or less per month more expensive to own. EVs that were than \$15 a month more to own are shaded red.

				Mon	thly Own	nership Cost o	during Finan	cing Term				
States	2022 Hy	rundai Kona	2022 H	lyundai Kona	2022	Ford F-150	2022	Kia Niro	2022 \	olvo XC40	2022 Nissan	
States	SEL	Electric SEL	Limited	Electric Limited	XL	Lightning Pro	EX Premium	EV EX Premium	Inscription	Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$724	\$686	\$804	\$826	\$905	\$819	\$816	\$860	\$1,027	\$1,044	\$568	\$582
Alaska	\$736	\$678	\$813	\$813	\$927	\$831	\$813	\$847	\$1,035	\$1,036	\$575	\$581
Arizona	\$755	\$676	\$836	\$819	\$950	\$810	\$841	\$853	\$1,068	\$1,040	\$588	\$570
Arkansas	\$731	\$694	\$814	\$838	\$914	\$825	\$828	\$872	\$1,041	\$1,059	\$573	\$587
California	\$802	\$690	\$885	\$834	\$1,021	\$851	\$876	\$871	\$1,129	\$1,072	\$620	\$585
Colorado	\$725	\$633	\$804	\$772	\$907	\$765	\$814	\$805	\$1,026	\$988	\$568	\$530
Connecticut	\$743	\$680	\$825	\$823	\$932	\$838	\$835	\$860	\$1,055	\$1,058	\$581	\$576
Delaware	\$721	\$610	\$798	\$745	\$905	\$738	\$804	\$777	\$1,017	\$955	\$565	\$511
District of Columbia	\$754	\$680	\$836	\$824	\$949	\$816	\$842	\$858	\$1,068	\$1,046	\$588	\$574
Florida	\$742	\$677	\$824	\$820	\$930	\$809	\$834	\$854	\$1,053	\$1,041	\$580	\$570
Georgia	\$719	\$685	\$799	\$826	\$897	\$817	\$813	\$859	\$1,021	\$1,043	\$565	\$581
Hawaii	\$772	\$740	\$853	\$880	\$979	\$924	\$848	\$918	\$1,087	\$1,126	\$600	\$641
Idaho	\$752	\$682	\$834	\$825	\$945	\$810	\$840	\$859	\$1,065	\$1,044	\$587	\$575
Illinois	\$755	\$690	\$837	\$834	\$950	\$826	\$843	\$868	\$1,069	\$1,057	\$589	\$584
Indiana	\$744	\$700	\$827	\$844	\$933	\$837	\$838	\$879	\$1,057	\$1,069	\$582	\$593
lowa	\$733	\$685	\$815	\$828	\$917	\$819	\$828	\$862	\$1,042	\$1,049	\$574	\$578
Kansas	\$731	\$691	\$814	\$835	\$914	\$826	\$828	\$869	\$1,041	\$1,058	\$573	\$584
Kentucky	\$731	\$675	\$813	\$818	\$914	\$806	\$827	\$852	\$1,040	\$1,038	\$573	\$569
Louisiana	\$726	\$665	\$807	\$806	\$907	\$793	\$819	\$839		\$1,022	\$569	\$560
Maine	\$743	\$663	\$824	\$805	\$932	\$807	\$833	\$840		\$1,032	\$581	\$558
Maryland	\$745	\$680	\$827	\$824	\$935	\$816	\$836	\$858	\$1,057	\$1,046	\$582	\$574
Massachusetts	\$745	\$679	\$827	\$823	\$935	\$840	\$837	\$859		\$1,059	\$582	\$576
Michigan	\$745	\$703	\$828	\$846	\$936	\$850	\$836	\$881	\$1,057	\$1,075	\$583	\$598
Minnesota	\$736	\$692	\$819	\$837	\$921	\$830	\$832	\$871	\$1,047	\$1,061	\$577	\$586
Mississippi	\$733	\$694	\$816	\$838	\$917	\$827	\$831	\$872	\$1,044	\$1,061	\$575	\$586
Missouri	\$722	\$671	\$803	\$812	\$902	\$801	\$816	\$845	\$1,026	\$1,029	\$567	\$567
Montana	\$719	\$641	\$796	\$776	\$901	\$765	\$802	\$807	\$1,013	\$984	\$563	\$541
Nebraska	\$732	\$676	\$814	\$819	\$916	\$806	\$826	\$852	\$1,040	\$1,037	\$574	\$570
Nevada	\$777	\$680	\$860	\$824	\$984	\$812	\$859	\$858	\$1,098	\$1,046	\$604	\$572
New Hampshire	\$718	\$669	\$795	\$804	\$900	\$815	\$802	\$838		\$1,024	\$563	\$571
New Jersey	\$748	\$588	\$831	\$723	\$939	\$726	\$839	\$756		\$938	\$584	\$489
New Mexico	\$736	\$677	\$818	\$819	\$923	\$813	\$828	\$853	\$1,044	\$1,040	\$576	\$572
New York	\$741	\$662	\$822	\$803	\$931	\$812	\$828	\$838	\$1,048	\$1,030	\$579	\$560
North Carolina	\$729	\$679	\$810	\$820	\$912	\$809	\$822	\$854	\$1,035	\$1,038	\$572	\$574
North Dakota	\$731	\$677	\$812	\$819	\$914	\$806	\$824	\$852	\$1,037	\$1,036	\$573	\$572
Ohio	\$735	\$695	\$817	\$837	\$920	\$829	\$829	\$871	\$1,044	\$1,059	\$576	\$589
Oklahoma	\$724	\$669	\$805	\$810	\$905	\$801	\$818	\$844		\$1,028	\$568	\$565
Oregon	\$737	\$629	\$814	\$764	\$929	\$754	\$814	\$796		\$972	\$575	\$529
Pennsylvania	\$750	\$672	\$832	\$815	\$942	\$809	\$839	\$850		\$1,038	\$585	\$566
Rhode Island	\$747	\$716	\$830	\$861	\$937	\$876	\$840	\$897	\$1,061	\$1,097	\$584	\$612
South Carolina	\$732	\$686	\$814	\$829	\$915	\$821	\$827	\$863	\$1,001	\$1,051	\$574	\$580
South Dakota	\$731	\$669	\$812	\$810	\$915	\$801	\$822	\$844		\$1,028	\$573	\$564
Tennessee	\$738	\$688	\$821	\$832	\$924	\$819	\$834	\$866	\$1,057	\$1,054	\$578	\$580
Texas	\$732	\$644	\$815	\$787	\$916	\$777	\$828	\$821	\$1,042	\$1,008	\$574	\$537
Utah	\$749	\$673	\$830	\$814	\$943	\$800	\$835	\$847	\$1,042	\$1,031	\$585	\$567
Vermont	\$746	\$701	\$828	\$844	\$936	\$852	\$836	\$879		\$1,074	\$583	\$596
Virginia	\$732	\$673	\$812	\$814	\$917	\$804	\$822	\$847	\$1,030	\$1,031	\$573	\$569
Washington	\$763	\$649	\$846	\$784	\$963	\$771	\$849	\$816		\$1,031	\$594	\$549
West Virginia	\$738	\$694	\$820	\$837	\$905	\$827	\$831	\$871	\$1,080	\$1,058	\$578	\$588
Wisconsin	\$731	\$688	\$820	\$830	\$925	\$827	\$824	\$864		\$1,058	\$573	\$583
Wyoming	\$734	\$680	\$814	\$820	\$920	\$808	\$823	\$853	\$1,039	\$1,036	\$574	\$575

Table 3: Monthly Ownership Costs by Vehicle

Kia Niro financing and operating costs are cheaper for the gasoline version in most states because of its high fuel efficiency: The Kia Niro gasoline hybrid car gets 49 MPG, lowering the estimated fuel savings between gasoline and EV versions.

The same subset of states, with higher electricity prices and/or lower gasoline prices, tend to be the ones where gasoline vehicles remain more economic including Alaska, Georgia, Hawaii, Michigan, New Hampshire, Rhode Island, and Vermont.

Figure 5 shows the average monthly cost of ownership during the finance term by vehicle across the U.S.

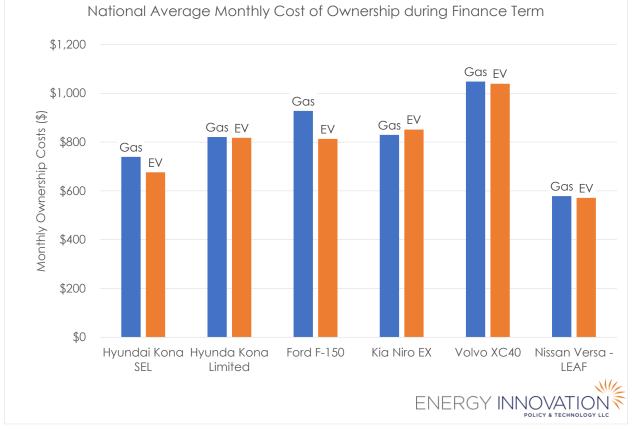


Figure 5: National Average Monthly Cost of Ownership during Finance Term

The Importance of Federal Tax Credits

The federal government offers a \$7,500 tax credit for EVs sold by qualifying manufacturers that have sold fewer than 200,000 EVs. Tesla and General Motors already passed this threshold, and their vehicles are no longer eligible for the tax credit. Toyota, Ford, and Nissan are all likely to pass this threshold in 2022 or early 2023.²⁴ For example, Toyota recently announced it will pass the threshold this year and the tax credit will soon be phased out for its vehicles.²⁵ Federal tax credits are critical to maintaining competitive EV financing and ownership costs during the financing term. Without them, purchasing an EV becomes significantly more expensive on a monthly basis.

			Мо	nthly Ownersh	ip Cost d	uring Financi	ng Term with	nout Federal Ta	x Credits			
States	2022 Hy	undai Kona		lyundai Kona	2022	Ford F-150		Kia Niro	2022 V	olvo XC40	2022 Nissan	
States	SEL	Electric SEL		Electric Limited	XL	Lightning Pro		EV EX Premium		Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$724	\$790	\$804	\$930	\$905	\$923	\$816	\$964	\$1,027	\$1,149	\$568	\$686
Alaska	\$736	\$782	\$813	\$917	\$927	\$935	\$813	\$952	\$1,035	\$1,140	\$575	\$685
Arizona	\$755	\$780	\$836	\$923	\$950	\$914	\$841	\$957	\$1,068	\$1,144	\$588	\$675
Arkansas	\$731	\$798	\$814	\$942	\$914	\$929	\$828	\$976	\$1,041	\$1,163	\$573	\$691
California	\$802	\$794	\$885	\$939	\$1,021	\$955	\$876	\$975	\$1,129	\$1,177	\$620	\$689
Colorado	\$725	\$737	\$804	\$876	\$907	\$869	\$814	\$909	\$1,026	\$1,092	\$568	\$634
Connecticut	\$743	\$784	\$825	\$928	\$932	\$942	\$835	\$964	\$1,055	\$1,162	\$581	\$680
Delaware	\$721	\$715	\$798	\$850	\$905	\$842	\$804	\$881	\$1,017	\$1,059	\$565	\$615
District of Columbia	\$754	\$785	\$836	\$928	\$949	\$920	\$842	\$962	\$1,068	\$1,150	\$588	\$679
Florida	\$742	\$781	\$824	\$924	\$930	\$913	\$834	\$958	\$1,053	\$1,145	\$580	\$675
Georgia	\$719	\$789	\$799	\$930	\$897	\$921	\$813	\$963	\$1,021	\$1,147	\$565	\$685
Hawaii	\$772	\$844	\$853	\$985	\$979	\$1,028	\$848	\$1,023	\$1,087	\$1,230	\$600	\$746
Idaho	\$752	\$787	\$834	\$930	\$945	\$914	\$840	\$963	\$1,065	\$1,148	\$587	\$680
Illinois	\$755	\$795	\$837	\$938	\$950	\$931	\$843	\$972	\$1,069	\$1,161	\$589	\$688
Indiana	\$744	\$804	\$827	\$948	\$933	\$941	\$838	\$983	\$1,057	\$1,173	\$582	\$697
lowa	\$733	\$789	\$815	\$932	\$917	\$923	\$828	\$966	\$1,042	\$1,154	\$574	\$683
Kansas	\$731	\$795	\$814	\$939	\$914	\$930	\$828	\$973	\$1,041	\$1,162	\$573	\$688
Kentucky	\$731	\$779	\$813	\$922	\$914	\$911	\$827	\$956	\$1,040	\$1,142	\$573	\$673
Louisiana	\$726	\$769	\$807	\$910	\$907	\$898	\$819	\$943	\$1,030	\$1,126	\$569	\$664
Maine	\$743	\$767	\$824	\$909	\$932	\$912	\$833	\$944	\$1,053	\$1,136	\$581	\$662
Maryland	\$745	\$785	\$827	\$928	\$935	\$920	\$836	\$962	\$1,057	\$1,150	\$582	\$679
Massachusetts	\$745	\$783	\$827	\$927	\$935	\$944	\$837	\$963	\$1,057	\$1,163	\$582	\$680
Michigan	\$745	\$807	\$828	\$951	\$936	\$954	\$836	\$986	\$1,057	\$1,179	\$583	\$703
Minnesota	\$736	\$797	\$819	\$941	\$921	\$934	\$830	\$975	\$1,037	\$1,165	\$585	\$690
Mississippi	\$733	\$798	\$816	\$943	\$917	\$931	\$831	\$977	\$1,044	\$1,165	\$575	\$691
Missouri	\$722	\$776	\$803	\$916	\$902	\$905	\$816	\$949	\$1,044	\$1,133	\$567	\$671
Montana	\$719	\$745	\$796	\$880	\$901	\$869	\$802	\$912	\$1,020	\$1,088	\$563	\$645
Nebraska	\$732	\$781	\$814	\$923	\$916	\$809	\$802	\$956	\$1,013	\$1,088	\$574	\$674
Nevada	\$777	\$781	\$860	\$923	\$984	\$910	\$859	\$962	\$1,040	\$1,141	\$604	\$677
	\$718	\$784		\$928		\$910		\$962				\$676
New Hampshire	\$748	\$692	\$795 \$831	\$908 \$827	\$900 \$939	\$920	\$802 \$839	\$942	\$1,013 \$1,061	\$1,128 \$1,042	\$563 \$584	\$594
New Jersey	\$736			\$923	\$939	\$850 \$917		\$957			\$576	\$676
New Mexico		\$781	\$818			-	\$828		\$1,044	\$1,144		
New York	\$741	\$766	\$822	\$907	\$931	\$916	\$828	\$942	\$1,048	\$1,134	\$579	\$664
North Carolina North Dakota	\$729 \$731	\$783 \$781	\$810 \$812	\$925 \$923	\$912 \$914	\$913 \$910	\$822 \$824	\$958 \$956	\$1,035 \$1,037	\$1,142	\$572 \$573	\$678 \$676
				-						\$1,140	· · · ·	
Ohio	\$735	\$799	\$817	\$941	\$920	\$933	\$829	\$975	\$1,044	\$1,163	\$576	\$693
Oklahoma	\$724	\$773	\$805	\$914	\$905	\$905	\$818	\$948	\$1,029	\$1,133	\$568	\$669
Oregon	\$737	\$734	\$814	\$869	\$929	\$858	\$814	\$900	\$1,036	\$1,076	\$575	\$633
Pennsylvania	\$750	\$776	\$832	\$919	\$942	\$913	\$839	\$954	\$1,062	\$1,143	\$585	\$670
Rhode Island	\$747	\$820	\$830	\$965	\$937	\$980	\$840	\$1,001	\$1,061	\$1,202	\$584	\$716
South Carolina	\$732	\$790	\$814	\$933	\$915	\$925	\$827	\$967	\$1,040	\$1,155	\$574	\$684
South Dakota	\$731	\$773	\$812	\$914	\$915	\$905	\$822	\$948	\$1,037	\$1,132	\$573	\$669
Tennessee	\$738	\$792	\$821	\$936	\$924	\$923	\$834	\$970	\$1,050	\$1,158	\$578	\$684
Texas	\$732	\$748	\$815	\$891	\$916	\$881	\$828	\$925	\$1,042	\$1,113	\$574	\$641
Utah	\$749	\$777	\$830	\$919	\$943	\$905	\$835	\$952	\$1,060	\$1,135	\$585	\$671
Vermont	\$746	\$805	\$828	\$948	\$936	\$956	\$836	\$983	\$1,058	\$1,179	\$583	\$700
Virginia	\$732	\$777	\$812	\$918	\$917	\$908	\$822	\$951	\$1,037	\$1,136	\$573	\$673
Washington	\$763	\$754	\$846	\$889	\$963	\$875	\$849	\$920	\$1,080	\$1,095	\$594	\$653
West Virginia	\$738	\$798	\$820	\$941	\$925	\$931	\$831	\$975	\$1,048	\$1,162	\$578	\$692
Wisconsin	\$731	\$792	\$813	\$934	\$915	\$930	\$824	\$968	\$1,038	\$1,156	\$573	\$687
Wyoming	\$734	\$784	\$814	\$924	\$920	\$912	\$823	\$957	\$1,039	\$1,140	\$574	\$679

Table 4 shows monthly cost comparisons without any federal tax credits, making EVs considerably more expensive on a monthly basis than gasoline counterparts.

	2022 ലം	undai Kona		yundai Kona		Ford F-150		nout Federal Ta: Kia Niro		olvo XC40	2022 Nissan	
States	SEL	Electric SEL		Electric Limited	2022 XL	Lightning Pro		EV EX Premium		Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$724	\$790	\$804	\$930	\$905	\$923	\$816	\$964	\$1,027	\$1,149	\$568	\$68
Alaska	\$736	\$782	\$813	\$930 \$917	\$903	\$935	\$810	\$952	\$1,027	\$1,149	\$575	\$68
Arizona	\$755	\$780	\$836	\$923	\$950	\$914	\$841	\$957	\$1,055	\$1,140	\$588	\$67
Arkansas	\$733	\$798	\$830	\$923	\$930	\$914	\$828	\$976	\$1,008	\$1,144	\$573	\$69
California	\$802	\$794	\$885	\$939	\$1,021	\$955	\$876	\$975	\$1,041	\$1,103	\$620	\$68
Colorado	\$725	\$737	\$804	\$876	\$907	\$869	\$870	\$909	\$1,026	\$1,092	\$568	\$63
Connecticut	\$743	\$784	\$825	\$928	\$932	\$942	\$835	\$964	\$1,020	\$1,162	\$581	\$68
Delaware	\$721	\$715	\$798	\$850	\$905	\$842	\$804	\$881	\$1,033	\$1,059	\$565	\$61
District of Columbia	\$754	\$785	\$836	\$928	\$949	\$920	\$842	\$962	\$1,017	\$1,055	\$588	\$67
Florida	\$742	\$781	\$824	\$924	\$930	\$913	\$834	\$958	\$1,053	\$1,145	\$580	\$67
Georgia	\$719	\$789	\$799	\$930	\$897	\$921	\$813	\$963	\$1,033	\$1,143	\$565	\$68
Hawaii	\$772	\$844	\$853	\$985	\$979	\$1,028	\$848	\$1,023	\$1,087	\$1,230	\$600	\$74
Idaho	\$752	\$787	\$834	\$930	\$945	\$914	\$840	\$963	\$1,065	\$1,148	\$587	\$68
Illinois	\$755	\$795	\$834	\$938	\$950	\$931	\$840	\$972	\$1,069	\$1,140	\$589	\$68
Indiana	\$744	\$804	\$837	\$948	\$933	\$941	\$838	\$983	\$1,005	\$1,101	\$585	\$693
lowa	\$733	\$789	\$815	\$932	\$917	\$923	\$828	\$966	\$1,037	\$1,154	\$574	\$683
Kansas	\$731	\$795	\$814	\$939	\$914	\$930	\$828	\$973	\$1,041	\$1,162	\$573	\$68
Kentucky	\$731	\$779	\$813	\$922	\$914	\$911	\$827	\$956	\$1,041	\$1,142	\$573	\$673
Louisiana	\$726	\$769	\$807	\$910	\$907	\$898	\$819	\$943	\$1,030	\$1,126	\$569	\$664
Maine	\$743	\$767	\$824	\$909	\$932	\$912	\$833	\$944	\$1,053	\$1,136	\$581	\$662
Maryland	\$745	\$785	\$827	\$928	\$935	\$920	\$836	\$962	\$1,057	\$1,150	\$582	\$67
Massachusetts	\$745	\$783	\$827	\$927	\$935	\$944	\$837	\$963	\$1,057	\$1,163	\$582	\$68
Michigan	\$745	\$807	\$828	\$951	\$936	\$954	\$836	\$986	\$1,057	\$1,179	\$583	\$70
Minnesota	\$736	\$797	\$819	\$941	\$921	\$934	\$832	\$975	\$1,047	\$1,165	\$577	\$690
Mississippi	\$733	\$798	\$816	\$943	\$917	\$931	\$831	\$977	\$1,044	\$1,165	\$575	\$69:
Missouri	\$722	\$776	\$803	\$916	\$902	\$905	\$816	\$949	\$1,026	\$1,133	\$567	\$67
Montana	\$719	\$745	\$796	\$880	\$901	\$869	\$802	\$912	\$1,013	\$1,088	\$563	\$64
Nebraska	\$732	\$781	\$814	\$923	\$916	\$910	\$826	\$956	\$1,040	\$1,141	\$574	\$674
Nevada	\$777	\$784	\$860	\$928	\$984	\$916	\$859	\$962	\$1,098	\$1,150	\$604	\$67
New Hampshire	\$718	\$773	\$795	\$908	\$900	\$920	\$802	\$942	\$1,013	\$1,128	\$563	\$67
New Jersey	\$748	\$692	\$831	\$827	\$939	\$830	\$839	\$860	\$1,061	\$1,042	\$584	\$594
New Mexico	\$736	\$781	\$818	\$923	\$923	\$917	\$828	\$957	\$1,044	\$1,144	\$576	\$67
New York	\$741	\$766	\$822	\$907	\$931	\$916	\$828	\$942	\$1,048	\$1,134	\$579	\$664
North Carolina	\$729	\$783	\$810	\$925	\$912	\$913	\$822	\$958	\$1,035	\$1,142	\$572	\$678
North Dakota	\$731	\$781	\$812	\$923	\$914	\$910	\$824	\$956	\$1,037	\$1,140	\$573	\$67
Ohio	\$735	\$799	\$817	\$941	\$920	\$933	\$829	\$975	\$1,044	\$1,163	\$576	\$693
Oklahoma	\$724	\$773	\$805	\$914	\$905	\$905	\$818	\$948	\$1,029	\$1,133	\$568	\$669
Oregon	, \$737	\$734	\$814	\$869	\$929	\$858	\$814	\$900	\$1,036	\$1,076	\$575	\$63
Pennsylvania	\$750	\$776	\$832	\$919	\$942	\$913	\$839	\$954	\$1,062	\$1,143	\$585	\$670
Rhode Island	\$747	\$820	\$830	\$965	\$937	\$980	\$840	\$1,001	\$1,061	\$1,202	\$584	\$71
South Carolina	\$732	\$790	\$814	\$933	\$915	\$925	\$827	\$967	\$1,040	\$1,155	\$574	\$684
South Dakota	\$731	\$773	\$812	\$914	\$915	\$905	\$822	\$948	\$1,037	\$1,132	\$573	\$669
Tennessee	\$738	\$792	\$821	\$936	\$924	\$923	\$834	\$970	\$1,050	\$1,158	\$578	\$68
Texas	\$732	\$748	\$815	\$891	\$916	\$881	\$828	\$925	\$1,042	\$1,113	\$574	\$64
Utah	\$749	\$777	\$830	\$919	\$943	\$905	\$835	\$952	\$1,060	\$1,135	\$585	\$67
Vermont	\$746	\$805	\$828	\$948	\$936	\$956	\$836	\$983	\$1,058	\$1,179	\$583	\$70
Virginia	\$732	\$777	\$812	\$918	\$917	\$908	\$822	\$951	\$1,037	\$1,136	\$573	\$67
Washington	\$763	\$754	\$846	\$889	\$963	\$875	\$849	\$920	\$1,080	\$1,095	\$594	\$65
West Virginia	\$738	\$798	\$820	\$941	\$925	\$931	\$831	\$975	\$1,048	\$1,162	\$578	\$69
Wisconsin	\$731	\$792	\$813	\$934	\$915	\$930	\$824	\$968	\$1,038	\$1,156	\$573	\$68
Wyoming	\$734	\$784	\$814	\$924	\$920	\$912	\$823	\$957	\$1,039	\$1,140	\$574	\$67

Table 4: Monthly Ownership Costs by Vehicle without Federal Tax Credits

Extending and enhancing the EV tax credit could make even more EVs economic during a six-year loan term. For example, Table 5 below shows how the economics would change with a \$10,000 federal tax credit, where only three states have any vehicles in the analysis that aren't economic, confined to the Kia Niro with a 50 MPG fuel efficiency gasoline version.

			Mont	hly Ownership	Cost dur	ing Financing	Term with \$	10,000 Federal	Tax Credit			
Chattan	2022 Hy	undai Kona	2022 H	lyundai Kona	2022	Ford F-150	2022	Kia Niro	2022 \	/olvo XC40	2022 Nissan	
States	SEL	Electric SEL	Limited	Electric Limited	XL	Lightning Pro	EX Premium	EV EX Premium	Inscription	Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$724	\$651	\$804	\$791	\$905	\$784	\$816	\$825	\$1,027	\$1,010	\$568	\$547
Alaska	\$736	\$643	\$813	\$778	\$927	\$796	\$813	\$813	\$1,035	\$1,002	\$575	\$546
Arizona	\$755	\$642	\$836	\$784	\$950	\$775	\$841	\$818	\$1,068	\$1,005	\$588	\$536
Arkansas	\$731	\$659	\$814	\$803	\$914	\$791	\$828	\$837	\$1,041	\$1,024	\$573	\$552
California	\$802	\$655	\$885	\$800	\$1,021	\$816	\$876	\$836	\$1,129	\$1,038	\$620	\$550
Colorado	\$725	\$598	\$804	\$737	\$907	\$730	\$814	\$770	\$1,026	\$953	\$568	\$495
Connecticut	\$743	\$645	\$825	\$789	\$932	\$803	\$835	\$825	\$1,055	\$1,024	\$581	\$541
Delaware	\$721	\$576	\$798	\$711	\$905	\$703	\$804	\$743	\$1,017	\$920	\$565	\$476
District of Columbia	\$754	\$646	\$836	\$789	\$949	\$781	\$842	\$823	\$1,068	\$1,011	\$588	\$540
Florida	\$742	\$642	\$824	\$785	\$930	\$775	\$834	\$819	\$1,053	\$1,006	\$580	\$536
Georgia	\$719	\$651	\$799	\$791	\$897	\$783	\$813	\$824	\$1,021	\$1,009	\$565	\$546
Hawaii	\$772	\$705	\$853	\$846	\$979	\$889	\$848	\$884	\$1,087	\$1,091	\$600	\$607
Idaho	\$752	\$648	\$834	\$791	\$945	\$776	\$840	\$824	\$1,065	\$1,009	\$587	\$541
Illinois	\$755	\$656	\$837	\$799	\$950	\$792	\$843	\$833	\$1,069	\$1,022	\$589	\$549
Indiana	\$744	\$665	\$827	\$809	\$933	\$802	\$838	\$844	\$1,005	\$1,022	\$582	\$558
lowa	\$733	\$650	\$815	\$793	\$917	\$784	\$828	\$827	\$1,042	\$1,015	\$574	\$544
Kansas	\$731	\$656	\$814	\$800	\$914	\$792	\$828	\$834	\$1,042	\$1,023	\$573	\$549
Kentucky	\$731	\$640	\$813	\$783	\$914	\$772	\$827	\$817	\$1,040	\$1,004	\$573	\$534
Louisiana	\$726	\$630	\$807	\$771	\$907	\$759	\$819	\$804	\$1,030	\$988	\$569	\$525
Maine	\$743	\$628	\$824	\$770	\$932	\$773	\$833	\$805	\$1,050	\$997	\$581	\$523
Maryland	\$745	\$646	\$824	\$789	\$935	\$781	\$835	\$823	\$1,053	\$1,011	\$582	\$540
Massachusetts	\$745	\$645	\$827	\$788	\$935	\$805	\$830	\$825	\$1,057	\$1,011	\$582	\$540
											· · · ·	
Michigan	\$745 \$736	\$669	\$828 \$819	\$812 \$802	\$936 \$921	\$815 \$795	\$836 \$832	\$847 \$837	\$1,057 \$1,047	\$1,040 \$1,027	\$583 \$577	\$564 \$551
Minnesota	\$738	\$658	\$819	\$802	\$921	\$795	\$831	\$838	\$1,047	\$1,027	\$575	
Mississippi	\$733	\$659 \$637	\$816	\$804 \$777	\$917	\$792	\$831 \$816	\$838 \$810	. ,	\$1,026	\$567	\$552 \$532
Missouri				-	\$902		\$810	\$773	\$1,026	\$994	· · · · ·	\$506
Montana	\$719 \$732	\$606	\$796	\$741 \$784		\$731			\$1,013	-	\$563	
Nebraska		\$642	\$814	-	\$916	\$771	\$826	\$817	\$1,040	\$1,002	\$574	\$535
Nevada	\$777	\$645	\$860	\$789	\$984	\$777	\$859	\$823	\$1,098	\$1,011	\$604	\$538
New Hampshire	\$718	\$634	\$795	\$769	\$900	\$781	\$802	\$803	\$1,013	\$989	\$563	\$537
New Jersey	\$748	\$553	\$831	\$689	\$939	\$691	\$839	\$721	\$1,061	\$903	\$584	\$455
New Mexico	\$736	\$642	\$818	\$784	\$923	\$778	\$828	\$818	\$1,044	\$1,006	\$576	\$537
New York	\$741	\$628	\$822	\$768	\$931	\$777	\$828	\$803	\$1,048	\$995	\$579	\$525
North Carolina	\$729	\$644	\$810	\$786	\$912	\$774	\$822	\$819	\$1,035	\$1,003	\$572	\$539
North Dakota	\$731	\$643	\$812	\$784	\$914	\$771	\$824	\$818	\$1,037	\$1,001	\$573	\$537
Ohio	\$735	\$660	\$817	\$803	\$920	\$794	\$829	\$837	\$1,044	\$1,024	\$576	\$554
Oklahoma	\$724	\$634	\$805	\$776	\$905	\$766	\$818	\$809	\$1,029	\$994	\$568	\$530
Oregon	\$737	\$595	\$814	\$730	\$929	\$719	\$814	\$761	\$1,036	-	\$575	\$495
Pennsylvania	\$750	\$637	\$832	\$781	\$942	\$775	\$839	\$815	\$1,062	\$1,004	\$585	\$532
Rhode Island	\$747	\$681	\$830	\$826	\$937	\$841	\$840	\$863	\$1,061	\$1,063	\$584	\$577
South Carolina	\$732	\$651	\$814	\$794	\$915	\$786	\$827	\$828	\$1,040	\$1,016	\$574	\$545
South Dakota	\$731	\$634	\$812	\$776	\$915	\$766	\$822	\$809	\$1,037	\$994	\$573	\$530
Tennessee	\$738	\$653	\$821	\$798	\$924	\$785	\$834	\$831	\$1,050		\$578	\$545
Texas	\$732	\$609	\$815	\$752	\$916	\$742	\$828	\$786	\$1,042	\$974	\$574	\$502
Utah	\$749	\$638	\$830	\$780	\$943	\$766	\$835	\$813	\$1,060	\$996	\$585	\$533
Vermont	\$746	\$666	\$828	\$809	\$936	\$817	\$836	\$845	\$1,058	\$1,040	\$583	\$561
Virginia	\$732	\$638	\$812	\$779	\$917	\$769	\$822	\$812	\$1,037	\$997	\$573	\$534
Washington	\$763	\$615	\$846	\$750	\$963	\$736	\$849	\$781	\$1,080	\$956	\$594	\$514
West Virginia	\$738	\$659	\$820	\$802	\$925	\$792	\$831	\$836	\$1,048	\$1,023	\$578	\$553
Wisconsin	\$731	\$653	\$813	\$795	\$915	\$791	\$824	\$829	\$1,038	\$1,017	\$573	\$549
Wyoming	\$734	\$645	\$814	\$785	\$920	\$773	\$823	\$818	\$1,039	\$1,001	\$574	\$540

Table 5: Monthly Ownership Costs by Vehicle with a \$10,000 Federal Tax Credit

Annual Ownership Costs

Over the course of a year, savings can add up to thousands of dollars. The Hyundai Electric SEL is nearly \$800 less a year than the gasoline version, and the Ford F-150 Lightning Pro is nearly \$1,400 less a year. Though it varies by vehicle make, model, and state, consumers purchasing an EV instead of a gasoline model frequently begin accruing substantial savings from their day the car is driven off the lot. Table 6 shows annual ownership costs by vehicle and state.

			·	Anr	ual Own	ership Cost d	uring Financ	ing Term				
Chattan	2022 Hy	undai Kona	2022 H	lyundai Kona	2022	Ford F-150	2022	Kia Niro	2022 V	olvo XC40	2022 Nissan	
States	SEL	Electric SEL	Limited	Electric Limited	XL	Lightning Pro	EX Premium	EV EX Premium	Inscription	Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$8,683	\$8,229	\$9,650	\$9,914	\$10,855	\$9,828	\$9,795	\$10,315	\$12,322	\$12,533	\$6,813	\$6,982
Alaska	\$8,830	\$8,137	\$9,759	\$9,758	\$11,125	\$9,975	\$9,759	\$10,169	\$12,416	\$12,435	\$6,896	\$6,972
Arizona	\$9,054	\$8,115	\$10,037	\$9,826	\$11,402	\$9,718	\$10,091	\$10,232	\$12,814	\$12,475	\$7,061	\$6,846
Arkansas	\$8,774	\$8,327	\$9,766	\$10,052	\$10,966	\$9,903	\$9,938	\$10,458	\$12,489	\$12,702	\$6,881	\$7,042
California	\$9,624	\$8,275	\$10,623	\$10,012	\$12,252	\$10,209	\$10,518	\$10,454	\$13,551	\$12,868	\$7,438	\$7,017
Colorado	\$8,696	\$7,591	\$9,652	\$9,258	\$10,887	\$9,178	\$9,768	\$9,655	\$12,314	\$11,851	\$6,818	\$6,358
Connecticut	\$8,913	\$8,159	\$9,903	\$9,882	\$11,179	\$10,052	\$10,024	\$10,317	\$12,657	\$12,700	\$6,971	\$6,909
Delaware	\$8,653	\$7,324	\$9,581	\$8,945	\$10,855	\$8,859	\$9,644	\$9,328	\$12,198	\$11,459	\$6,780	\$6,127
District of Columbia	\$9,048	\$8,165	\$10,034	\$9,882	\$11,388	\$9,790	\$10,100	\$10,291	\$12,815	\$12,550	\$7,058	\$6,892
Florida	\$8,901	\$8,121	\$9,888	\$9,838	\$11,165	\$9,712	\$10,004	\$10,244	\$12,635	\$12,487	\$6,962	\$6,844
Georgia	\$8,626	\$8,223	\$9,593	\$9,908	\$10,769	\$9,808	\$9,759	\$10,308	\$12,252	\$12,519	\$6,776	\$6,974
Hawaii	\$9,268	\$8,879	\$10,236	\$10,564	\$11,747	\$11,089	\$10,178	\$11,022	\$13,043	\$13,512	\$7,195	\$7,697
Idaho	\$9,019	\$8,188		\$9,906	\$11,344	\$9,724	\$10,081	\$10,306	\$12,780	\$12,525	\$7,039	\$6,906
Illinois	\$9,057	\$8,286	\$10,046	\$10,008	\$11,400	\$9,917	\$10,115	\$10,418	\$12,832	\$12,683	\$7,065	\$7,010
Indiana	\$8,926	\$8,395	\$9,922	\$10,129	\$11,191	\$10,042	\$10,054	\$10,542	\$12,687	\$12,825	\$6,981	\$7,110
lowa	\$8,792	\$8,215	\$9,779	\$9,932	\$10,999	\$9,828	\$9,933	\$10,340	\$12,500	\$12,594	\$6,891	\$6,941
Kansas	\$8,776	\$8,290	\$9,768	\$10,016	\$10,968	\$9,915	\$9,939	\$10,426	\$12,491	\$12,692	\$6,882	\$7,011
Kentucky	\$8,774	\$8,101	\$9,761	\$9,818	\$10,971	\$9,677	\$9,921	\$10,223	\$12,478	\$12,459	\$6,879	\$6,823
Louisiana	\$8,707	\$7,978	\$9,679	\$9,671	\$10,887	\$9,521	\$9,826	\$10,068	\$12,362	\$12,267	\$6,830	\$6,719
Maine	\$8,911	\$7,952	\$9,893	\$9,662	\$11,185	\$9,689	\$9,994	\$10,080	\$12,636	\$12,381	\$6,967	\$6,699
Maryland	\$8,940	\$8,165	\$9,927	\$9,883	\$11,224	\$9,790	\$10,030	\$10,292	\$12,682	\$12,550	\$6,987	\$6,893
Massachusetts	\$8,941	\$8,152	\$9,930	\$9,873	\$11,222	\$10,076	\$10,038	\$10,311	\$12,689	\$12,706	\$6,989	\$6,907
Michigan	\$8,944	\$8,439	\$9,931	\$10,157	\$11,230	\$10,197	\$10,032	\$10,578	\$12,687	\$12,895	\$6,990	\$7,180
Minnesota	\$8,831	\$8,310	\$9,826	\$10,042	\$11,047	\$9,954	\$9,987	\$10,575	\$12,567	\$12,735	\$6,919	\$7,027
Mississippi	\$8,800	\$8,326	\$9,796	\$10,042	\$10,998	\$9,921	\$9,971	\$10,469	\$12,531	\$12,733	\$6,899	\$7,036
Missouri	\$8,667	\$8,056	\$9,637	\$9,745	\$10,828	\$9,610	\$9,793	\$10,142	\$12,308	\$12,343	\$6,803	\$6,801
Montana	\$8,622	\$7,689	\$9,551	\$9,310	\$10,808	\$9,184	\$9,623	\$9,689	\$12,508	\$11,802	\$6,760	\$6,488
Nebraska	\$8,781	\$8,116	\$9,763	\$9,826	\$10,988	\$9,666	\$9,910	\$10,226	\$12,100	\$12,444	\$6,882	\$6,843
Nevada	\$9,328	\$8,110	\$10,323	\$9,889	\$11,806	\$9,743	\$10,311	\$10,226	\$12,470	\$12,550	\$7,244	\$6,868
New Hampshire	\$8,617	\$8,029	\$9,546	\$9,650	\$10,800	\$9,785	\$9,620	\$10,054	\$12,154	\$12,283	\$6,757	\$6,856
New Jersey	\$8,973	\$8,029	\$9,966	\$8,679	\$10,800	\$8,708	\$9,020	\$9,073	\$12,134	\$12,283	\$7,011	\$5,873
New Mexico	\$8,833	\$8,126	\$9,812	\$9,829	\$11,208	\$9,755	\$9,931	\$10,236	\$12,532	\$12,483	\$6,915	\$6,866
New York	\$8,891	\$7,947	\$9,812	\$9,633	\$11,173	\$9,739	\$9,931	\$10,250	\$12,532	\$12,355	\$6,949	\$6,721
North Carolina	\$8,750	\$8,147	\$9,724	\$9,844	\$10,948	\$9,707	\$9,864	\$10,031	\$12,373	\$12,355	\$6,859	\$6,885
North Dakota	\$8,768	\$8,127	\$9,745	\$9,828	\$10,948	\$9,670	\$9,884	\$10,243	\$12,449	\$12,433	\$6,872	\$6,860
Ohio	\$8,821	\$8,334	\$9,805	\$10,048	\$11,046	\$9,946	\$9,884	\$10,227	\$12,449	\$12,434	\$6,909	\$7,064
		\$8,030		\$10,048								
Oklahoma Oregon	\$8,690 \$8,845	\$8,030 \$7,552	\$9,663 \$9,773	\$9,724 \$9,173	\$10,861 \$11,147	\$9,611 \$9,049	\$9,817 \$9,769	\$10,124 \$9,553	\$12,343 \$12,434	\$12,341 \$11,667	\$6,820 \$6,906	\$6,774 \$6,351
-	\$8,994	\$7,552 \$8,066	\$9,773	\$9,175 \$9,784	\$11,147	\$9,049 \$9,711	\$9,769	\$9,555 \$10,194	\$12,434 \$12,749	\$11,667	\$7,023	\$6,795
Pennsylvania Rhode Island	\$8,994	\$8,066 \$8,594	\$9,981 \$9,961	\$9,784 \$10,328	\$11,306	\$9,711 \$10,509	\$10,065	\$10,194 \$10,767	\$12,749 \$12,734	\$12,462 \$13,169	\$7,023 \$7,007	\$7,338
South Carolina	\$8,780	\$8,227	\$9,961 \$9,767	\$10,328 \$9,944	\$10,980	\$10,509 \$9,853	\$10,079 \$9,925	\$10,787	\$12,734 \$12,485	\$13,109	\$6,883	\$6,954
		\$8,227 \$8,030	\$9,767 \$9,743	\$9,944 \$9,723	\$10,980						\$6,883	\$6,774
South Dakota	\$8,770					\$9,610	\$9,869	\$10,123	\$12,441	\$12,340		\$6,961
Tennessee	\$8,855	\$8,253	\$9,851	\$9,987	\$11,082	\$9,831	\$10,007	\$10,395	\$12,599	\$12,646	\$6,935	
Texas	\$8,789	\$7,723	\$9,778	\$9,444 \$9,772	\$10,991	\$9,318	\$9,939	\$9,851	\$12,502	\$12,100	\$6,889	\$6,443
Utah	\$8,988	\$8,074	\$9,964	\$9,773	\$11,311	\$9,605	\$10,023	\$10,170	\$12,717	\$12,370	\$7,015	\$6,808
Vermont	\$8,947	\$8,408	\$9,933	\$10,125	\$11,234	\$10,218	\$10,034	\$10,552	\$12,690	\$12,893	\$6,992	\$7,155
Virginia	\$8,779	\$8,076	\$9,749	\$9,766	\$10,998	\$9,650	\$9,868	\$10,165	\$12,447	\$12,376	\$6,877	\$6,822
Washington	\$9,161	\$7,793	\$10,153	\$9,414	\$11,555	\$9,253	\$10,191	\$9,790	\$12,965	\$11,887	\$7,133	\$6,588
West Virginia	\$8,855	\$8,326	\$9,842	\$10,044	\$11,095	\$9,922	\$9,974	\$10,450	\$12,578	\$12,696	\$6,932	\$7,051
Wisconsin	\$8,773	\$8,254	\$9,750	\$9,956	\$10,981	\$9,910	\$9,888	\$10,364	\$12,455	\$12,622	\$6,875	\$6,999
Wyoming	\$8,803	\$8,155	\$9,771	\$9,840	\$11,039	\$9,697	\$9,874	\$10,235	\$12,471	\$12,428	\$6,892	\$6,902

Table 6: Annual Ownership Costs by Vehicle

Total Cost of Ownership

The analysis above focuses on monthly costs during the financing term, which includes monthly loan repayment. However, after a vehicle loan is paid off, monthly savings for EVs grow dramatically. For example, Table 7 below shows monthly ownership costs after loan repayment. At this point, consumers save on average anywhere from \$1,500 to \$2,000 per year, with some vehicle-state combinations as high as \$3,000 per year.

						nership Cost		-				
States	-	undai Kona		lyundai Kona	2022 Ford F-150		2022 Kia Niro			olvo XC40	2022 Nissan	
	SEL	Electric SEL		Electric Limited	XL	Lightning Pro		EV EX Premium		Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$363	\$257	\$370	\$267	\$443	\$298	\$327	\$273	\$416	\$300	\$307	\$252
Alaska	\$391	\$272	\$398	\$282	\$486	\$336	\$345	\$290	\$451	\$328	\$326	\$269
Arizona	\$388	\$238	\$394	\$249	\$481	\$278	\$343	\$254	\$447	\$281	\$324	\$234
Arkansas	\$361	\$251	\$368	\$261	\$440	\$287	\$326	\$267	\$414	\$292	\$306	\$246
California	\$429	\$281	\$435	\$291	\$543	\$346	\$370	\$299	\$497	\$337	\$350	\$279
Colorado	\$369	\$245	\$375	\$255	\$451	\$285	\$331	\$260	\$423	\$288	\$311	\$240
Connecticut	\$373	\$269	\$380	\$279	\$458	\$332	\$334	\$287	\$428	\$324	\$314	\$267
Delaware	\$376	\$238	\$383	\$249	\$463	\$278	\$336	\$254	\$432	\$281	\$316	\$234
District of Columbia	\$386	\$240	\$392	\$251	\$478	\$281	\$342	\$256	\$444	\$284	\$322	\$236
Florida	\$374	\$237	\$380	\$247	\$459	\$275	\$334	\$252	\$429	\$278	\$314	\$232
Georgia	\$359	\$256	\$365	\$267	\$436	\$296	\$324	\$272	\$410	\$299	\$304	\$252
Hawaii	\$412	\$311	\$418	\$321	\$518	\$403	\$359	\$332	\$476	\$382	\$339	\$312
Idaho	\$383	\$242	\$390	\$253	\$474	\$276	\$340	\$257	\$441	\$282	\$321	\$237
Illinois	\$386	\$249	\$392	\$259	\$477	\$290	\$342	\$265	\$444	\$293	\$322	\$244
Indiana	\$372	\$254	\$378	\$264	\$456	\$296	\$333	\$270	\$427	\$298	\$313	\$249
lowa	\$365	\$245	\$371	\$255	\$445	\$284	\$328	\$260	\$418	\$287	\$308	\$240
Kansas	\$361	\$248	\$368	\$258	\$440	\$288	\$326	\$264	\$414	\$291	\$306	\$243
Kentucky	\$363	\$235	\$369	\$245	\$443	\$272	\$327	\$251	\$416	\$276	\$307	\$230
Louisiana	\$364	\$233	\$370	\$244	\$444	\$269	\$327	\$249	\$417	\$274	\$308	\$228
Maine	\$376	\$253	\$383	\$263	\$463	\$304	\$336	\$270	\$432	\$302	\$316	\$250
Maryland	\$377	\$240	\$383	\$251	\$464	\$281	\$336	\$256	\$433	\$284	\$316	\$236
Massachusetts	\$376	\$273	\$382	\$283	\$463	\$338	\$335	\$291	\$432	\$329	\$316	\$271
Michigan	\$377	\$263	\$384	\$273	\$465	\$315	\$336	\$280	\$433	\$312	\$317	\$260
Minnesota	\$364	\$248	\$371	\$258	\$445	\$289	\$328	\$264	\$418	\$291	\$308	\$243
Mississippi	\$361	\$248	\$368	\$258	\$440	\$286	\$326	\$264	\$414	\$290	\$306	\$243
Missouri	\$361	\$241	\$367	\$251	\$440	\$278	\$326	\$257	\$413	\$282	\$306	\$236
Montana	\$374	\$234	\$380	\$244	\$459	\$270	\$334	\$250	\$429	\$275	\$314	\$229
Nebraska	\$366	\$239	\$372	\$249	\$447	\$274	\$329	\$254	\$419	\$279	\$309	\$234
Nevada	\$406	\$235	\$412	\$245	\$508	\$272	\$355	\$250	\$469	\$276	\$335	\$230
New Hampshire	\$374	\$263	\$380	\$273	\$459	\$320	\$334	\$280	\$429	\$315	\$314	\$260
New Jersey	\$377	\$251	\$384	\$261	\$465	\$300	\$336	\$268	\$433	\$299	\$317	\$247
New Mexico	\$371	\$242	\$378	\$252	\$456	\$284	\$332	\$258	\$426	\$286	\$313	\$237
New York	\$381	\$261	\$387	\$271	\$470	\$318	\$338	\$279	\$438	\$313	\$319	\$258
North Carolina	\$366	\$246	\$372	\$256	\$447	\$283	\$329	\$261	\$419	\$287	\$309	\$241
North Dakota	\$366	\$243	\$373	\$253	\$448	\$278	\$329	\$258	\$420	\$283	\$310	\$237
Ohio	\$368	\$256	\$374	\$266	\$450	\$296	\$330	\$272	\$422	\$299	\$311	\$251
Oklahoma	\$362	\$238	\$368	\$248	\$441	\$276	\$326	\$253	\$415	\$280	\$307	\$233
Oregon	\$392	\$244	\$399	\$254	\$488	\$280	\$346	\$259	\$452	\$284	\$327	\$238
Pennsylvania	\$381	\$243	\$388	\$253	\$471	\$285	\$339	\$259	\$438	\$287	\$319	\$238
Rhode Island	\$375	\$271	\$381	\$281	\$461	\$335	\$335	\$289	\$431	\$326	\$315	\$268
South Carolina	\$364	\$246	\$370	\$256	\$444	\$286	\$327	\$261	\$417	\$289	\$308	\$241
South Dakota	\$369	\$237	\$375	\$248	\$451	\$276	\$331	\$253	\$423	\$280	\$311	\$233
Tennessee	\$366	\$242	\$372	\$252	\$447	\$278	\$329	\$258	\$419	\$283	\$309	\$237
Texas	\$363	\$237	\$370	\$247	\$443	\$275	\$327	\$252	\$416	\$279	\$308	\$232
Utah	\$385	\$239	\$392	\$249	\$477	\$273	\$342	\$254	\$443	\$279	\$322	\$234
Vermont	\$377	\$261	\$384	\$271	\$465	\$317	\$336	\$278	\$434	\$312	\$317	\$258
Virginia	\$370	\$242	\$377	\$253	\$454	\$281	\$332	\$258	\$425	\$284	\$312	\$237
Washington	\$393	\$243	\$400	\$253	\$489	\$276	\$347	\$258	\$453	\$282	\$327	\$237
West Virginia	\$370	\$254	\$376	\$264	\$453	\$292	\$331	\$269	\$424	\$296	\$312	\$249
Wisconsin	\$367	\$253	\$373	\$264	\$449	\$298	\$329	\$270	\$421	\$299	\$310	\$249
Wyoming	\$373	\$251	\$380	\$261	\$459	\$287	\$334	\$266	\$429	\$291	\$314	\$245

Table 7: Monthly Ownership Cost by Vehicle after Loan Repayment

Because EVs are so much more efficient with significantly lower maintenance costs, vehicle TCO over average lifetimes are significantly lower today for EVs than for gasoline vehicles. Table 8 below shows TCO during the vehicle lifetime, estimated at 12 years based on national data,²⁶ and Figure 6 compares average national TCO across each pair of vehicle comparisons.

Even though EVs are often cheaper to own on a monthly basis even during loan repayment and much lower on a TCO basis higher purchase costs can dissuade potential EV owners from purchasing. Better understanding around the costs of EV ownership is needed to overcome this information barrier.

						st of Owners	nıp over 12 Y	rears				
States	2022 H	yundai Kona	2022	Iyundai Kona	2022	Ford F-150		Kia Niro	2022 V	olvo XC40	2022 Nissan	
States	SEL	Electric SEL	Limited	Electric Limited	XL	Lightning Pro	EX Premium	EV EX Premium	Inscription	Recharge Plus	Versa S Xtronic CVT	LEAF
Alabama	\$60,729	\$54,522	\$66,497	\$64,095	\$75,368	\$64,898	\$66,247	\$66,777	\$83,174	\$80,035	\$48,461	\$47,173
Alaska	\$62,443	\$54,350	\$68,016	\$63,597	\$78,212	\$66,760	\$66,699	\$66,411	\$84,845	\$80,281	\$49,515	\$47,503
Arizona	\$63,459	\$53,091	\$69,306	\$62,794	\$79,437	\$63,438	\$68,297	\$65,497	\$86,711	\$78,859	\$50,270	\$45,623
Arkansas	\$61,117	\$54,813	\$67,007	\$64,589	\$75,816	\$64,920	\$66,918	\$67,283	\$83,927	\$80,605	\$48,755	\$47,255
California	\$67,758	\$55,138	\$73,685	\$64,976	\$85,892	\$68,060	\$71,380	\$67,943	\$92,183	\$82,572	\$53,105	\$47,825
Colorado	\$60,982	\$50,409	\$66,697	\$59,893	\$75,819	\$60,730	\$66,229	\$62,554	\$83,366	\$75,706	\$48,609	\$43,13
Connecticut	\$62,237	\$54,102	\$68,120	\$63,867	\$77,532	\$66,731	\$67,624	\$66,793	\$85,289	\$81,226	\$49,485	\$46,82
Delaware	\$61,037	\$48,801	\$66,610	\$58,048	\$76,069	\$58,806	\$65,781	\$60,638	\$83,114	\$73,437	\$48,597	\$41,69
District of Columbia	\$63,353	\$53,408	\$69,219	\$63,143	\$79,253	\$63,919	\$68,295	\$65,867	\$86,625	\$79,332	\$50,208	\$45,92
Florida	\$62,191	\$53,056	\$68,057	\$62,792	\$77,482	\$63,298	\$67,536	\$65,491	\$85,194	\$78,836	\$49,449	\$45,54
Georgia	\$60,281	\$54,489	\$66,049	\$64,062	\$74,686	\$64,750	\$65,954	\$66,733	\$82,624	\$79,940	\$48,168	\$47,12
Hawaii	\$65,378	\$59,515	\$71,147	\$69,088	\$82,453	\$74,745	\$69,283	\$72,224	\$88,897	\$87,641	\$51,497	\$52,68
Idaho	\$63,126	\$53,745	\$68,992	\$63,481	\$78,907	\$63,548	\$68,146	\$66,139	\$86,345	\$79,288	\$50,059	\$46,19
Illinois	\$63,396	\$54,429	\$69,274	\$64,185	\$79,303	\$64,982	\$68,364	\$66,916	\$86,705	\$80,418	\$50,240	\$46,93
Indiana	\$62,251	\$55,202	\$68,166	\$65,019	\$77,515	\$65,854	\$67,742	\$67,771	\$85,378	\$81,372	\$49,504	\$47,66
lowa	\$61,326	\$53,875	\$67,192	\$63,611	\$76,163	\$64,295	\$66,971	\$66,326	\$84,129	\$79,750	\$48,884	\$46,38
Kansas	\$61,130	\$54,416	\$67,021	\$64,192	\$75,836	\$64,910	\$66,926	\$66,922	\$83,944	\$80,416	\$48,764	\$46,89
Kentucky	\$61,182	\$52,899	\$67,048	\$62,635	\$75,944	\$63,021	\$66,877	\$65,322	\$83,953	\$78,614	\$48,790	\$45,379
Louisiana	\$60,862	\$52,229	\$66,652	\$61,838	\$75,546	\$62,143	\$66,409	\$64,484	\$83,388	\$77,569	\$48,555	
Maine	\$62,336	\$52,540	\$68,178	\$62,235	\$77,732	\$63,957	\$67,547	\$65,036	\$85,318	\$78,867	\$49,535	
Maryland	\$62,498	\$53,411	\$68,364	\$63,147	\$77,950	\$63,924	\$67,736	\$65,871	\$85,572	\$79,336	\$49,649	
Massachusetts	\$62,471	\$54,158	\$68,349	\$63,914	\$77,893	\$67,032	\$67,760	\$66,862	\$85,566	\$81,397	\$49,635	
Michigan	\$62,532	\$55,691	\$68,398	\$65,427	\$78,001	\$67,258	\$67,758	\$68,249	\$85,614	\$82,184	\$49,671	
Minnesota	\$61,513	\$54,471	\$67,422	\$64,278	\$76,398	\$65,105	\$67,239	\$67,026	\$84,456	\$80,610	\$49,020	
Mississippi	\$61,249	\$54,659	\$67,164	\$64,476	\$75,988	\$64,896	\$67,087	\$67,189	\$84,145	\$80,605	\$48,850	
Missouri	\$60,575	\$52,971	\$66,354	\$62,562	\$75,121	\$62,979	\$66,184	\$65,213	\$83,010	\$78,324	\$48,364	
Montana	\$60,793	\$50,793	\$66,366	\$60,041	\$75,697	\$60,484	\$65,621	\$62,601	\$82,814	\$75,260	\$48,437	
Nebraska	\$61,308	\$53,200	\$67,149	\$62,895	\$76,164	\$63,133	\$66,875	\$65,558	\$84,052	\$78,728	\$48,864	
Nevada	\$65,465	\$53,183	\$71,373	\$62,988	\$82,422	\$63,355	\$69,816	\$65,692	\$89,318	\$79,068	\$51,601	
New Hampshire	\$60,753	\$53,496	\$66,326	\$62,744	\$75,636	\$65,254	\$65,595	\$65,497	\$82,765	\$79,075	\$48,411	
New Jersey	\$62,680	\$47,593	\$68,576	\$56,840	\$78,190	\$58,513	\$67,959	\$59,515	\$85,864	\$72,721	\$49,778	
New Mexico	\$61,773	\$53,266		\$62,931	\$76,895	\$63,841	\$67,117	\$65,648	\$84,584	\$79,077	\$49,162	
New York	\$62,385	\$52,790	\$68,154	\$62,364	\$77,893	\$64,693	\$67,329	\$65,188	\$85,213	\$79,125	\$49,543	
North Carolina	\$61,160	\$53,647	\$66,965	\$63,282	\$75,983	\$63,690	\$66,654	\$65,944	\$83,788	\$79,108	\$48,755	
North Dakota	\$61,269	\$53,431	\$67,087	\$63,086	\$76,135	\$63,329	\$66,767	\$65,738	\$83,950	\$78,856	\$48,830	
Ohio	\$61,591	\$55,018	\$67,445	\$64,734	\$76,581	\$65,430	\$67,102	\$67,445	\$84,428	\$80,847	\$49,052	
Oklahoma	\$60,723	\$52,632	\$66,516	\$62,245	\$75,332	\$62,844	\$66,327	\$64,920	\$83,223	\$78,141	\$48,466	
Oregon	\$62,560	\$50,369	\$68,133	\$59,616	\$78,390	\$60,079	\$66,775	\$62,178	\$84,989	\$74,846	\$49,591	
Pennsylvania	\$62,929	\$52,894	\$68,795	\$62,629	\$78,606	\$63,563	\$68,018	\$65,368	\$86,103	\$78,903	\$49,931	
Rhode Island	\$62,558	\$56,623	\$68,473	\$66,440	\$77,983	\$69,397	\$67,942	\$69,390	\$85,756	\$83,935	\$49,705	
South Carolina	\$61,229	\$53,965	\$67,095	\$63,701	\$76,016	\$64,488	\$66,907	\$66,426	\$84,010	\$79,895	\$48,820	
South Dakota	\$61,358	\$52,625	\$67,151	\$62,239	\$76,299	\$62,833	\$66,741	\$64,913	\$84,004	\$78,132	\$48,880	
Tennessee	\$61,686	\$54,025	\$67,601	\$63,843	\$76,655	\$64,123	\$67,373	\$66,543	\$84,683	\$79,897	\$49,135	
Texas	\$61,265	\$50,752	\$67,143	\$60,508	\$76,055	\$61,022	\$66,973	\$63,213	\$84,082	\$76,589	\$48,848	
Utah	\$63,041	\$53,006	\$68,851	\$62,649	\$78,843	\$62,815	\$67,899	\$65,290	\$86,114	\$78,358	\$49,985	
Vermont	\$62,552	\$55,335	\$68,418	\$65,071	\$78,031	\$67,320	\$67,771	\$67,932	\$85,638	\$82,053	\$49,684	
Virginia	\$61,454	\$53,101	\$67,237	\$62,698	\$76,457	\$63,270	\$66,771	\$65,366	\$84,101	\$82,055 \$78,553	\$49,684	
Washington	\$64,187	\$51,783	\$70,077	\$61,031	\$80,494	\$61,195	\$68,922	\$63,565	\$87,705	\$76,100		
West Virginia	\$61,827	\$51,785 \$54,908	\$67,693	\$64,644	\$76,927	\$65,186	\$67,298	\$67,346	\$84,746	\$76,100 \$80,707	\$49,211	
Wisconsin	\$61,313	\$54,908 \$54,418	\$67,130	\$64,044 \$64,073	\$76,201	\$65,209	\$66,795	\$66,808	\$84,003	\$80,707	\$49,211	
		-										
Wyoming	\$61,687	\$53,932	\$67,456	\$63,505	\$76,829	\$63,857	\$66,873	\$66,145	\$84,354	\$79,202	\$49,087	\$40,53

Table 8: Total Cost of Ownership during Vehicle Lifetime

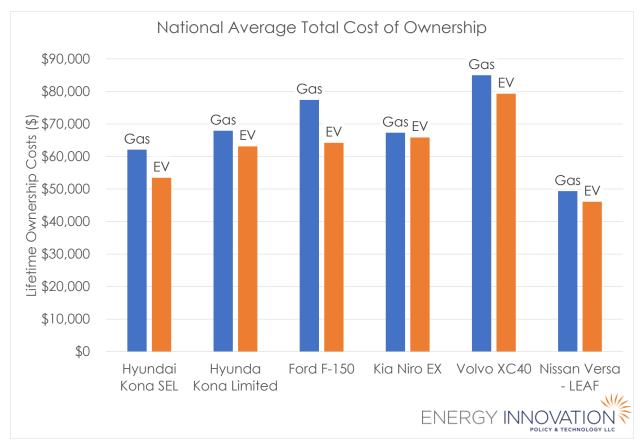


Figure 6: National Average Total Cost of Ownership over Vehicle Lifetime

CONCLUSION

Many studies show that operating costs and TCO are lower for EVs. But the more relevant factor in influencing consumer decision-making at the time of purchase is the *monthly cost of paying for and owning* an EV during a period of loan repayment.

Today, EVs have higher upfront prices, leading some consumers to think owning an EV is only available to higher-income earners. Failure to translate purchase price differences to monthly loan repayment costs also makes purchase price differences seem greater, especially when combined with fuel and maintenance savings. However, in many states and across multiple vehicle models today, it is cheaper to buy an EV than a gasoline vehicle.

This analysis is good news for consumers who want protection from high oil prices, but EVs should be available to all Americans looking to purchase a new car. The EV incentives currently under consideration in Congress would help ensure millions more American drivers can access EVs to help families deal with pain at the pump in nearly every state.

These impressive consumer savings are contingent on continued federal support for EV adoption, in particular the federal tax credit of at least \$7,500. GM and Tesla have already exceeded the sales cap under this program, and Nissan and Ford will likely hit the cap this year. Without this incentive, it would cost consumers more per month during loan repayment to purchase an EV for nearly all vehicle-state comparisons we evaluated.

EV purchase costs will continue to decline over time, making their economic case even stronger. Furthermore, because electricity prices are subject to state utility regulation, they tend to change slowly over time, but gasoline prices are highly variable and dependent on global oil markets and volatile geopolitics. As more Americans grapple with the high price of gasoline, continued federal policy support for EVs will help get more people driving EVs and reaping savings the minute they drive off the lot.

⁷ "Update on Electric Vehicle Costs in the United States through 2030."

¹⁰ "Driving into Debt | U.S. PIRG," accessed April 19, 2022, https://uspirg.org/feature/usp/driving-debt.

¹¹ Borlaug et al., "Levelized Cost of Charging Electric Vehicles in the United States"; "Update on Electric Vehicle Costs in the United States through 2030."

¹² "What Is a Down Payment on a Car?," J.D. Power, accessed April 15, 2022, https://www.jdpower.com/cars/shopping-guides/what-is-a-down-payment-on-a-car.

¹³ "Federal EV Tax Credit Phase Out Tracker By Automaker – EVAdoption," accessed April 18, 2022, https://evadoption.com/ev-sales/federal-ev-tax-credit-phase-out-tracker-by-automaker/.

¹⁴ Ronald Montoya, "How Long Should a Car Loan Be?," Edmunds, May 1, 2013, https://www.edmunds.com/car-loan/how-long-should-my-car-loan-be.html.

¹⁵ "Average Car Loan Interest Rates by Credit Score," NerdWallet, accessed April 15, 2022, https://www.nerdwallet.com/article/loans/auto-loans/average-car-loan-interest-rates-by-credit-score.

¹⁶ "Versa Configurator | Summary | Nissan USA," Nissan, accessed April 18, 2022, https://www.nissanusa.com/shopping-tools/build-price/c/29483/BABc5:ArKIYJw.

¹⁷ "Nissan LEAF Configurator | Summary | Nissan USA," Nissan, accessed April 18, 2022, https://www.nissanusa.com/shopping-tools/build-price/c/29324/BABch:AqoD5iM.

¹⁸ "FOTW #1190, June 14, 2021: Battery-Electric Vehicles Have Lower Scheduled Maintenance Costs than Other Light-Duty Vehicles," Energy.gov, accessed April 15, 2022, https://www.energy.gov/eere/vehicles/articles/fotw-1190-june-14-2021-battery-electric-vehicles-have-lower-scheduled.

¹⁹ U.S. Environmental Proection Agency, "Population and Activity of Onroad Vehilces in MOVES3," April 2021, https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1011TF8.pdf.

²⁰ "AAA Gas Prices," accessed April 15, 2022, https://gasprices.aaa.com/state-gas-price-averages/.

²¹ Borlaug et al., "Levelized Cost of Charging Electric Vehicles in the United States."

¹ Brennan Borlaug et al., "Levelized Cost of Charging Electric Vehicles in the United States," *Joule* 4, no. 7 (July 15, 2020): 1470–85, https://doi.org/10.1016/j.joule.2020.05.013.

² Tom Taylor and Josh Rosenberg, "Total Cost of Ownership Analysis" (Atlas Public Policy, February 2022), https://atlaspolicy.com/wp-content/uploads/2022/01/Total-Cost-of-Ownership-Analysis.pdf.

³ "Update on Electric Vehicle Costs in the United States through 2030," *International Council on Clean Transportation* (blog), accessed April 19, 2022, https://theicct.org/publication/update-on-electric-vehicle-costs-in-the-united-states-through-2030/.

⁴ Marco Miotti et al., "Personal Vehicles Evaluated against Climate Change Mitigation Targets," *Environmental Science* & *Technology* 50, no. 20 (October 18, 2016): 10795–804, https://doi.org/10.1021/acs.est.6b00177.

⁵ "New Consumer Reports Analysis Shows Rising Gas Prices Ramp up Savings for EV Owners," CR Advocacy, accessed April 19, 2022, https://advocacy.consumerreports.org/press_release/new-consumer-reports-analysis-shows-rising-gas-prices-ramp-up-savings-for-ev-owners/.

⁶ Amol Phadke et al., "2035 The Report" (Goldman School of Public Policy, University of California Berkeley, June 2020), http://www.2035report.com/wp-content/uploads/2020/06/2035-Report.pdf?hsCtaTracking=8a85e9ea-4ed3-4ec0-b4c6-906934306ddb%7Cc68c2ac2-1db0-4d1c-82a1-65ef4daaf6c1.

⁸ "As More Americans Choose EVs, Price and Range Continue to Hold Back the Market, According to New Cox Automotive Study," *Cox Automotive Inc.* (blog), accessed May 4, 2022, https://www.coxautoinc.com/news/as-more-americans-choose-evs-price-and-range-continue-to-hold-back-the-market-according-to-new-cox-automotive-study/.

⁹ "The Electric Car Consumers Want: Lower Cost, Higher Mileage," *Morning Consult* (blog), February 9, 2021, https://morningconsult.com/2021/02/09/energy-efficiency-series-electric-vehicles-consumers-polling/.

²² "FOTW #1047, September 17, 2018: Daily Vehicle Miles Traveled Varies with the Number of Household Vehicles," Energy.gov, accessed April 15, 2022, https://www.energy.gov/eere/vehicles/articles/fotw-1047-september-17-2018-daily-vehicle-miles-traveled-varies-number.

²³ Chargepoint, "Driver's Checklist: A Quick Guide to Fast Charging," accessed April 15, 2022, https://www.chargepoint.com/files/Quick_Guide_to_Fast_Charging.pdf.

²⁴ "Federal EV Tax Credit Phase Out Tracker By Automaker – EVAdoption."

²⁵ A. B. C. News, "US Electric-Vehicle Tax Credits Ending for New Toyota Buyers," ABC News, accessed April 18, 2022, https://abcnews.go.com/US/wireStory/toyota-buyers-lose-us-electric-vehicle-tax-credits-83919239.

²⁶ "How Long Do Cars Last? A Guide to Your Car's Longevity," accessed April 18, 2022, https://www.aarp.org/auto/trends-lifestyle/info-2018/how-long-do-cars-last.html.