

April 2015

NADA Used Car Guide

PERSPECTIVE

Electric Vehicle Retention Report Card

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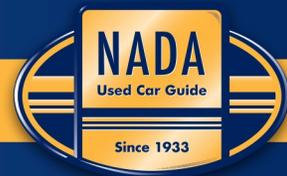


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Electric Vehicle Retention Report Card

April’s edition of Perspective is the first of what will likely become a series of yearly reports that detail one-, two- and three-year retention performance of electric vehicles (EVs). In this inaugural edition we’ll focus primarily on the most popular EVs offered for sale in each model year.

We’ve provided retention figures for the most popular style level as determined by its share of new vehicle sales. While retention for other styles within a model lineup may be better or worse than the ones provided, the differences are generally small and do little to change the model’s overall standing in the used marketplace.

The retention calculation is a function of a three month average (March – May 2015) of NADA’s average trade-in value divided by a vehicle’s typically-equipped Manufacturer Suggested Retail Price (MSRP). Typically-equipped MSRP data was sourced from NADA Used Car Guide and ALG. Note that a vehicle’s rate of depreciation, and ultimately retention, is in part a product of the level of discounting at the time of new. As such, typically-equipped MSRP’s do not include any state or federal tax credits, nor do they include any manufacturer incentives or rebates available at the time of purchase.

U.S. EV HISTORY: 125 YEARS IN THE MAKING

Research shows that EVs were first introduced to the United States nearly 125 years ago by a chemist named William Morrison. In 1890, Morrison developed and built the country’s first successful EV, a 4-horsepower wagon capable of carrying up to six passengers at speeds of 14 mph. Morrison’s invention was essentially an electrified wagon, which sparked initial EV interest in the U.S.

In the early 20th century, EVs were nearly as common as gasoline-powered vehicles. In 1908, however, the entire EV market was dealt a huge blow when Henry Ford introduced

his mass-produced and affordable Model T. When it first went on sale, Ford sold his “Tin Lizzie” for \$850, which was much less than battery-powered vehicles. During this same period, comparable EVs were selling for around twice as much. For the average family, the Model T quickly made more sense for its low cost, durability, versatility and ease of maintenance.

Fast forward to present day and not much has changed. While it’s true that EVs are now more popular than they’ve ever been, high MSRPs along with range and technology concerns keep them from securing a strong foothold in today’s mainstream marketplace.

EV RETENTION

For the most part, used EV prices continue to be very soft, which really isn’t much of a departure from how prices have tracked over the past couple of years. Used EV demand continues to be hampered by range and technology concerns, as well as by stiff competition from highly efficient—and more affordable—gasoline-powered cars.

One-Year-Old EV Retention

2014 Model Year Units, Mar. - May 2015.

| Make | Model | Average Trade-In | Average TE MSRP | Retention % |
|------------|----------------|------------------|-----------------|-------------|
| Tesla | Model S | \$77,983 | \$93,890 | 83.1% |
| Porsche | Panamera S-E | \$81,725 | \$104,265 | 78.4% |
| Toyota | RAV4 EV | \$36,108 | \$50,660 | 71.3% |
| Honda | Accord PHV | \$28,325 | \$40,570 | 69.8% |
| Toyota | Prius PHV | \$21,200 | \$30,800 | 68.8% |
| Ford | Fusion Energi | \$22,258 | \$35,525 | 62.7% |
| BMW | i3 | \$27,825 | \$45,325 | 61.4% |
| Cadillac | ELR | \$43,675 | \$75,995 | 57.5% |
| Chevrolet | Volt | \$19,633 | \$34,995 | 56.1% |
| Ford | C-Max Energi | \$18,108 | \$33,745 | 53.7% |
| Fiat | 500e | \$16,358 | \$32,650 | 50.1% |
| Chevrolet | Spark EV | \$12,967 | \$27,495 | 47.2% |
| Mercedes | B-Class ED | \$23,275 | \$49,415 | 47.1% |
| Ford | Focus Electric | \$16,742 | \$35,995 | 46.5% |
| Smart | FORTWO ED | \$11,800 | \$25,750 | 45.8% |
| Nissan | LEAF | \$14,275 | \$32,850 | 43.5% |
| Mitsubishi | i-MiEV | \$8,325 | \$23,845 | 34.9% |

Source: NADA Used Car Guide/ALG

Looking first at one-year-old EV retention, we see there are some very strong—as well as extremely weak—performers. Led by Tesla’s Model S, retention for the entire group fell between 83.1% – 34.9%. By comparison, segment averages for gasoline-powered luxury large, mid-size and compact cars fell between 70.1% – 62.7% for the same period.

So far, prices for luxury EVs have been the strongest with Tesla and Porsche at the top of the list. Tesla and Porsche’s relative strength can likely be traced back to their luxury status. For example, the Model S and Panamera S-E are expensive vehicles purchased by affluent consumers. Demand for the two has been predicated on owning a vehicle with cachet and exclusivity. These luxury vehicles are status symbols and often do not compete with the large pool of mainstream, gasoline-powered substitutes, but rather a rarer group of more technologically advanced performance models.

By comparison, demand for more inexpensive models—such as the Chevrolet Volt and Nissan Leaf—is driven by more pragmatic factors: upfront costs, maintenance and repair costs, price among the competition, overall range, as well as real-world practicality and gasoline prices. Simply put, competition for mainstream models has been much fiercer than for luxury models, hence their lower retention rates.

Two-Year-Old EV Retention

2013 Model Year Units, Mar. - May 2015.

| Make | Model | Average Trade-In | Average TE MSRP | Retention % |
|-----------|----------------|------------------|-----------------|-------------|
| Tesla | Model S | \$68,350 | \$96,140 | 71.1% |
| Toyota | RAV4 EV | \$28,275 | \$50,660 | 55.8% |
| Toyota | Prius PHV | \$17,600 | \$32,810 | 53.6% |
| Ford | Fusion Energi | \$18,175 | \$39,495 | 46.0% |
| Ford | C-Max Energi | \$14,242 | \$33,745 | 42.2% |
| Fiat | 500e | \$13,725 | \$32,600 | 42.1% |
| Smart | FORTWO ED | \$9,825 | \$25,750 | 38.2% |
| Nissan | LEAF | \$11,916 | \$32,670 | 36.5% |
| Chevrolet | Volt | \$14,333 | \$39,995 | 35.8% |
| Ford | Focus Electric | \$13,967 | \$39,995 | 34.9% |

Source: NADA Used Car Guide/ALG

Similar to the one-year-old retention results, our two-year-old findings also peg the Tesla Model S at the top of the list. The Model S’s retention score of 71.1% leads the second place Toyota RAV4 EV by over 15 percentage points. As far as the rest of the two-year-old group goes, mainstream EV value retention is currently between 55.8% – 34.9%. In comparison, segment averages for gasoline-powered luxury large, mid-size as well as compact cars fell between 57.8% – 54.4% for the same period.

Toyota’s RAV4 and Prius EVs have also performed relatively, and their scores of 55.8% and 53.6% are the highest of the mainstream bunch. At the bottom of the list, the

Nissan Leaf, Chevrolet Volt and Ford Focus Electric carry retention scores of roughly 36%.

Three-Year-Old EV Retention

2012 Model Year Units, Mar. - May 2015.

| Make | Model | Average Trade-In | Average TE MSRP | Retention % |
|------------|----------------|------------------|-----------------|-------------|
| Tesla | Model S | \$50,650 | \$88,550 | 57.2% |
| Toyota | RAV4 EV | \$24,100 | \$50,645 | 47.6% |
| Ford | Focus Electric | \$12,708 | \$39,995 | 31.8% |
| Chevrolet | Volt | \$12,525 | \$39,995 | 31.3% |
| Nissan | LEAF | \$9,300 | \$36,733 | 25.3% |
| Mitsubishi | i-MiEV | \$6,166 | \$29,975 | 20.6% |

Source: NADA Used Car Guide/ALG

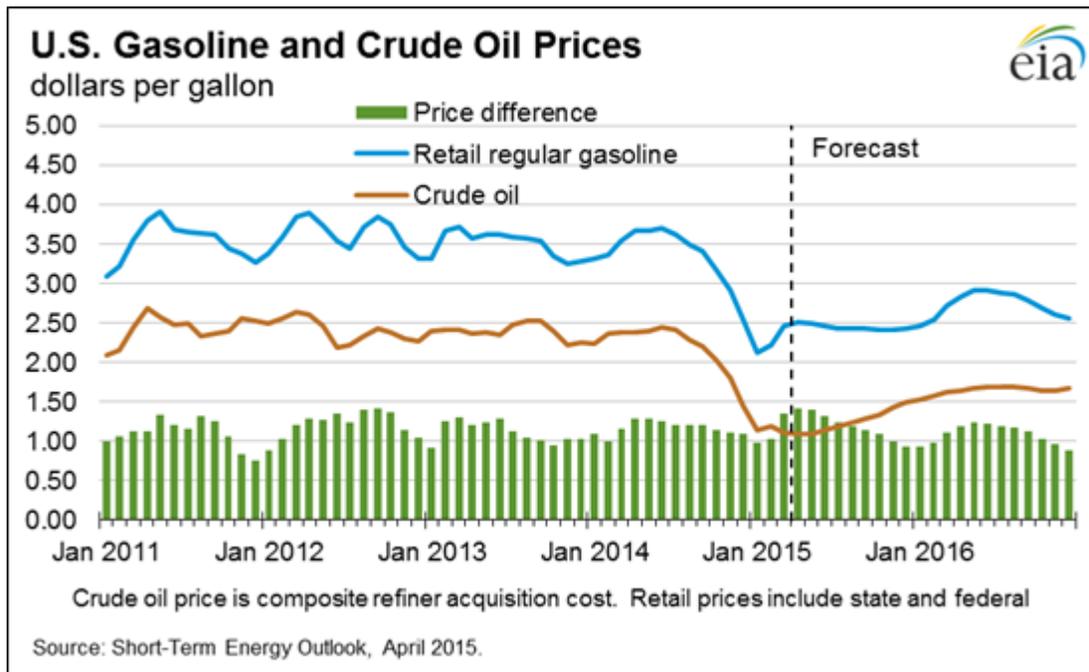
Finally, our three-year-old EV retention ranking order looks very similar to both one- and two-year-old results. Tesla is once again on top of the list with a Model S retention score of 57.2%. However, the spread between the number one and two spots is a slightly narrower 10 percentage points compared to the 15 point gap we observed in our two-year results. As for mainstream EV models, the overall range fell between 47.6% – 20.6%. In comparison, segment averages for gasoline-powered luxury large, mid-size, as well as compact cars fell between 49.5% – 46.2% for the same period.

Similar to our two-year-old findings, Toyota’s RAV4 score was relatively good compared to the rest of the pack, while the Nissan Leaf and Chevrolet Volt ranked near the bottom once again. Following the same pattern as our one-year-old findings, Mitsubishi’s i-MiEV scored the lowest at 20.6%.

Moving forward, many three-year-old EVs are now nearing or already to the point where they are no longer covered by their respective manufacturer’s basic warranty due to age or mileage accrual. For example, both the Nissan Leaf and Chevrolet Volt carry basic manufacturer warranty coverage of 3 years or 36,000 miles, which we have now begun to reach. This is a potential concern since an extra layer of risk is being added into the mix when used EV buyers are shopping for vehicles. As mentioned previously, technology concerns are one of the biggest drawbacks for prospective EV buyers, and the lack of warranty coverage will undoubtedly increase this hindrance further and erode prices on out-of-warranty vehicles accordingly. Certified Pre-Owned programs are a logical fit for used EVs, as the program’s comprehensive inspection and extended warranty features help reduce consumer concerns associated with unexpected repair expenses.

OTHER FACTORS TO CONSIDER: GASOLINE & FEDERAL/STATE INCENTIVES

A review of EV market performance is incomplete without also discussing the role of gasoline prices as well as federal and state incentives. These factors play a crucial role in setting the tone for both new and used EV sales.



The fact that gasoline prices are more than \$1 less per gallon than they were this time last year erodes demand for new and used EVs even further. According to the most recent fuel price information obtained from the U.S. Energy Information Administration (EIA), the average price per gallon of regular grade gasoline this April is \$1.16 less than one year ago. Substantially lower gasoline prices make it even more difficult to justify an EV purchase from an economic standpoint. Lower gasoline prices combined with ongoing gains in gas-powered vehicle efficiency makes EVs an even harder sell. From now through the end of 2016, the EIA’s Short-Term Energy Outlook expects gasoline prices to remain, on average, similar to today’s level, up slightly to a still reasonable \$2.61 per gallon.

As for encouragement, federal and state tax incentives have been an effective tool for sparking purchases of new EVs to counter the drawbacks potential consumers face. However, we’re beginning to see budget cuts and other issues which have legislatures reducing or eliminating incentives at the state level.

Since March, Illinois and Georgia have passed laws to end their respective \$4,000 and \$5,000 EV tax credits. Georgia, which previously had the biggest state-based credit in the nation, actually took it a step further and replaced the credit with a \$200 tax.

At the federal level, the end of EV incentives is also in the not too distant future for some automakers. The federal credit begins to phase out for vehicles at the beginning of the second calendar quarter after the manufacturer produces 200,000 eligible plug-in electric vehicles (i.e., plug-in hybrids and EVs) as counted from January 1, 2010. For example, at its current sales pace, Nissan would hit the federal 200,000 unit target around 2018, which will initiate the phase out of the Leaf's \$7,500 federal credit.

An affluent Tesla Model S or Porsche Panamera S-E buyer willing to pay north of \$100,000 for a performance-oriented family sedan might not be alarmed by the loss of these credits, however, buyers of mainstream EVs might find the \$7,500 – \$12,500 (best case scenario of maximum federal and state EV credits) price hike harder to justify.

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AT NADA USED CAR GUIDE

What's New

The NADA Appraisal Suite is launched! Tired of the back and forth? Turn your entire appraisal process into something your customers can truly understand. Select NADA Appraisal, starting at \$99/month with an annual subscription, or upgrade to NADA AppraisalPRO to include additional market data from trusted industry sources. Both provide you with an official appraisal document, backed by NADA, which gives customers the confidence to sign. Learn more at nada.com/appraisal or call 866.974.6232.

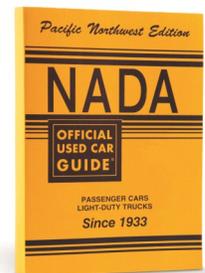


On the Road

On May 18 – 19 in San Diego, CA, Steve Stafford, John Beckman and Jonathan Banks will attend the Auto Finance Risk Summit. Say, “Hi” to Jonathan Banks and Doug Ott May 20 – 21 at Drive ‘15, the CU Direct Lending and Marketing Conference, in Las Vegas. This May 27 – 29, meet up with Steve Stafford, Larry Dixon and John Beckman at the National Automotive Finance Association’s Non-Prime Auto Financing Conference in Plano, TX. Doug Ott will attend the League of Southeastern Credit Unions and Affiliates June 17 – 19 in Orlando, FL. Mike Stanton and Jim Dodd will be in attendance at the National Independent Auto Dealers Convention in Las Vegas, June 22 – 25.

About NADA Used Car Guide

Since 1933, NADA Used Car Guide has earned its reputation as the leading provider of vehicle valuation products, services and information to businesses throughout the United States and worldwide. NADA’s team collects and analyzes over one million combined automotive and truck wholesale and retail transactions per month. Its guidebooks, auction data, analysis and data solutions offer automotive/truck, finance, insurance and government professionals, the timely information and reliable solutions they need to make better business decisions. Visit nada.com/b2b to learn more about solutions for your business and nada.com/usedcar to stay abreast of the latest used and new vehicle market trends.



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NADA’s market intelligence team leverages a database of nearly 200 million automotive transactions and more than 100 economic and automotive market-related series to describe the factors driving current trends to help industry stakeholders make more informed decisions. Analyzing data at both wholesale and retail levels, the team continuously provides content that is both useful and usable to the automotive industry, financial institutions, businesses and consumers.

Complemented by NADA’s analytics team, which maintains and advances NADA’s internal forecasting models and develops customized forecasting solutions for automotive clients, the market intelligence team is responsible for publishing white papers, special reports and the Used Car & Truck Blog. Throughout every piece of content, the team strives to go beyond what is happening in the automotive industry to confidently answer why it is happening and how it will impact the market in the future.

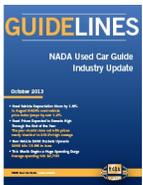
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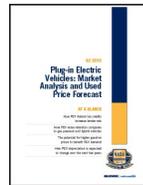
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ADDITIONAL RESOURCES



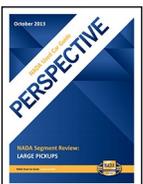
Guidelines

Updated monthly with a robust data set from various industry sources and NADA’s own proprietary analytical tool, *Guidelines* provides the insight needed to make decisions in today’s market.



White Papers

NADA’s white papers and special reports aim to inform industry stakeholders on current and expected used vehicle price movement to better maximize today’s opportunities and manage tomorrow’s risk.



NADA Perspective

Leveraging data from various industry sources and NADA’s analysts, *NADA Perspective* takes a deep dive into a range of industry trends to determine why they are happening and what to expect in the future.



Used Car & Truck Blog

Written and managed by the Market Intelligence team, the Used Car & Truck Blog analyzes market data, lends insight into industry trends and highlights relevant events.

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