

Low Price Electric Vehicles

By John Benson

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1. Introduction

First of all, your author is not planning to purchase an EV. I love my 1993 Honda Civic dearly, and it only has a bit over 300,000 miles on it (barely broken in, and very reliable). Also, it averages over 35 mpg. Even with the price of gas in California and my periodic trips from Livermore (primary residence) to Arnold (mountain home at 4,000 ft in the Sierra Nevada Mountains), I really don't spend much on gas. Thus, an EV would be an added expense and hassle for me.

However, I do write about EVs, and if I were a younger John Benson, with a commute into Silicon Valley, I would be considering one. That's why I originally bought my Pre-EV Civic. Note the first modern EVs, the Nissan Leaf and Tesla Model S, were first shipped in, respectively, 2010 and 2012.

Thus, that is what I will be looking for herein: an inexpensive EV with a decent range. My criteria for "inexpensive" is a base price under \$40,000, including delivery charges but not tax and license, and this is per the manufacturer's web site. Also, the \$40K does not include federal or state rebates. I easily found what would be the least expensive EV – see section 2.

2. Nissan Leaf

The numbers	Base price: \$29,664
	Range: 150 miles

Comments: I consider 150-mile range to be the minimum. Although it is only about 100 miles from my Livermore residence to my Arnold residence, I go from about 400 ft altitude in Livermore to about 4,000 ft in Arnold. Thus, I really would need to watch my speed, or get a quick-charge on the way up.

3. Kia Niro EV

The numbers	Base price: \$39,600
	Range: 253 miles

Comments: The standard warranties on this, and the Hyundai (below) are, by far, the best available: 10-year / 100,000-mile limited warranty, which includes the EVs' batteries.

4. Subaru Solterra

The numbers	Base price: \$38,900
	Range: 227 miles

Comments: I believe all of the other EVs herein are 2WD (to keep the price as low as possible, even when 4WD or AWD is available), but AWD is a Subaru calling card, so it is standard. This would be good for me as in winter it occasionally snows in Arnold (4,000 ft.), and I occasionally go cross-county skiing at Bear Valley (7,000 ft. where it frequently snows).

5. Hyundai Kona Electric

The numbers Base price: \$34,325
Range: 200 miles

Comments: This is the second lowest price after the Leaf, and it offers a significantly longer range. Also, this and the above Kia offers by far, the best available 10-year / 100,000-mile limited warranty, which includes the EVs' batteries. For the extra \$5K, I might well choose this one, or opt for an extra \$8K for the Subaru with the AWD.

6. Certified Used EVs

For those of you not familiar with the section-title term, these are late model, low mileage used cars that are certified by either a factory-dealer or the manufacturer. Normally it goes through an extensive diagnostic before it can be certified. It also comes with a decent warranty. The following are the above models' prices for a certified used version of each. I've used Cars.com for this and include a link to that below, since my search is for my primary resident's location (Livermore, CA) and car pricing is regionally dependent.¹

Nissan Leaf: Nissan Certified, 2023 Nissan Leaf SV PLUS with 34,778 miles on it for \$18,511. Expected range, 219-225 miles. This includes a warranty with the following terms:

Powertrain: 84 months/100,000 miles (I assume this is total mileage, and it includes LEAF electric vehicle system and powertrain)

Dealer certification required with 167-point inspection

Roadside assistance

Kia Niro EV: Kia Certified 2022 Kia Niro EV EX with 26,160 miles on it for \$22,021. Expected range, 265-277 miles. This includes a warranty with the following terms:

Basic warranty: 12 months/12,000 miles

Powertrain: 10 years/100,000 miles

Dealer certification required with 165-point inspection

Roadside assistance

Subaru Solterra: Subaru Certified 2023 Subaru Solterra Limited with 7,746 miles on it for \$27,995. Expected range: 227 miles (as new). This includes the following warranty:

Basic warranty: Coverage available for purchase

Powertrain: 7 years/100,000 miles

Dealer certification required with 152-point inspection

Roadside assistance

No deductible

Rental allowance for service loan

¹ <https://www.cars.com/> t

Hyundai Kona Electric: Hyundai Certified 2023 Hyundai Kona EV Limited with 4,509 miles on it for \$27,600. This includes the following warranty:

Remainder of the 5-Year/60,000-Mile New Vehicle Limited Warranty. From original in-service date and zero (0) miles.

Powertrain: 10-Yr/100K-Mile Limited Warranty. From original in-service date and zero (0) miles.

Dealer certification required with 176-point inspection

7. Future Ford EVs

There is no doubt that “pure EVs” (a.k.a. battery-electric vehicles or BEVs) come with a set of compromises. All the way from range anxiety to finding a fast-charge station when you are on unfamiliar turf. Although Ford has a couple of credible BEVs: Mustang Mach-E SUV (priced \$44,856 - \$61,270) and F150 Lightning Pickup (priced \$57,433 - \$92,542), they are not exactly flying off of the dealers’ lots (possibly due to their prices). Thus, they have developed a plan B and a Plan C.

7.1. Plan B - Extended-Range Electric Vehicles (EREVs)

Engineers are hard at work developing so-called extended-range electric vehicles, broadly similar to plug-in hybrids, though there are some differences. A complicated (since you basically have two separate powertrains) but an effective intermediate step between combustion-powered vehicles and pure EVs, both EREVs and plug-ins provide the best of both worlds. When charged up, many motorists can do most of their daily driving purely on electric power, but you still have a traditional engine for when you want to take a longer trip. Some of these products will offer as much as 700 miles of range, ideal for cross-country drives.²

According to Bloomberg, Ford is hard at work engineering the fundamental technology for these powertrains. Reportedly, the company will offer range-extended electric drivetrains in many of its most popular products including crossover and SUV models as well as the gargantuan Super Duty truck line. And, that last vehicle could be a game-changer given the popularity – and profitability – of these hard-working vehicles.

Unfortunately, these new powertrains are at least a couple years away, and rival automakers are set to introduce a raft of plug-in hybrids before Ford can complete its electrification pivot. Some 150 of these are expected to land on the U.S. market by 2026.

Author’s comment: Speaking of “...rival automakers...” those that have made big bucks on conventional hybrids (like Toyota), first pivoted to plug-in hybrids, and then EREVs (the Prius Prime might be considered a plug-in hybrid or an EREV, since there is a gray area between these).

² Craig Cole, Top Speed via MSN, “Ford Developing EREVs Amid Electric Truck Uncertainty,” 2025, <https://www.msn.com/en-us/autos/news/ford-developing-erevs-amid-electric-truck-uncertainty/ar-AA1yv0Ja?ocid=msedgntp&pc=DCTS&cvid=73bf550ca00d431da7b14c83c7561bc0&ei=13>

7.2. Despite the News, EVs Aren't Dead at Ford

Despite the challenges it's faced, Ford is still developing electric vehicles, something the company's executive chair, Bill Ford, confirmed at last month's Detroit Auto Show. "We are working very hard on EV affordability," he said, "because I think that will be the catalyst for much wider adoption." Lowering price tags is a great way to sell more units.

Moving forward, the automaker has a dedicated team in California that's developing a line of small, affordable EVs. These products are expected to start at less than \$30,000, a price that addresses the high costs associated with many electrics today, though, again, these yet-unannounced vehicles are still likely years away. In the near-term, Ford may have to brace itself for financial hardship as it sorts out this new strategy.

Author's comment: The under \$30,000 EVs Ford is working on would compete with all of the above (new) EVs in this post (although it is likely to be more than \$30K). Hopefully, they will have longer-ranges than 150-miles (Nissan Leaf). Their initial pivot to EREVs should facilitate pure BEVs, because the only technical differences between these are larger battery in BEVs and an internal combustion driven generator in EREVs.

8. Inflation of a Different Type

Most US based auto makers either don't make EVs, or consider them "premium vehicles" (I'm talking to you, GM, Ford and Stellantis).

Electric vehicles have rapidly grown in popularity over the last several years as, in general, they've gotten cheaper, more powerful and easier to charge. But in some cases, say traffic safety experts, they've also gotten more dangerous.³

In particular, the proliferation of heavier electric trucks and SUVs in recent years has raised concerns among safety experts who fear their increased speed and weight will lead to deadlier incidents, even as Bay Area governments work to reverse record-setting traffic fatalities and pedestrian deaths in the region. From March 2023 on, half of all new retail registered vehicles in the Bay Area are electric, according to S&P Global Mobility.

"Electric vehicles that are coming to market are very heavy and very, very fast," said Joseph Young, media relations director for the independent nonprofit Insurance Institute of Highway Safety.

Tesla's Cybertruck can accelerate from 0 to 60 mph in 2.6 seconds; America's most popular heavy-duty truck, the Ford F-150, takes more than double the time at 6.0 seconds.

"The reason that matters is because, in a multi-vehicle crash, physics are at play," Young said.

Specifically, Isaac Newton's second law of motion: mass times acceleration equals force. The heavier a vehicle is, the bigger the force upon impact in a crash.

³ Chase Hunter, Silicon Valley via MSN, "As EV vehicles get heavier, they're also getting more dangerous, safety experts say," Feb 4, 2025, <https://www.msn.com/en-us/autos/electric-cars/as-ev-vehicles-get-heavier-they-re-also-getting-more-dangerous-safety-experts-say/ar-AA1ypNwJ>

The average EV is approximately 20-30% heavier than its gas-powered counterparts because of massive heavy metal batteries — a consistency found across makes and models — that put EVs into their own weight class. While the gas-powered Ford F-150 truck weighs around 4,500 pounds, the battery-electric Ford-150 Lightning weighs more than 6,000 pounds.

In the Bay Area, fatalities from traffic crashes increased 48% between 2010 and 2020, according to National Highway Traffic Safety Administration data; data on the number of fatalities which involve heavy-duty trucks is not available. Fatalities had bottomed out in 2010 with 317 total deaths, but 472 people died in the region a decade later — equal to 1.3 traffic deaths per day.⁴

Julia Griswold, director of UC Berkeley's Safe Transportation Research and Education Center, said the main culprit of this trend is larger, heavier, and faster vehicles. And the auto industry's own view of what defines "safety" is partially to blame, Griswold said.

"Historically, the focus has been on the occupants of the vehicle and their safety," Griswold said. "The general understanding was that being in a bigger car would be safer in a crash."

By viewing safety through the limited lens of a vehicle's passengers, Griswold said the auto industry failed to consider how a larger, heavier vehicle could negatively impact the safety of pedestrians or drivers of more compact vehicles.

9. Recent Data on EV & Charging Growth

Battery electric cars continue to gain ground in the U.S. A record-breaking 1.3 million electric vehicles (EVs) were sold in 2024—accounting for around 8.7% of new cars sold. Similar to 2023, EV sales in Q4 2024 set a new record for volume sold in a single quarter (365,824 vehicles), boosted in part by attractive lease deals and manufacturer discounts. EV volumes were also more evenly distributed across more manufacturers, according to Kelly Blue Book data.⁵

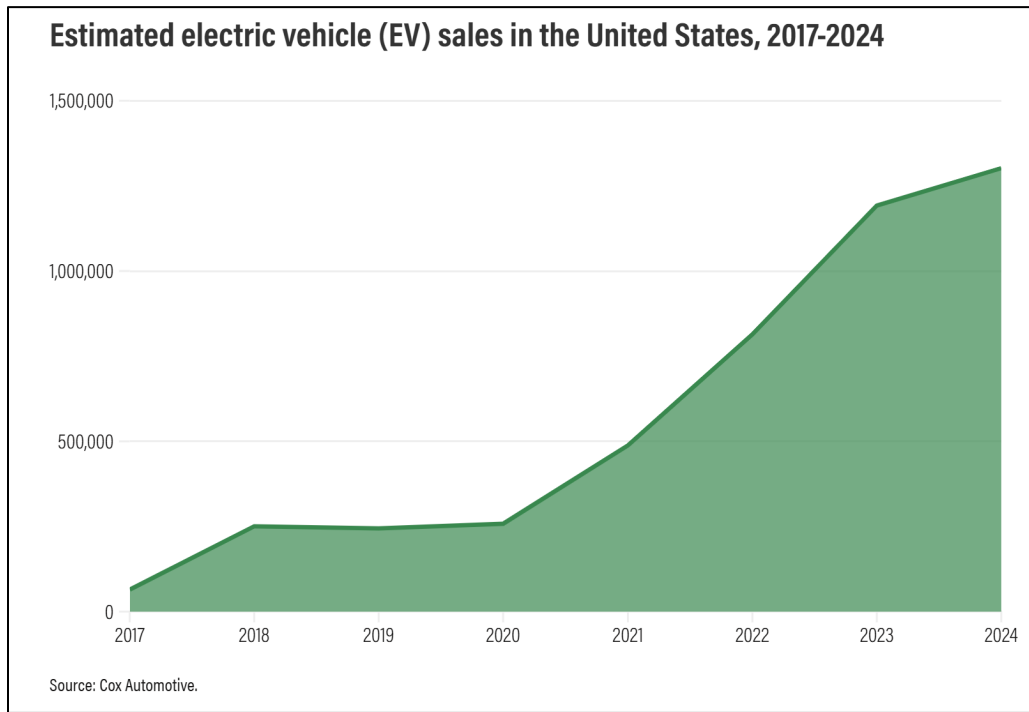
While the total number of EVs sold set a record, the rate of EV sales growth continues to slow compared to previous years. The number of EVs sold in 2024 were up only 7.3% compared to 2023, slower than the 49% increase seen from 2022 to 2023.

See the chart on the next page.

⁴ For fairness, your author must add that, from 2010 to 2020, the nine-county San Francisco Bay Area region added 614,901 residents amid a tech boom, an 8.6% increase that surpassed California's growth rate of 6.1% and the U.S. rate of 7.4%. The population of this region in 2020 was 7,765,640.

In 2024 the population of this region fell to 7,588,780. See <https://www.kron4.com/news/bay-area/bay-area-population-this-is-the-most-populated-county-in-2024/> for more details. Note that the "Bay Area Region" does not include several counties from which many workers commute into the Bay Area, so I expect that much of the reduction between 2020 and 2024 was caused by the flight of commuters to less expensive areas, as property prices in the Bay Area continue to climb and commuting options into the Bay Area from surrounding counties continue to improve (mainly freeway improvements and rail options).

⁵ Lori Bird, Andrew Light and Ian Goldsmith, World Resources Institute, "US Clean Power Development Sees Record Progress, As Well As Stronger Headwinds," February 21, 2025, <https://www.wri.org/insights/clean-energy-progress-united-states>



The U.S. also continued to make progress in expanding EV charging infrastructure in 2024, adding more than 37,700 charging ports, including 12,500 fast chargers. The country now boasts more than 204,000 publicly available charging ports nationally.

10. Why Vehicle-Makers are Ignoring DC-Zig-Zags

Your author is proud to be a Californian. Not only is my state a world-wide leader in technology, it has the fifth largest economy in the world, when compared to other countries.

Among US States it has also been a leader in environmental matters, including the deployment of EVs. A fairly large number of states follow California's lead on policies and laws regarding vehicles (electric and other road vehicles). The "me-too" states include many of the high gross-domestic-product states.

California has always been a leader in environmental policies, and it made headlines in 2022 by approving the Advanced Clean Cars II rule. This regulation requires all new passenger cars sold in the state to be zero-emission by 2035, according to Reuters. Given California's history of strict emissions laws and its massive influence on the auto market, this move is expected to set a nationwide precedent. The state is also investing heavily in EV infrastructure to support this transition.⁶

⁶ Dylan Rogers, American Charm via MSN, "12 American States Where Gas-Powered Cars Are Most Likely Banned First," February, 2025, <https://www.msn.com/en-us/money/markets/12-american-states-where-gas-powered-cars-are-most-likely-banned-first/ss-AA1zH98Y?ocid=msedgntp&pc=DCTS&cvid=f508bc4597214f31bf790712a4a872ee&ei=47#image=1>

For the record, the other 11 states following California in banning gas car sales by 2035 are Washington, Oregon, New York, Massachusetts, New Jersey, Rhode Island, Vermont, Connecticut, Maryland, Colorado, and Maine. Now you know why the title of this section is true. Sorry, Don.

10.1. EV Investments

Globally, automakers and EV battery manufacturers have thus far committed to invest \$1.2 trillion in the EV transition, an increase of \$261 billion since January 2023. This includes nearly \$312 billion in investment for EV and EV battery manufacturing in the United States, \$346 billion in Europe, and \$243 billion expected to flow to China. Figure 1 depicts the rapid rise in U.S. EV investment alongside other regions.

