



2021

EV OUTLOOK

Progress in EV sales, infrastructure development, and fleet expansion

BlastPoint

2020 RECAP: A YEAR OF NOTABLE EV PROGRESS

2020 brought new opportunities in the electric vehicle market, with major growth among some industry players such as Tesla, explosive sales across Europe and China, and an uptick in U.S. EV sales. But some areas, including the development of electric semi trucks, experienced somewhat of a lag in progress. The COVID-19 pandemic may be responsible for slower commercial expansion, as businesses put fleet electrification and charging infrastructure on the back burner while they struggled to merely survive. However, the U.S. saw healthy consumer EV sales and thousands more chargers installed. With a vaccine being distributed in the US, a new president on the way, and the promise of a "Clean Energy Revolution," the American EV industry is poised to flourish anew, fulfilling, and perhaps even exceeding, expectations for growth.

EVS & THE PANDEMIC

While the coronavirus somewhat dimmed EV growth, it didn't stop sales altogether. Consumers were stuck at home, traveling less and making shorter commutes, finding 2020 a great time to buy electric. The Chevrolet Bolt, Mitsubishi Outlander PHEV, Tesla Model 3 and Audi e-Tron all saw a spike in U.S. sales in 2020. Tesla had the strongest new EV sales, while the Nissan Leaf was popular in the used market.

Overall, more than 345K EVs were sold in the US in 2020 despite the unfavorable economic environment. By comparison, 2019 saw US battery powered vehicle sales of about 245K.



The EV Partnership Ecosystem

OPPORTUNITIES UNVEILED

While consumers are showing continued growing interest in EVs, and commercial businesses seek ways to attract new customers, charging infrastructure is not necessarily keeping pace with demand. Most drivers charge up at home, but to ease range anxiety (i.e., the fear of running out of battery and getting stranded without the ability to charge) and support bigger growth, more players need to participate in expanding charging infrastructure. Our 2019 research identified overnight accommodations and cinemas as excellent targets for charging stations prior to the pandemic, but with those businesses struggling in the current climate, we're seeing expanding opportunities for gas stations, supermarkets, public parking lots and workplaces to take the lead in installing charging units.

Perhaps the biggest opportunity lies with electric utilities, who may be able to recover lost revenue from energy efficiency programs by expanding customer EV adoption. Knowing which businesses to partner with, and which commercial and residential customers are most likely to adopt, will be key to moving EV technology forward in 2021.

PBlastPoint EV SALES

345K+

1.5M+

70%

New EVs sold in the US in 2020.

EVs currently on the road in the US. Up from 1.12M in March 2019.

Projected increase in 2021 EV sales in the US.

BESTSELLING NEW EVS IN THE US - 2020



Tesla Model 3 38K+ Sold



Tesla Model Y 18K+ Sold



Tesla Model X gK+ Sold

BESTSELLING USED EVS IN THE US - 2020



Nissan Leaf 28% of Used EV Sales



Tesla Model S

18% of Used EV Sales



Fiat 500e 9% of Used EV Sales

♥ BlastPoint FLEET ELECTRIFICATION

COMPANIES LEADING THE EV FLEET REVOLUTION*











DHL IKEA North America

AT&T

Also: Siemens, Direct Energy, Clif Bar, Consumers Energy, LeasePlan and Genetech.



US companies hosting private charging for fleets & employee vehicles

COMMERCIAL FLEET BRANDS & MODELS AVAILABLE IN THE US



GreenPower

- EV Star Mini eBus
- EV250, EV350 & EV550 Transit Buses
- Battery Electric
 Automotive School
 Transportation (i.e.,
 "The Beast"



Lion

- M Paratransit Bus
- A Mini School Bus
- 6 & 8 Classic Urban Delivery Trucks



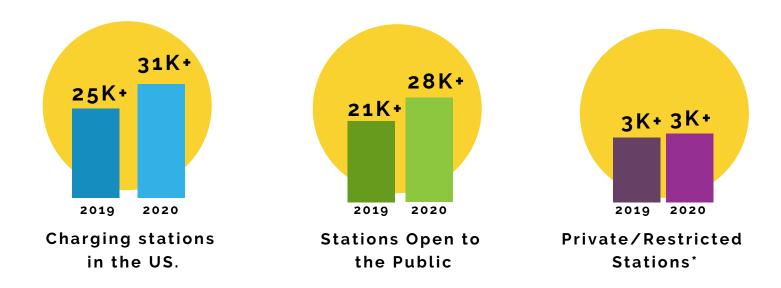
Phoenix

- ZEUS 400 Shuttle Bus
- ZEUS Flatbed Truck

Others

- BYD Motor Coaches & Trucks
- Starcraft
 Allstar & E Quest

Barriers to fleet electrification are being removed as the above vehicles were available in 2020, with more models to be released soon. Most of these vehicles can travel 150 - 250 miles before needing a charge, indicating that robust charging infrastructure along interstate transit routes is necessary for more freight companies to adopt. Heavy duty EV models by Volvo, BYD, and Freightliner are expected to be released soon.



*Data reporting is likely incomplete for private stations. See Sources & Notes for more info.

TYPES OF OUTLETS AVAILABLE AT CHARGING STATIONS

The charging stations mentioned above (private and public) contain the following outlet types. Note that many stations include more than one type.



Most charging stations listed in the Alternative Fuels Data Center database have J1772 outlets available. These are the "universal" North American EV plug. The J1772 Combo outlet, an upgraded version, is less readily available. CHAdeMO outlets, used for fast charging, are also less prevalent, and there's a lot of opportunity for increasing their availability. Tesla's proprietary outlets are more widely available at charging stations across the US than combo plugs and CHAdeMO plugs; however, only Tesla EVs can utilize them. Finally, less than 1K NEMA 5-20 outlets are available at charging stations; these are essentially standard electrical plugs and are not ideal for charging on the go, as they are fairly slow.

♥BlastPoint WHERE ARE MOST CHARGERS LOCATED?



Restaurants & Stores

Businesses install plugs to attract customers with green values and higher income.



Gas Stations

More gas stations are installing plugs alongside traditional fuel dispensers.



Shopping Centers

Multi-tenant shopping centers install plugs to motivate shoppers to stick around and spend more money.



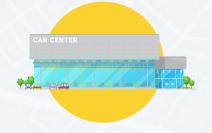
Hotels & Spas

High-end hospitality destinations, including those in remote locations, install plugs to attract guests.



City Centers, Parks, & Public Spaces

Government-owned spaces in cities across the US install private plugs for fleets & employees, but also offer public plugs.



Car Sales & Repair

Currently, the DoE lists a large percentage of private plugs at these businesses.



Offices & Workplaces

These are generally private plugs for company fleets, employees & visitors



Multi-Tenant Real Estate

High-end residential properties offer private EV charging as a luxury perk.

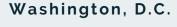
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LEADING STATES

State government incentives have been key to boosting EV adoption. More state incentives in 2021 could propel adoption forward. The following states are leading the EV pack in the US by offering incentives to retail & commercial buyers.

Vermont • Income-based rebate of up to \$5K for EV purchase • Emissions reduction grants 105.3 EVSE per 100K people

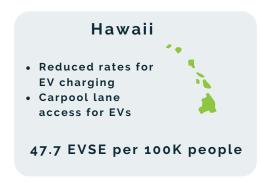




- Excise tax exemption
- Reduced registration fees
- Up to \$1K tax exemption for home charging installation



63 EVSE per 100K people





EXPECTED FEDERAL INCENTIVES

At the close of 2020, federal tax credits ranging from \$2,500 to \$7,500 were available to consumers buying new, qualified electric vehicles. However, per federal guidelines, tax credits no longer apply to any manufacturer that has sold more than 200K electric cars. This means buyers of Tesla or General Motors electric models cannot receive tax credits, as both brands have exceeded 200K EV sales.

There are currently no federal tax incentives for purchasing used EVs, but states, cities and utilities do offer rebates and credits for preowned EVs.

Other local incentives are available for installing Level 2 (or equivalent) charging units on residential or commercial property.

Looking ahead to 2021 and beyond, as Joseph R. Biden takes over the White House, look out for newer, broader policies that move the U.S. closer to a zero carbon future. Expect emissions standards to lower, fuel efficiency minimums to raise, investments in U.S. EV manufacturing, and consumer credits for trading in combustion engine vehicles.

PBlastPoint SOURCES & NOTES

2020 Recap: A Year of Notable EV Progress

GCBC, "2020 US Vehicle Figures by Model"
Clean Technica, "US EV Sales Report"
Clean Technica, "Electric Vehicle Adoption — About To Explode? Or Slow & Steady?"
Business Insider, "The 10 Most Popular Evs to Buy Used"

EV Sales

Clean Technica, "Forecast: 2021 US EV Sales To Increase 70% Year Over Year EEI, Electric Vehicle Sales: Facts & Figures Clean Technica, "US EV Sales Report"
Business Insider, "The 10 Most Popular Evs to Buy Used"
Statista, "Estimated U.S. battery electric vehicle sales in 2019, by brand"

Fleet Electrification

The companies listed in "Companies Leading the EV Fleet Revolution" are flagship members of the Corporate EV Alliance. See Automotive Fleet, "Major Companies Accelerate EV Fleet Transition Through New Alliance."

Fleet Models & Brands Available in the US is based on BlastPoint internal research and verified via each brand's website.

EV Charging Infrastructure

Charging station and plug type data is taken from the DoE's Alternative Fuels Data Center. 2019 data was downloaded on June 10, 2019; 2020 data was downloaded on Dec. 14, 2020.

Note that the DoE's data for private charging stations remains the same as 2019 (3,136 stations), likely because private stations don't have to report to the DoE. However, the NREL has tracked additional private stations and claims a 3.2% growth in private EV charging within the first quarter of 2020 alone. They don't specify whether this growth is from new plugs and stations, or just new plugs at existing stations. Despite their additional research, they still warn that private charging stations are unrepresented in their data. See NREL, *Electric Vehicle Charging Infrastructure: Trends from the Alternative Fueling Station Locator: First Quarter 2020.*

Where Are Most Chargers Located?

Based on data from the DoE's Alternative Fuels Data Center and BlastPoint's proprietary analysis of commercial EV data.

EV Incentives

DoE Alternative Fuels Data Center

Tesla.com, "Electric Vehicle and Solar Incentives"

Car & Driver, "Will There Be an EV in Every Driveway under the Biden Administration?"

Enel X, "Electric Vehicle Rebates and Incentives: A Comprehensive Guide"

NREL, "EV Charging Stations Continued Strong Growth in Early 2020, NREL Report Shows"