



Electric Vehicles Continue to Gain Market Traction

During the first half of 2020, sales of consumer electric vehicles (EVs) in the US outperformed non-electric vehicle sales which have been affected dramatically by COVID-19. While absolute sales units are down versus the first half of 2019, the biggest factors causing this were incentives for the purchase of Tesla Model 3 vehicles during the first half of 2019 and COVID-19 related supply chain issues. For some vehicles such as the Chevy Bolt and Audi e-tron, sales were actually better in the first half of 2020 than they were in the same period during 2019.

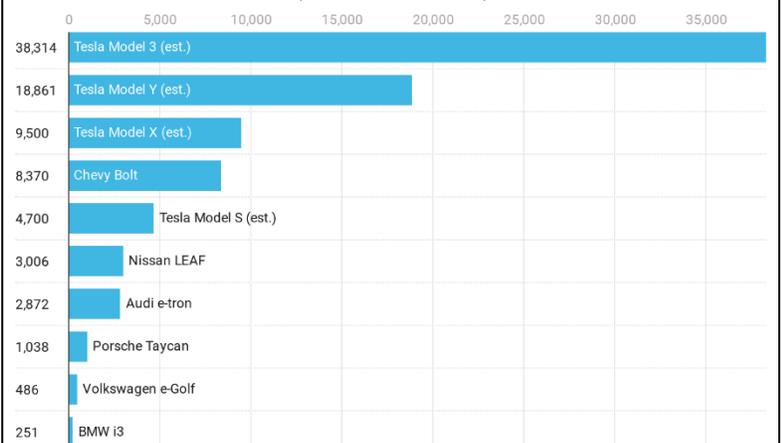
Meanwhile, the race for automakers to introduce new vehicles continues at its rapid pace. Some of the new vehicle introduction highlights include:

Lucid, a startup in the EV market, [announced this month](#) that their Air electric sedan will have a range of over 500 miles. More importantly, this estimate is based on testing an actual vehicle against the US Environmental Protection Agency (EPA) test cycle and adjustment factors. One of the keys to Lucid's success is their 900-volt architecture, and Atieva (Lucid's battery arm). Atieva also is the official battery supplier for FIA Formula E racing, which probably helps their battery performance.

General Motors: Hot on the heels of the new Corvette C8 mid-engine car, it looks like GM might be developing an electric version of the Corvette. [GM filed a trademark](#) this month for the name "E-RAY", which sure sounds like a placeholder for an electric Corvette. Since many of the exotic supercar manufacturers have incorporated electric (or partially electric) drivetrains over the past few years, it is not surprising to see Chevrolet pursue the same course, especially when GM now has a total of twelve new EVs across its portfolio.

Volkswagen recently [announced](#) that they will start developing electric vehicle batteries at its US facility in Chattanooga, Tennessee. These batteries will be utilized for Volkswagen EVs focused on the US market.

US Electric Vehicle Sales (1st Half of 2020)



Several electric vehicle models not included here. Tesla sales figures are informed estimates.
Chart: CleanTechnica · Source: Automakers, EV Volumes, Troy Teslike, CleanTechnica · Created with Datawrapper



Join Our Aug 27th Webinar on Vehicle to Grid Deployment for EV Fleets

Vehicle to grid is one of the hot technologies today in clean energy, and it has great promise for electric vehicle (EV) fleet operators. Join Blue Bird, Nuvve, and Rhombus Energy Solutions at our webinar on “Best Practices for EV Fleet Operators Looking to Deploy Vehicle to Grid (V2G) Technology” on Thursday, August 27, 2020 at 9:00am Pacific time. Even if you cannot attend the live webinar, please still register – all registrants will receive a link to the webinar recording and a PDF copy of the slide set. Register for the webinar [here](#).



EPA Creating an Energy Star Program for DC Fast Chargers

EPA’s Energy Star rating has become a standard fixture in the electronics world. Currently, the only EV chargers that EPA has an Energy Star program in place for are Level 1 and Level 2 chargers. Building on that, EPA is now proposing an Energy Star standard for DC fast chargers. If the requirements are similar to those for Level 1 and Level 2 chargers, they will include modes of operations to minimize power usage when a vehicle is not being actively charged. EPA expects the standards to be ready in late 2020 or early 2021.



Electric Truck Deployments Expected to Pick Up Rapidly

According to a [new study](#) by Wood Mackenzie, there will be over 48,000 medium/heavy duty (M/HD) electric trucks on the road in the US by 2025. There were only roughly 2,000 M/HD electric trucks in the US at the end of 2019, representing a growth rate of 73% per year. Factors driving the growth in these EVs include reduced fuel and maintenance costs (37% and 46% reduction, respectively), government incentive programs, and cooperative programs with utilities where they build and commission the charging site. For California deployments, an additional incentive are the Low Carbon Fuel Standard (LCFS) credit. It is estimated that for a M/HD vehicle driving 60,000 miles per year, the credits generated could have a value of nearly \$34,000 per year.



An example of the increasing popularity of M/HD electric trucks is the order that startup [Nikola](#) just [received](#) from Republic Services (the second-largest refuse hauler in the US) for a minimum of 2,500 trucks, with options for a total of 5,000 trucks. According to Nikola’s press release, they will begin testing early in 2022, and will start shipping the product vehicles in 2023. And the M/HD electric truck market is not just for startups – Volvo recently staged several [test drives earlier this year](#) of their VNR Class 8 electric truck in Southern California. Expect entries from more companies as electric drivetrains for M/HD vehicles increase in availability from current conventional drivetrain manufacturers.

New Content from Rhombus Energy Solutions

Rhombus Energy Solutions has several new pieces of content focused on vehicle to grid (V2G) technology. They include:

- [“Implementing Vehicle to Grid \(V2G\) from a Fleet Operator’s Perspective”](#) Solutions Brief (July 2020)
- [“Rhombus Energy Solutions Announces UL 1741-SA Certification for Its AC-DC High-Power Charging Systems for Fleet Electric Vehicles”](#) Press Release (August 11, 2020)
- [“Vehicle to Grid – Its Value to EV Fleets”](#) Video (August 2020)

We will be releasing more content on a regular basis. Over the next few months, we will be focusing on charging for medium/heavy duty (M/HD) EV fleets.

Quick Notes from the Electric Vehicle (EV) Ecosystem

Some interesting links to stories in the EV ecosystem during the past month:

- [BMW Group signs long-term contract with Swedish company Northvolt for 2 billion euros worth of electric vehicle batteries.](#)
- [Rivian, Neo, and Nikola cited as leading EV startups by Guidehouse.](#)
- [GM discloses information on upcoming electric Hummer.](#)
- [Center for Transportation and the Environment releases guidebook for deploying zero-emission transit buses.](#)
- [EVgo fast-charging network expansion gets a jumpstart in funding from GM.](#)
- [Nissan launches V2G pilot in Australia.](#)

About Rhombus Energy Solutions

Rhombus develops and manufactures next-generation bi-directional electric vehicle charging infrastructure, high-efficiency power conversion systems, and energy management system (EMS) software for vehicle-to-grid (V2G) capable electric vehicle fleet charging, energy storage, and microgrid applications. The high reliability of our solutions is the result of decades of experience developing high-power systems for a variety of applications and deployment scenarios, including UL-1741SA system-to-grid solutions. For more information, please visit www.rhombusenergy.com.

