



Bezos Earth Fund Provides \$100M Grant to Electrify US School Buses by 2030

The task of electrifying the over 450,000 school buses in the US just got a kickstart from the Bezos Earth Fund, which provided \$100M to the World Resources Institute (WRI) over a five-year timeframe. School buses are an excellent use case for electrification for various reasons:

- The routes that school buses drive are predictable
- The air pollution created by diesel buses is significant, and some of which is inhaled by its passengers (school children)
- The school bus use case is perfect for vehicle to grid (V2G) usage since the buses are in the bus yard during mid-day and in the evening (peak load hours for most cities)

The Bezos Earth Fund grant money will augment funding for school bus electrification from a variety of other organizations, including state organization and utilities. The use of school buses for V2G has especially been of interest and has led to a number of shareholder-owned utilities to invest in helping school districts to electrify their buses.

Will Electric Filling Stations Take Off, and What Will They Look Like?

By now we all know that charging an electric vehicle (EV), even with a high-power fast DC charger, is fundamentally different than filling up an internal combustion engine (ICE) vehicle at a gas station. A typical car can be filled from empty with gasoline or diesel fuel in roughly 10 minutes – enough time to get a cup of coffee or a bottle of water. Fully charging an empty vehicle like a Tesla Model S (85kWh battery) with a Tesla V1 or V2 Supercharger takes 75 minutes, which is long even for a lunch stop. That means that an electric vehicle charging station certainly needs to be able to accommodate more vehicles. Food or restaurant choices also seem logical, as would cubicles to work at. Maybe even a workout area?



[Gridserve](#) has just offered up their vision of an EV filling station with their Electric Forecourt, which opened this month in Braintree, United Kingdom. In addition to the standard convenience store accommodations such as food and groceries, the station has thirty-six charging stalls, meeting rooms, and the ability to test-drive new EVs if you are in the market. Gridserve plans to open one hundred of the Electric Forecourts over the next five years. Of course, these stations will also include solar power generation and energy storage resources to ensure that they are a reliable source of power for their EV clients.

Rhombus Energy Solutions Chosen as “Best CleanTech Company”

Today [Rhombus Energy Solutions](#) was named as the “Best CleanTech Company in 2020” by the [Centrepolis Accelerator](#), a division of Lawrence Technological University. Rhombus competed with a number of Michigan companies for awards in five different categories and was chosen by public vote as the Best CleanTech Company. The award recognizes companies with the best clean energy, energy efficiency and sustainability technology or products. The award was delivered today at a virtual ceremony which was attended by Kent Harmon.

“Rhombus epitomizes the reason that these awards were created – to recognize companies whose products are changing our world for the better,” said Daniel Radomski, Director of the Centrepolis Accelerator at Lawrence Technological University. “Rhombus high-power bi-directional electric vehicle chargers are helping to advance the electrification of medium and heavy duty vehicles, reducing air pollution and increasing energy efficiency in the transportation sector. And what’s more exciting to us, they are developing and manufacturing these products right here in Michigan! We look forward to a continued partnership with Rhombus.”



Toyota Jumps Into the All-Electric Vehicle Pool

[Toyota](#), who was a leader in bringing hybrid vehicles to market but has been a laggard in battery electric vehicles, announced that they will launch an all-electric SUV in early 2021. The sketch of the vehicle that was released by Toyota (shown here) looks a lot like some of their small or midsize SUV offerings (maybe the Toyota CRV or Highlander?). The vehicle is first being launched in Europe, but a US version is widely expected, given the rapid speed which EVs are taking off in the US and the dominance of Tesla in this market segment. It is believed that this vehicle came out of the Toyota-Subaru partnership announced in 2019. No pricing has been provided for the new vehicle, which would compete with the Tesla Model Y (among others).



Rhombus Energy Solutions Smart Multiport Inverter Listed by CEC

Last week, the Rhombus 30kW/60kW Multiport Smart Inverter was approved for addition to the California Energy Commission (CEC) Solar Equipment List. The Rhombus Multiport Smart Inverter is one of only a few products in this power range that support connection to both photovoltaic (PV) solar and battery-based energy storage resources, making it an excellent fit for behind-the-meter usage in commercial and small/medium industrial applications.



And If You Have A Little More To Spend, Get an Electric Lotus



While many of the established supercar manufacturers have been building hybrid sports cars over the past decade ([McLaren](#) in particular), few have jumped into the all-battery supercar market. Tesla's recent announcement of their newest [Roadster](#), which claims the top spot

worldwide for acceleration (0-60 in 1.8 seconds) will probably change that dynamic. The Tesla Roadster is probably at least one of the reasons that [Lotus](#) (owned by the Chinese company [Geely](#)) just [announced](#) a battery-powered SUV called Lambda. The vehicle will have a range of 360 miles minimum, and will be available with powertrains capable of 600 bhp and 750 bhp, which should provide LOTS of acceleration. It will join Lotus' new electric hypercar called the [Evija](#), which launches in the 2021 model year with 2000 bhp and a price of \$2,300,000. Only 130 Evijas will be built (and it won't be street-legal in the US), but Lotus is expanding the manufacturing capacity of their plant in England to 10,000 vehicles per year (primarily cars). Perhaps an electric version of the Evora (about \$90,000 for the gasoline model) will be the next addition to the Lotus lineup - one can hope...

Southern California Edison to Expand Grid-Scale Battery Storage

Hot on the heels of the largest energy storage procurement in California, [Southern California Edison \(SCE\)](#) just added [several new battery deals](#) to its energy storage resources by signing contracts for a total of 585MWh of lithium-ion batteries. These deals, with NextEra Energy (325MW), Recurrent Energy (200MW), and 174 Power Global and the Hanwha Group (60MW), are to smooth the availability of power from renewable resources, in support of California's goal to have 100% of its power come from



renewable, carbon-free sources. “Bringing more utility-scale battery storage resources online will improve the reliability of the grid and further the integration of renewable generation resources, like wind and solar, into the grid,” said William Walsh, SCE vice president of Energy Procurement & Management. “As California transitions to 100% clean renewable energy to reduce the greenhouse gas emissions that are driving climate change, battery storage will play a key role in harnessing the value of these cost-effective, carbon-free resources in a reliable manner.” These three acquisitions will bring SCE’s energy storage capacity to 2,050MW, and are expected to come online between August 2022 and August 2023.

Quick Notes from the Electric Vehicle (EV) / Energy Storage Ecosystem

- [UK’s first electric-only car charging station opens for business](#)
- [Electric vehicle charging times make some Americans hesitate: The Indicator from Planet Money](#)
- [Lawmakers want data to decide the future of America’s electric vehicle charging infrastructure](#)
- [Apple, ChargePoint team up on electric vehicle charging info](#)
- [Aptera is back with a new EV it says doesn’t need charging](#)
- [Electrify America Surpasses Milestone: More than 500 Electric Vehicle Charging Stations Open to Public](#)
- [Volvo to launch a range of electric trucks in Europe by 2021](#)
- [Fluid truck orders 600 Lightning electric trucks and vans](#)
- [Despite Nikola’s woes, electric truck plan progresses in Arizona](#)
- [BMW’s new electric pickup truck looks great](#)

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-1741-SA system-to-grid solutions. For more information, please visit www.rhombusenergy.com.

