Last week, the Rhombus RES-DCVC60-480-V2G Power Control System (PCS) and RES-D2-CS20-V2G remote dispenser were added to the Approved Products List (APL) for the Southern California Edison Charge Ready Transport Program for medium duty and heavy duty (MDHD) electric vehicles (EVs). The addition of these products to the APL means that they are eligible for rebates on their purchase which are funded by California utility ratepayers under the auspices of the California Public Utilities Commission. These rebate apply to both the Rhombus-branded and Nuvve-branded versions of the products.

These products, which are part of the Rhombus Energy Solutions DC fast charger lineup, are designed and manufactured in the USA and are UL 1741-SA certified, enabling their use for V2G deployments. When combined with Nuvve's proprietary V2G technology, they provide a means for EV fleet operators to utilize their vehicles as a source of energy storage. The combination of Nuvve's V2G aggregation platform and Rhombus's high-power fast DC chargers provides fleet operators for vehicles such as school buses, public transit buses, and municipal vehicles to significantly reduce their energy costs, and provide emergency power during power outages. You can read the joint Rhombus/Nuvve press release here.
Advanced Clean Transportation (ACT) Expo: Lots of New EVs!

Tradeshows tend to be a place where new products are launched, and in this respect the ACT Expo in Long Beach (August 30-September 2) did not disappoint. A number of new vehicles were introduced at the ACT Expo; a quick summary of some of this is shown in the paragraphs below (you can see many of the press release announcements from the ACT Expo [here](#)).

**BYD Gen3 E88 and 6F Electric Trucks:**
BYD has made a name for itself by focusing on medium- and heavy-duty (M/HD) vehicles. At the ACT Expo, BYD introduced two new heavy EV trucks, the 8TT and 6F. Both trucks feature a 185kWh battery capacity and a range of up to 200 miles (depending on their configuration). The trucks are designed for drayage, regional hauling, and distribution tasks. These vehicles join BYD’s deployed fleet of over 8,000 trucks worldwide, of which 200 are deployed in the US.

**Navistar Electric International eMV™ Series Trucks:** Navistar’s eMV Series was also announced at the ACT Expo. The series is a set of four different medium-duty trucks, with wheelbase lengths of 217 inches to 272 inches. The vehicles incorporate a 210kWh battery pack that can produce a continuous power of 215 HP, and feature regenerative braking capabilities.

"The entire Navistar team is proud of our progress in eMobility and our thoughtful approach on accelerating the adoption of zero emissions vehicles," said Gary Horvat, vice president, eMobility. "We are centered around providing a complete ecosystem solution that will allow our customers to seamlessly integrate our EVs into their fleets and are confident the eMV will provide an extremely positive total ownership experience."
CityFreighter CF1 Electric Box Van:
CityFreighter introduced the beta version of their CF1 last-mile delivery van at this year’s ACT Expo. The DoT Class 3 device has over 700 cubic feet of cargo volume, which is approximately 25% greater than competitive cargo vans. The vehicle also provides multiple displays for the driver to utilize. The company aims to start shipping the vehicle in 2024, with a target price of under $60,000.

Rhombus Energy Solutions Launches Its RES-D3-CS20 Remote EV Dispenser with Sequential Power Switching (SPS)

Rhombus Energy Solutions also launched the new RES-D3-CS20 Remote EV dispenser for DC fast charging (DCFC) at the end of August. The new dispenser was showcased at the ACT Expo and at the Electric & Hybrid Vehicle Technology (EHVT) Expo in Novi Michigan (September 13-16). The D3 remote dispenser is compatible with existing Rhombus AC-DC Power Control System (PCS) units, and was announced the Thursday before the ACT Expo (you can download the D3 dispenser data sheet, application notes, and press release here). The “killer feature” for the D3 dispenser is Rhombus’ Sequential Power Switching (SPS) technology, which allows up to five (5) dispensers to be connected to a single Rhombus PCS. Since the DC high-voltage switching circuitry in the SPS-enabled dispensers is resident in the dispenser itself, they do not require any external high-voltage DC switching gear next to the PCS (many competitive designs do require this). SPS also significantly reduces the amount of trenching required during the installation process by allowing dispensers to be connected in series. With trenching prices reaching up to $20,000 per 1000 feet of trench, this can be a huge savings for large vehicle yards which often have to accommodate one hundred or more vehicles simultaneously. The end result is both a significant reduction in the overall system’s procurement cost and in its deployment cost.

Who Thinks EV Subsidies Are a Bad Idea? Apparently Toyota Does

Toyota has been long known as a pioneer in clean vehicle technologies, from being one of the first companies to introduce hybrid vehicles in the late 1990s, to hydrogen-powered fuel cell
vehicles in the 2000s. Toyota has also launched a battery-powered RAV4 (though the vehicle is only available today in China). Which makes Toyota's public outcries against battery electric vehicles (BEVs) the more curious. And according to a recent New York Times article, this resistance to BEVs now has included private back-room meetings a number of US Congress staffers to oppose Biden administration efforts to promote BEVs. Unsurprisingly, a number of the people Toyota senior management officials met with were Republican staffers, who have generally opposed any efforts related to mitigating climate change. Whether these moves are to give Toyota more time to make their hydrogen fuel cell vehicles more commercially successful, to buy time to “catch up” on BEVs, or just to maintain the status quo is unclear, but it is certainly puzzling for a company that continues to talk about climate change and what they are doing to help the environment.

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

- Battery swapping specialist Ample raises $160M in Series C Funding
- Rivian files for IPO at $80 billion valuation
- Motor Trend finds Lucid Air Dream Edition has a range of up to 517 miles in rave review
- VIA Motors to be acquired by Ideanomics
- Tesla gets 4 models certified in India, could enter market soon
- Mercedes-Benz launches electric bus chassis for Brazilian market
- Performance Team orders 16 Volvo VNR Electric Class 8 trucks
- Electrify America to provide charging infrastructure, including on-site generation and storage, for NFI drayage trucks at California ports
- Joby Aviation teams with NASA to measure noise footprint of electric air taxi

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.