



ACT EXPO 2019 - APRIL 24, 2019



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ACT Expo Fleet Awards

The ultimate recognition of fleets who show true leadership in transportation

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Major Announcements from Kenworth, Nikola, BYD, and Others Signal Real-World Adoption of Zero and Near-Zero Emission Commercial Transportation Technologies



READ MORE ABOUT Kenworth on page 5, Nikola on page 7, and BYD on page 10.

Major Announcements Today in the Expo Hall

12:25 – 12:40pm The Lion Electric Co. Will Announce Its First US Customers for the All Electric Class 8 Urban Truck, **Booth #1800**

12:40 – 1:00pm Mitsubishi Fuso Will Unveil a New Alternative Fuel Medium-Duty Truck, **Booth #1435**

1:00 – 1:25pm Allison Transmission (Formerly AxleTech) Will Unveil Several New Products in the Electric Vehicle Space, **Booth #1447**

1:25 – 1:55pm Volvo Trucks North America Will Be Giving a Media Presentation "Connecting the Bigger Picture" and Explore the Future of Sustainable Transport Solutions, **Booth #1634**

1:55 – 2:15pm Meritor Is Making a Major Announcement, **Booth #1800**

2:30 – 2:50pm Dana Is Making a Major Announcement, **Booth #1847**

2:50 – 3:15pm The California Air Resources Board, the South Coast Air Quality Management District, and Volvo Group North America Are Announcing CARB's Selection of SCAQMD as the Grantee for the Volvo Low Impact Green Heavy Transport Solutions (LIGHTS) Project, **Booth #1634**

3:15 – 3:40pm AMPLY Power Will Announce a New Platform, AMPLIFY, That Optimizes Charging and Depot Operations for Commercial Fleets, **Booth #1913**

3:40 – 4:00pm CityFreighter Will Unveil a Prototype of Their Medium-Duty CF1 Last-Mile Electric Delivery Truck, **Booth #1926**



4:00 – 4:20pm Trillium Will Announce PowerUP by Trillium, a New Recharging Solution for Electric Fleets, **Booth #1010**

4:20 – 4:40pm ROUSH CleanTech and HARCOR Will Announce the New Ultra-Low NOx Vehicles to Deliver Airline Meals, **Booth #735**

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eM2

Welcome to ACT Expo 2019

The largest advanced transportation technology & clean fleet event.

On behalf of Gladstein, Neandross & Associates [Booth #1119], welcome to the ninth annual Advanced Clean Transportation (ACT) Expo! I want to extend an especially warm welcome to our many attendees, exhibitors, and sponsors who have traveled across the country and globe to join us here in Southern California—the epicenter of advanced clean technology. I would also like to thank and recognize our presenting sponsors, Penske Truck Leasing, Daimler Trucks North America, and Meritor, for their support and leadership, and for sharing our vision for a future where commercial transportation is helping to better protect our environment and is highly connected, cost-effective, and technologically advanced.

We are witnessing such an exciting and pivotal time for our industry. There has never been more attention, advancement, and investment in zero and near-zero technology as we have seen in the last year—which attendees will experience firsthand throughout the week at ACT Expo.

Along with this year's record-setting attendance, we have incredible support and participation from nearly all top OEMs, global Tier 1 suppliers, major fleets, and stakeholders from throughout the transportation sector. These leaders are working to transform an entire industry by setting ambitious goals and continuing to develop innovative technologies and vehicles.

Attendees have come to expect a huge variety of product debuts, vehicle unveilings, and new equipment showcased on the expo hall floor—and this year will certainly not disappoint. ACT Expo has become the destination, not just for fleets to explore and experience the latest alternative fuel technology and



products available, but where partnerships, investments, and collaborations happen. This year, more than any previous year, we are seeing substantial participation from top executives, leaders, and C-suite decision makers, signaling to the industry that ACT Expo is the place where business happens.

We created this year's conference programming to focus on the megatrends happening across the country and to cover the topics most top-of-mind for the entire industry, including connected vehicle technologies, fuel efficiency improvement strategies and equipment, drivetrain electrification, and more. This year, we are proud to expand to include the broader global goods movement industry, including the port terminal and aviation sectors.

We are thrilled to begin today's events with a welcome address given by Jay Craig, CEO and president of Meritor, followed by a keynote presented by president and CEO of Daimler Trucks North America, Roger Nielsen, who will be sharing how Daimler is helping to lead the industry forward toward the future of medium- and

heavy-duty trucking. In addition, there will be a special recognition ceremony to announce a significant milestone in the development of zero emission truck technology given by South Coast Air Quality Management District board member, Janice Hahn.

Next up is a powerhouse panel not to be missed—Ike Brown, vice-chairman, president, and co-owner, NFI Industries; Trevor Milton, CEO, Nikola Motor Company; Paul Rosa, senior vice president of procurement and fleet planning, Penske Truck Leasing; and Peter Voorhoeve, president, Volvo Trucks North America, will be providing their in-depth insights into the state of alternative fuels and connected tech.

Following the general session, there will be more than a dozen press conferences held by sponsors and exhibitors in the expo hall to unveil new vehicles and make major corporate announcements.

Tomorrow is another day packed with valuable networking opportunities and engaging programming, including a four-part EV charging infrastructure workshop, a bio-fuel bonanza breakout session dedicated to exploring the next generation of biofuels, and a medium- and heavy-duty electric truck technology showcase.

On Friday, don't miss the ride & drive where you will have the chance to get behind the wheel and test drive the latest advanced clean vehicles spanning all alternative fuels and vehicle applications, including vehicles making their debut here at ACT Expo.

Check back with ACT News Live, our daily digest of happenings at the show and your guide to sessions and the show floor.

Welcome to ACT Expo 2019!

Erik Neandross, CEO
Gladstein, Neandross & Associates

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2019 ACT Expo Fleet Awards Leaders Recognized Across the Industry

Organizers of ACT Expo announced the winners of the 2019 Fleet Awards. The Fleet Awards Reception, presented by the Propane Education & Research Council (PERC) [Booth #639], took place Tuesday night with cocktails, gourmet bites, and entertainment to celebrate the winners.

The ACT Expo Fleet Awards are the ultimate recognition of fleets and individuals who show true leadership in transportation, having gone above and beyond what has been required to tirelessly pursue sustainability in their fleet operations.

The 2019 ACT Expo Fleet Award categories and winners are as follows:

Leading Carrier Award

Winners of this award are organizations that have demonstrated a commitment to a sustainable supply chain. Finalists in this category included Quik Pik Express, NFI, and Dillon Logistics Inc. The 2019 Leading Carrier Award winner is **Dillon Logistics Inc.**, a natural gas leader in heavy-duty trucking for liquid and dry bulk over-the-road trucking,

expanding their fleet of clean-burning liquefied natural gas (LNG) and compressed natural gas (CNG) vehicles.

Leading Public Fleet

This category recognizes fleets that have demonstrated leadership in the procurement and deployment of alternative fuels and advanced vehicle technology. Finalists included the New York City Department of Sanitation, Port Authority of New York and New Jersey, City of Toronto, and the University of California, Irvine. The 2019 Leading Public Fleet Award winner is the **University of California, Irvine Transportation and Distribution Services**, ensuring their "right size" and "right fuel" goals help their 52,000 students breathe cleaner air as the fleet incorporates their electrification plan.

Leading Private Fleet

Winners of this award are private-sector companies that have gone beyond requirements to green their fleet. Finalists in this category



Attendees, nominees, and winners gather for the fourth annual event to honor those making commitments to sustainability and clean transpiration in their operations.

included Coldstar Solutions Inc., Matheson, Athens Services, and GSC Logistics. The 2019 Leading Private Fleet Award winner is **Matheson**, a United States Postal Service mail carrier, operating natural gas vehicles in 30% of their fleet. Matheson has committed

■ continued on page 9



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Kenworth, Toyota Show First Production Fuel Cell Truck for Ports

After 14,000 miles of testing its prototype hydrogen fuel cell heavy-duty trucks, Kenworth and Toyota reveal the first emission-free unit for port service late this year.

TRUCKS.COM | The first production fuel cell powered heavy-duty truck jointly developed by Kenworth Truck Co. (Booth #939) and Toyota Motor Corp. (Booth #1307) will begin service in the fourth quarter this year, the companies said Monday.

The goal is to develop green cargo-hauling trucks that can replace diesel big rigs and reduce pollution at the ports of Los Angeles and Long Beach complex, the nation's largest.

The new truck is the first of 10 planned under a \$41 million California Air Resources Board (Booth #1727) grant matched by Kenworth, Toyota, and Royal Dutch Shell. They are part of the "Shore to Store" project of California Climate Investments, which supports greenhouse gas emissions reductions with money from the sale of carbon credits.

Toyota Logistics Services will operate four of the trucks. United Parcel Service will get three, Total Transportation Services Inc. will get two, and Southern Counties Express will get one.

"With more than 10,000 alternative fuel and advanced technology vehicles in our fleet today, UPS has a long history of pioneering and evaluating technologies that aid us in decreasing our environmental footprint," said Carlton Rose, UPS president of global fleet maintenance and engineering.

The Kenworth/Toyota fuel cell electric truck was retrofitted with two fuel cells originally designed for the Toyota's fuel cell sedan, which the Japanese automaker leases in California.

"Toyota is committed to fuel cell electric technology as a powertrain for the future," said Bob Carter, Toyota executive vice

president for automotive operations. "It's a clean, scalable platform that can meet a broad range of mobility needs with zero emissions."

The Los Angeles and Long Beach port complex is the largest trade gateway for containerized cargo in North America. The ports handle 20% of all US-bound cargo. Particulate matter and carbon dioxide emissions from the 16,000 trucks entering and leaving the ports daily negatively impact the air quality in the surrounding communities.

The "Alpha" and "Beta" fuel cell trucks have logged more than 14,000 miles of testing and real-world drayage operations in and around the two

California. They will be located in Wilmington, near the ports, and Ontario, a warehousing hub located 56 miles inland from the ports. When networked with three existing hydrogen fueling stations located at Toyota facilities and two operated by Air Liquide, more than one ton of hydrogen will be available daily.

The Kenworth-Toyota truck showing comes a week after startup Nikola revealed the production version of its Nikola Two heavy-duty fuel cell truck targeted for late 2022. Nikola's trucks were developed from a clean-sheet approach instead of converting an existing truck.

Nikola, Toyota, and Shell are among a group of automotive and industrial companies working together to standardize hydrogen-fueling components that could get fuel cell electric trucks on the road faster.

The group, which includes Hyundai, Norwegian hydrogen station builder NEL Hydrogen Fueling, and French industrial gas maker Air Liquide, wants the fueling nozzle, vehicle receptacle, dispenser hose, and other components to be useable in all



Toyota's hydrogen fuel cell truck has an estimated range of more than 300 miles, twice that of a typical drayage truck's average daily duty cycle.

Southern California ports over the last two years. Their only emission is water vapor.

The new truck extends the range of two of Toyota's proof-of-concept trucks to more than 300 miles between hydrogen fill-ups. A typical drayage truck averages 150 miles during a daily duty cycle.

Shell plans to develop two large-capacity heavy-duty hydrogen fueling stations in

fuel cell vehicles.

"We absolutely feel there is a place for hydrogen fuel cell electric vehicles," said Mike Dozier, general manager of Kenworth Truck Co., which will build the remaining nine trucks in what Kenworth and Toyota internally refer to as the "Oceans 10" project.

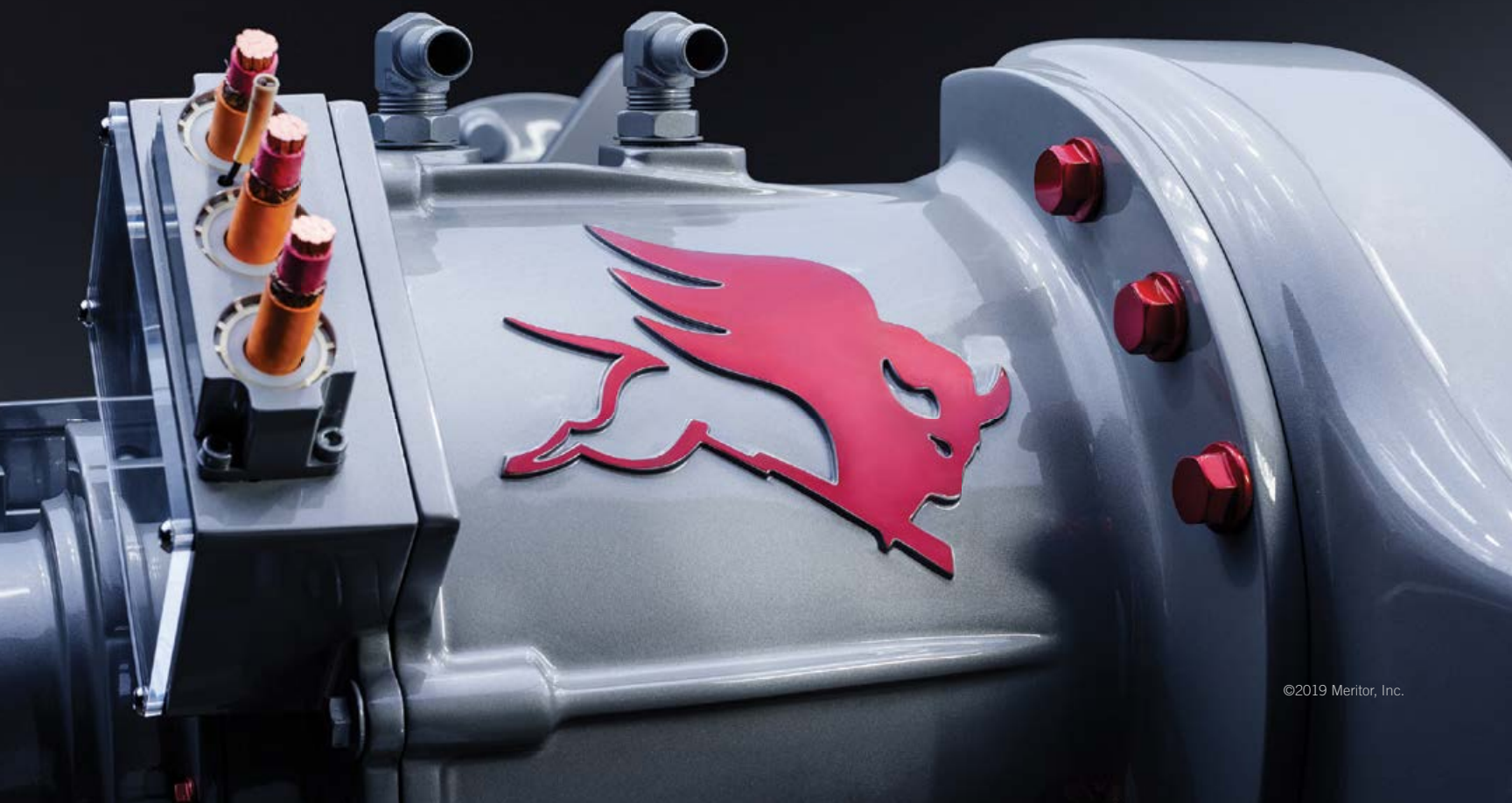
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Nikola's Ambitious Plan for Zero Emission Trucks, Hydrogen Fueling, and Service Network

Fuel cell truck developer Nikola knows its future is tied directly to its ability to provide hydrogen fuel to its customers, and it has a plan that could bring hydrogen to the masses.



TRUCKS.COM | Nikola [\[Booth #2147\]](#) has launched a \$1.5 billion fundraising round to finance its ambitious plans to begin producing fuel cell and battery electric trucks, electric ATVs for personal and military use, a nationwide string of hydrogen-fueling stations, and perhaps even an all-electric personal watercraft.

The Phoenix, Ariz., startup unveiled its corporate blueprint—and working prototypes of two of its hydrogen fuel cell Class 8 trucks—at a lavish, two-day “Nikola World” event in Arizona earlier this month.

Trevor Milton, Nikola’s founder and chief executive, is discussing these plans and the company’s push for a hydrogen future for trucking at this morning’s general session panel, “The State of Alternative Fuels and Connected Tech”.

Milton arrived at his corporate event in Arizona atop a beer wagon pulled by the famed Budweiser Clydesdale horses, signaling his company’s close relationship with Anheuser-Busch.

The brewery giant is a major Nikola development partner and has said that it intends to buy up to 800 of the hydrogen fuel cell models for its fleet of long-haul delivery vehicles. That number would represent about 30% of Anheuser-Busch’s dedicated truck fleet.

US Xpress is another Nikola testing partner

and has said it intends to purchase the company’s hydrogen fuel cell trucks for its fleet. Production is expected to begin in late 2022.

Unlike the Bud wagon, each Nikola truck can deliver about 1,000 horsepower and 2,000 pound-feet of torque and travel up to 750 miles between fueling sessions. The fuel cell trucks use compressed hydrogen gas and are emission-free.

The trucks “will play a key role in our plans” to slash carbon emissions by 25%, said Ingrid de Ryck, Anheuser-Busch’s vice president for sustainability.

Nikola claims more than 13,000 non-binding advance orders for its trucks. The Nikola One sleeper and Nikola Two day cab models are for the North American market and the Nikola Tre day cab are for the European market.

Nikola is offering battery electric models of the day cab trucks for customers who don’t need the longer-range capabilities of a fuel cell truck. But Milton expects they will account for less than 20% of sales. Fuel cell trucks will be Nikola’s major product, he said.

Fuel cells produce electricity in a process that splits electrons from hydrogen. Fuel cell trucks carry their own hydrogen and can be refilled relatively quickly. Otherwise, they operate with all-electric powertrains, the same as battery electric trucks.

To keep them running, Nikola plans a

network of hydrogen stations, with 700 to be built in the US and Canada.

The company is partnering with Norway’s NEL Hydrogen for development of the stations. Milton has said that wherever possible, the stations will produce hydrogen on-site using solar or wind energy to further reduce greenhouse gas emissions.

Nikola has partnered with several commercial suppliers, rather than build the trucks on its own. Robert Bosch dedicated 50 engineers to the project. Brake-systems supplier Wabco Holdings Inc. worked with Nikola to develop stability control in the Nikola Two.

Nikola’s marketing plan is to lease or sell trucks, maintenance—by Ryder System [\[Booth #1647\]](#) and Thompson Caterpillar—and fuel for about \$950,000 in a million-mile package. That will cost trucking companies less over the million-mile life of the plan than the Class 8 diesel trucks they now operate, Milton said.

To date, Nikola has raised about \$300 million, Milton said. The company has built a headquarters and research facility in Phoenix and is beginning work on fuel cell development and a testing lab as well as a \$1 billion truck plant. At its recent event in Phoenix, Nikola launched a \$1.5 billion investment driver.

Be sure to catch all the trucking, freight and logistics news at [Trucks.com/news](https://www.trucks.com/news).

Back to the Basics of Alt. Fuels and Clean Transportation Tech

ACT Expo kicked off with a session tailored to alternative fuel vehicle newcomers, in the first ever "Clean Fuel Vehicle Bootcamp." GNA President Cliff Gladstein shared the key market drivers compelling fleet operators to move to alternative fuels—including air pollution and climate protection regulations, the desire to reduce operating costs, and corporate sustainability goals and mandates. During this one-hour intro session, Gladstein provided guidance on key questions that fleet operators should ask to determine the technologies and fuels that will provide the best economic and environmental performance for their unique operations. Each attendee received an AFV Expert certification after reviewing the new developments in the alternative fuels and advanced vehicle technology industry.

Workshop Recap: Connected Vehicle Technology Workshop 2.0

With the emergence of connected technologies, the transportation industry has seen a huge opportunity for improved operational, economic, and environmental performance.

During this full-day workshop, attendees learned about the connected technologies available today and how to leverage them to maximize performance while improving safety and compliance. Speakers from Daimler Trucks North America, Volvo Group, and Hino Trucks kicked off the day with a discussion on OEM technology across all weight classes.

The workshop featured a keynote presentation from Sherry Sanger, senior vice president of marketing at Penske Truck Leasing. Sanger shared insight into the array of connected and autonomous vehicle technologies—such as driver-assisted platooning—that Penske is evaluating to continue providing a superior user experience for its vehicle leasing customers. The presentation continued with Sanger discussing the key factors that will impact the commercial success

of heavy-duty electric vehicles, including range, weight, cost, charging time. To wrap up, Sanger reinforced the critical need to attract new talent into the transportation sector that



Sherry Sanger, SVP of Marketing, Penske Truck Leasing

can help the industry continue developing the increasingly complex technologies that fleets need to reduce costs and emissions and improve safety on our roadways.

The afternoon focused on telematics, sensors, and other tech to maximize fleet assets. Attendees left the workshop with a better understanding of the use cases and opportunities of vehicle-to-grid energy storage.

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ACT Expo Fleet Awards

to assist the USPS in achieving their goal of reducing diesel use 20% by the year 2020.

Transit & Mobility

This category recognizes organizations that have demonstrated leadership in sustainable passenger transport including buses, taxis, carsharing, and shuttles. This year the category included winners in both transit bus fleet and a school bus fleet.

Finalists included SporTran, Bethel School District, San Antonio's VIA, and San Diego Metropolitan Transit System. The 2019 Transit & Mobility Award winner in transit bus is **San Diego Metropolitan Transit System**, operating over 300 CNG buses. In 2016, the agency began transitioning its remaining fixed route mini-buses and paratransit buses to propane and by the end of this year the mini-buses and paratransit will be 100% propane.

The 2019 Transit & Mobility Award winner

in school bus is **Bethel School District**, who expanded their use of propane from 10 to 32 buses this year, improving air quality for the young students they transport.

In it For the Long Haul

Often pioneers in their respective fields, organizations that win this award have demonstrated a lifetime commitment to sustainable transportation. Finalists in this category included Paper Transport, FedEx, TTSI, and the City of Oakland. The 2019 In It For the Long Haul Award winner is the **City of Oakland**, with decades of leadership in and commitment to fleet sustainability and innovation.

Organizers of ACT Expo congratulate all of the 2019 Fleet Award winners and nominees as their leadership is setting an example for how fleets of all types and sizes across the country can immediately and cost-effectively deploy advanced clean vehicles.

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Refrigerated Truck Debuts

To help offset the load from the refrigerated system and maximize the vehicle's range, 400 watts of Thermo Lite solar panels are installed on its roof.

Thermo King has made one demonstration vehicle for the U.S. and two for Europe. It plans to test them with current and prospective customers.

"Most customers want to experiment with electrification for their sustainability initiatives and also for the purpose of improved maintenance costs and total operating costs," Hubbard said, "but they don't know what they need yet. They're not sure whether or not 100 miles of range before recharge will suffice for their needs, so that's the basis for this demo unit – to be able to put it into operation with customers and have them give us feedback."

Battery Electric Refrigerated Delivery Truck Debuts at ACT Expo

TRUCKS.COM | Whether it's your local grocery store or Amazon Prime, on-demand food deliveries are on the rise. That's why the electric delivery vehicle maker Chanje has partnered with refrigeration unit supplier Thermo King [Booth #1826] on a prototype zero emissions refrigerated van.

The vehicle will debut on the show floor at this week's ACT Expo.

"The global refrigerated vehicle market is expected to reach \$16.5 billion by 2022."

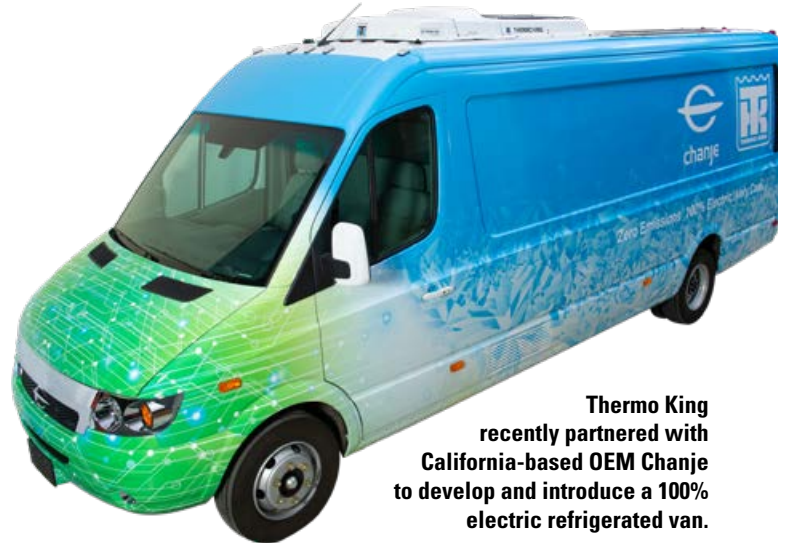
"The global refrigerated vehicle market is expected to reach \$16.5 billion by 2022," said Ian Televik, director of marketing for Chanje, based in Los Angeles. "In the US, we are seeing increasing demand for medium-duty, last-mile refrigerated solutions due to a steady increase in consumers doing their shopping

online and expecting fast home deliveries."

The demonstration vehicle is a version of the Chanje V8100 all electric, medium-duty panel van. It's outfitted with a Thermo King V-520RT refrigeration unit and Thermo Lite solar panels on the roof that help maintain the van's electric range.

The refrigerated box is 400 cubic feet and is designed to stay cool in ambient conditions exceeding 100 degrees for a 10-hour delivery cycle that includes door openings, drive time and delivery stops, according to Steve Hubbard, engineering leader for Thermo King, based in Minneapolis, Minn.

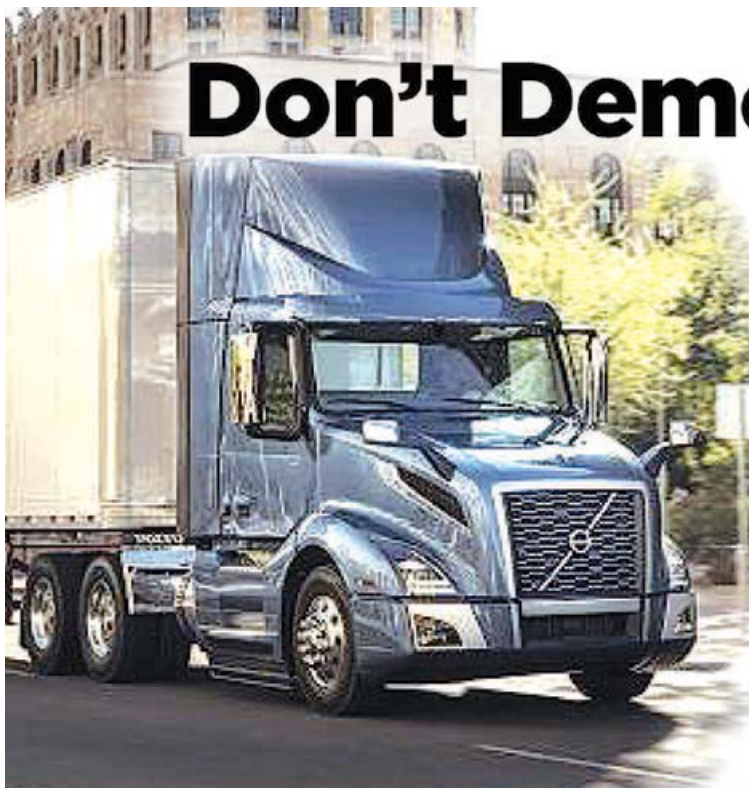
Without the refrigerated unit, the Chanje



Thermo King recently partnered with California-based OEM Chanje to develop and introduce a 100% electric refrigerated van.

V8100 is capable of traveling 120 to 150 miles per charge. "We expect to take 5 to 10% of that available energy for our refrigerated use," Hubbard said, "so it's still well over 100 miles of range."

Continued on page 9



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BYD Debuts Next Generation Battery Electric Yard Tractor Providing Performance, Comfort, and Reliability

Leading electric vehicle manufacturer BYD Motors ([Booth #2007](#)) is making a world premiere on the ACT Expo show floor with its next generation 8Y battery electric yard tractor. Manufactured in Southern California, the new all electric yard tractor is designed to provide performance, reliability, and improved driver comfort along with zero tailpipe emissions and quieter operation than its diesel equivalent.

The unveiling at ACT Expo coincides with the expected delivery of 14 second generation BYD 8Y yard tractors to two BNSF Railway intermodal facilities in Southern California.

First generation BYD 8Y yard tractors have already been in use at railyards and the San Pedro Bay ports since early 2018, helping to reduce emissions near the facilities that handle freight as well as in their surrounding communities. Under the first phase of the project led by San Bernardino Council of Governments (SBCOG) and funded by the California Air Resources Board (CARB) ([Booth #1727](#)), six first generation BYD 8Y trucks went

to work at BNSF intermodal rail facilities in San Bernardino and the City of Commerce as well as three units at Daylight Transport, LLC in the City of Fontana.

Use of those vehicles and feedback from operations personnel provided a wealth of information, allowing BYD to push the state-of-the-art in battery electric trucks to the next level. The second generation yard tractor features improvements that directly reflect feedback received from their first generation yard tractor.

"We listened to the drivers, the operations managers, and the safety officers to make this the best performing yard truck in the industry," said John Gerra, BYD director of business development, electric trucks. "This is a vehicle that proves you

can have both toughness and driver comfort."

The ongoing demonstration project at the BNSF facilities is paid for in large part by a \$9.1 million grant awarded to SBCOG from CARB. The grant comes through California Climate Investments, a statewide program that puts billions of cap-and-trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment—particularly in disadvantaged communities.

"We are excited to be part of this initiative that will help bring zero emission yard

tractors to the Inland Empire. This demonstration leads to the adaptation of cleaner technology on a much broader scale," SBCOG president Darcy McNaboe said. "Coupling this application with our exploration into zero emission train technology is a giant step forward to addressing air quality issues in our county and throughout the region."



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Xos Electrifies Cash-Hauling Loomis Armored Trucks

Xos has signed a deal to electrify two Loomis Armored US trucks with a pending order for 100 more if the test trucks prove their worth.

TRUCKS.COM | Xos ([Booth #1457](#)), the new name for electric truck startup Thor Trucks, will retrofit two Loomis Armored US cash-hauling trucks. An order for 100 more trucks awaits if the test models prove their worth.

Xos will deliver the Class 6 medium-duty

electric armored vehicles as part of a pilot program. Loomis will evaluate the vehicles for 90 days before deciding whether to order more trucks, which would primarily be used in California.

"It seems like a logical choice," said Sam Abuelsamid, an analyst with Navigant Research. "Armored trucks operate mostly in urban areas. So, they don't need a huge amount of range. Electricity makes a lot of sense in reducing costs and emissions."

Loomis is the largest integrated cash-distribution network in the US, with nearly 200 locations,

Newly rebranded Xos is delivering two Class 6 electric armored vehicles as part of an electric vehicle pilot program with Loomis Armored Trucks.

9,000 employees and more than 3,000 vehicles. The Xos/Loomis truck is on display on the show floor at Xos [Booth #1457](#).

"Electric vehicles make a lot of sense for cash-in-transit companies," said Dakota Semler, chief executive of Xos. "They do a lot of idling in city centers as money is loaded in and out of the vehicles."

Xos has existing electrification pilot programs with United Parcel Service and others. UPS will test two medium-duty electric delivery trucks in the Los Angeles area.

The startup successfully demonstrated a prototype of its ET-1 heavy-duty truck, capable of hauling 80,000 pounds of freight 100 miles on a single electric charge.

Xos recently was forced to change its name from Thor Trucks after RV maker Thor Industries sued for name infringement.

Xos is short for exosphere – the outermost section of the planet's atmosphere. It better represents the company's development of cutting-edge technologies while building hardware for commercial vehicles, said Gio Sordoni, Xos chief operating officer.

"Electrification encompasses so much more than just hardware, which gives us lots of opportunities to expand in directions we weren't thinking about in the early days of the company," he said.

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David J. Clamage
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Build Your Dreams®

Clean Cities Coalition Celebrates 25 Years of Building the Right Partnerships to Scale Solutions

Now in its 25th year, Clean Cities coalition [Booth #729] has a lot to celebrate. The national network has grown to nearly 100 coalitions covering more than 80% of the US population. In 25 years, coalition efforts have not only helped put more than 1.1 million alternative fuel vehicles on the road but also helped establish the fueling and charging infrastructure to support them. Clean Cities coalition activities have improved local air quality by avoiding more than 46 million tons of emissions across the US. The US Department of Energy has competitively awarded nearly \$400 million to fund hundreds of coalition-supported transportation projects, resulting in nearly \$800 million more in matching funds and in-kind contributions from the private and public sectors.

The key to Clean Cities coalition's undeniable success and milestones remains—working one-on-one with local

fleet managers to understand their operational needs and develop cost effective solutions.

Through the National Clean Fleets Partnership, Clean Cities works with some of the largest private fleets in the US to implement transportation projects. The initiative provides fleets with resources, expertise, and technical support to evaluate incorporating domestic alternative fuels and fuel-saving technologies and strategies into their operations.

Fuel economy improvement projects like trailer aerodynamic packages, vehicle telematics, driver training, and outfitting fleets with idle reduction equipment have saved over 85 million gasoline gallon equivalents of energy.

Working with fleets directly is critical to developing solutions and scaling infrastructure. One or more fleets' commitment to use an alternative or renewable fuel—whether biodiesel, ethanol, electricity, hydrogen, natural gas, or propane—can make the business case for an independent fuel provider to then develop an alternative fuel station. Just one fleet shifting to domestic energy resources can spark a local shift where other fleets learn from their example and begin to replicate their success.

Once fueling and charging infrastructure is in place, alternative fuels and advanced vehicles can then become viable options for smaller fleets and consumers, which can create economies of scale and tipping points of demand that help transform local markets.

Coalition projects have resulted in a cumulative impact in energy use equal to nearly **8 billion** gasoline gallon equivalents resulting from reduced fuel use and increased fuel diversity.¹



Enough to drive the distance to the sun and back **1,008** times



Enough liquid to fill nearly **1 million** tanker trucks

Coalition projects have helped to put more than **1.1 million alternative fuel vehicles** on the road.²



Coalitions contribute to the expansion of alternative fueling station infrastructure. More than **23,000 fueling stations** nationwide now provide at least one of these fuel types:

Ethanol (E85)	Biodiesel
Compressed Natural Gas	Electric
Hydrogen	Liquefied Natural Gas
Renewable Natural Gas	Propane

Find alternative fueling stations near you at afdc.energy.gov/stations#/find/nearest.

85 million gasoline gallon equivalents

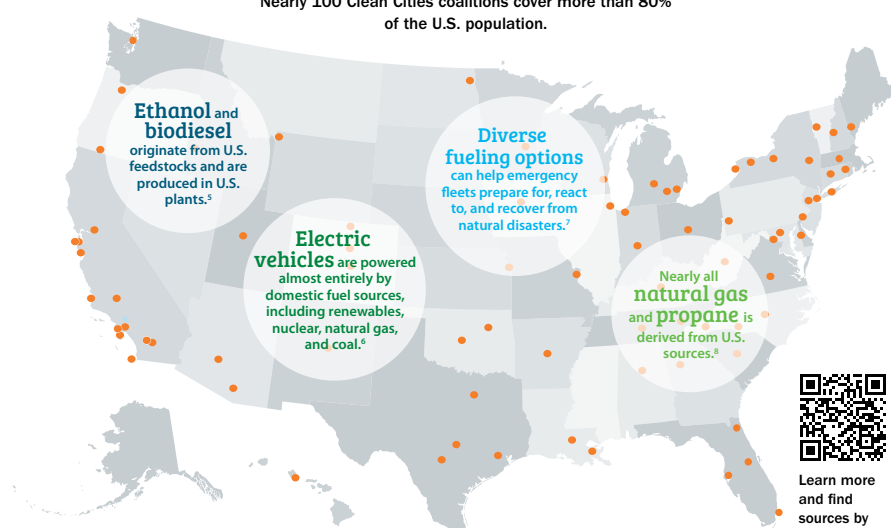
of energy were saved through fuel economy improvement projects like trailer aerodynamic packages, telematics, driver training, and outfitting fleets with idle reduction equipment.²



Clean Cities coalitions have forged partnerships with nearly **13,000 stakeholders** nationwide. Through their collective efforts, they are transforming local and regional transportation markets and offering consumers additional transportation choices.²

Alternative Fuels and Vehicles Strengthen the Nation's Energy and Economic Security

Nearly 100 Clean Cities coalitions cover more than 80% of the U.S. population.



Learn more and find sources by scanning the code.



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Growth of Regional Haul to Present Opportunities, NACFE Report Finds

If you asked most people to describe what trucking is, the answer is likely to contain the words “long-haul”, “cross country,” “coast to coast”, or “over-the-road”. The reality is actually somewhat different. While regional freight moved by day cabs and sleeper tractors has always been a part of the trucking industry, it is an area that has not received much attention or recognition.

The North American Council for Freight Efficiency (NACFE) ([Booth #1963](#)) recently released a report, *Regional Haul: An Opportunity for Trucking* that looks at this growing market segment.

DON'T MISS

NACFE's Press Conference
Thursday, April 25th
1:30pm Booth #1963

Although over the road and long haul may be most commonly associated with trucking, the reality is that 45% of the Class 8 tractors produced today are day cabs and a high percentage of those trucks are involved in regional haul operations.

In addition, according to a trucking industry source, the length of haul has actually been decreasing for some years while regional haul operations have been growing. NACFE defines regional haul as an operation where a truck



Photo credit: Schaller, LLC.

stays within a 300-mile radius of a home base. This may include trucks that return to a home base every day or ones on a route for multiple days but that stay within that 300-mile radius.

The *Regional Haul: An Opportunity for Trucking* report identifies a variety of trends that are likely to impact the continued growth of regional haul operations including:

- Driver hiring and retention
- Growth in e-commerce
- The push towards immediate delivery
- Growth in GPS based asset tracking systems (tractor, trailer, load and driver)
- Advances in technologies such as electric and hybrid vehicles
- Vehicle automation

- Innovations in load matching systems
- Increased use of long combination vehicles
- Data collection and mining
- Vehicle specialization

NACFE believes that if regional fleet continues to grow it will help with the attraction and retention of drivers, as they will be able to get home on a more regular basis—something that has been expressed as desirable by current drivers and those considering truck driving as a career.

Regional operations also open the door to the use of more alternative fueled vehicles. Regional haul will facilitate the development of the infrastructure that needs to be put in place for electric vehicles and vehicles powered by compressed natural gas and liquefied natural gas. Fleets with return-to-base operations will be able to install charging or fueling stations on-premise. This eliminates one of the concerns of alternative fueled vehicles which is that there is not enough infrastructure in place to support fueling of vehicles powered by an energy source other than gasoline or diesel.

The trucking industry is already in the midst of a great deal of change, with more change on the horizon. This offers real opportunities for efficiency gains across transportation, making this an exciting time to be a part of the trucking industry.

As more freight is moved in regional haul operations, we can begin to explore what we can do to make trucking even more efficient and more satisfying for the nation's truck drivers.

—Mike Roeth, Executive Director, North American Council for Freight Efficiency

AxleTech Sells Electric Vehicle Systems Group to Allison Transmission

AxleTech ([Booth #1447](#)), the world's premier provider of off-highway and specialty vehicle drivetrain systems and components, announced the sale of its Electric Vehicle Systems division to Allison Transmission ([Booth #1452](#)), effective immediately. The transaction consists exclusively of assets, intellectual property, products, and people specifically involved in AxleTech's advanced integrated electrification solutions. The deal, finalized on April 16, affects 5% of AxleTech's global employees. AxleTech's core business in the commercial off-highway and defense industries, including certain non-integrated electrification

solutions for off-highway and defense industries, aftermarket, and remanufacturing, will continue to operate under the ownership of The Carlyle Group.

“Several years ago, we established our Electric Vehicle Systems group to develop electric vehicle solutions for on- and off-highway applications as a complement to our 100-year-old off-highway heritage,” said Bill Gryzenia, CEO, AxleTech. “Today, thanks to the incredible job done by everyone involved, it's time to let the advanced integrated electrification solutions enter their next phase of development and commercialization with Allison Transmission. This agreement allows AxleTech to focus on what we do best—traditional powertrain and non-integrated electric solutions for the off-highway and defense industries.”

Commercial Fleets to Benefit from Launch of LAZER Initiative to Reduce Emissions and Cut Costs

GNA and UCR's CE-CERT collaborate to support organizations in evaluating the real-world economic and environmental benefits of advanced transportation technologies in commercial fleet applications.

Gladstein, Neandross and Associates (GNA) [Booth #1119] and the University of California at Riverside's Bourns College of Engineering – Center for Environmental Research and Technology (CE-CERT) just announced the launch of the Low and Zero Emission Readiness (LAZER) Initiative. This new collaboration will support organizations—including transit agencies, refuse operations, trucking carriers, delivery fleets, school districts, municipalities, and more—in evaluating the real-world economic and environmental benefits of advanced transportation technologies.

Across the nation, commercial fleets are increasingly turning to new advanced vehicle technologies and alternative fuels in order to reduce costs and emissions. The development and use of battery electric, hydrogen fuel cell, natural gas, propane, renewable fuels, autonomous and connected technologies continues to expand at an accelerated pace.

With an ever-increasing number of technology and fuel choices in the market, the LAZER Initiative will help these commercial fleet operators and their suppliers to validate the economic, environmental and operational impacts of these advanced technology platforms and

The LAZER Initiative will help commercial fleet operators and their suppliers to validate the economic, environmental and operational impacts of the ever-increasing number of technology and fuel choices in the advanced vehicle technology markets.

alternative fuel powertrains on a full life-cycle basis. Confirming an equivalent or lower total cost of ownership, combined with proven environmental benefits, will assist not only end-users and suppliers, but policymakers and other industry stakeholders alike.

The initiative brings together two global leaders with unique and complimentary skill sets.



The GNA-UCR team helps fleets conduct both laboratory and in-use emissions testing to capture emissions data, conduct data analysis, and manage reporting needs.

Working with North America's largest commercial fleets, vehicle manufacturers, industry suppliers and other industry stakeholders, GNA has helped to spearhead the development of some of the largest clean transportation projects to date, bringing significant real-world experience working with commercial fleets to help them achieve their economic and environmental sustainability goals. CE-CERT is recognized around the world for their engine and vehicle emissions measurement and research, and is the premier testing laboratory for in-use vehicle performance and activity data collection on the West Coast.

"We are excited to expand upon our capabilities and work side-by-side with the CE-CERT team to offer laboratory and in-use emissions testing to further validate the performance and durability of vehicles as their use in commercial fleet operations is increased," said Erik Neandross, chief executive officer of GNA.

"When introducing a new product to the market, very significant capital investments are required for research, development, testing, optimization, and certification," said Kent Johnson, research faculty for CE-CERT. "The LAZER initiative will provide OEMs with unique access to CE-CERT's world class laboratories and a team of technical experts that can help design and implement durability and emissions test protocols, identify compliance and reporting requirements, and navigate the approval process required to commercialize engines, fuels, hybrid-drive systems and after-treatment technologies."

GNA and CE-CERT have a long history of working together on projects for a range of leading public and private organizations, including several active projects on behalf of the South Coast Air Quality Management District and the Port of Long Beach.

**To learn more, visit
www.lazerinitiative.org
and stop by the ACT Expo
GNA Booth #1119.**



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Quantum Fuel Systems and Quantitative BioSciences Develop Biofuels Production Facility

New partnership enables California dairy “farm of the future” to produce 450 DGEs of CNG per day.

A promising new partnership demonstrates how dairy farms can realize the many benefits of capturing and selling biomethane as fuel.

Quantum Fuel Systems [Booth #912] just announced that Quantitative BioSciences, Inc. (QBI) is partnering with and purchasing the company’s newest 10-foot Virtual Pipeline trailers to be used in a California dairy biogas project.

QBI, with funding from the California Energy Commission, has partnered with the family owned and operated Fiscalini Cheese Company in Modesto, Calif., to develop a bio-fuels production facility that will purify and compress the biomethane from anaerobic digesters into vehicle fuel.

Adding to the environmental benefits of the project, simple raceway algae ponds will be used to clean the farm’s wastewater, consume the carbon dioxide from the biogas, and grow renewable algae biomass to supplement the feed for the farm’s cows.

“We are excited to provide a way for captured biomethane to be easily stored and transported,” said Mark Arold, president of Quantum Fuel Systems. “There is an abundance of dairy waste producing biomethane on farms all over the country. As more farms realize the benefits of capturing and selling this gas as fuel, our trailers will help bring more renewable natural gas to market.”

The goal of the project is to make 450 DGEs of CNG per day and to demonstrate that algae can help a farm extract the maximum value from its waste by converting it to both fuel and feed.

“We are going to be producing enough fuel for 10-20 trucks per day, and we were looking for a way to get this fuel to a local CNG fleet via a virtual pipeline. Quantum’s trailers provided the perfect solution,” commented Natalie Cookson, CEO of QBI.

“As California faces increasing strains on both our finite energy resources and limited water supplies, we are hoping to demonstrate ways in which a farm can maximize its resources and become increasingly self-sufficient. Our forward-thinking partners at Fiscalini Cheese Company are very excited to serve as the demonstration site for this ‘farm of the future’ concept.”

Stop by [Booth #912] to learn more about this project and how Quantum Fuel Systems is engineering alternative fuel storage.



Quantum’s 10-foot modular container has a gaseous capacity of approximately 83,635 Standard Cubic Feet (SCF). Equipped with 6 (or 8) Type 4 CNG tanks, it can be towed by a ¾-ton pickup truck and weighs less than 9,000 pounds empty or 12,500 pounds fully loaded.

Workshop Recap: A Small and Mighty Fleet

Representatives from small but mighty fleets engaged in a townhall style discussion Tuesday morning on the opportunities and challenges for smaller fleets to reduce costs and emissions with alternative fuels. Small fleets make up an overwhelming portion of the transportation network and tend to operate the same assets for longer, making purchase decisions even more important. Panelists

representing three fleet operators discussed some of the key challenges of clean vehicle deployments and unique solutions, such as taking advantage of partnerships with utilities to offset capital expenditures and identify local funding programs.

Darryl Syler, director of fleet management for the City of Dublin, Ohio, shared that one of the keys to effectively managing fleets with multiple fuel types is to build a tech-savvy maintenance team that can help you avoid downtime. He also reinforced that it is critical for small fleets to effectively convey the benefits of alternative fuel vehicles to management in order to gain full project support going forward.

RIDE & DRIVE

Join Us Friday, April 26, for Two Separate Ride & Drives!

Get behind the wheel and test drive dozens of advanced clean vehicles spanning all alternative fuels and vehicle applications with two ride & drive events taking place on Friday.

ACT Expo Ride & Drive — 9:00 am to 12:00 pm | Pine Avenue in front of the Convention Center

Check in at the ride & drive registration desk, located outside of the convention center main doors, on the walkway down to Pine Avenue. Show a valid driver's license, sign a waiver, and pick up your wristband to participate.

ACT Expo Ride & drive vehicles Include:

DAIMLER TRUCKS NORTH AMERICA

- Freightliner eM2 Medium-Duty Electric Truck
- Freightliner eCascadia Class 8 Electric Truck

DANA INCORPORATED

- Zenith Battery Electric Van - Spicer Electrified w/TM4® Electromechanical Powertrain
- Peterbilt 220 Medium-Duty Battery Electric Truck

DULEVO INTERNATIONAL SPA

- D.zero² Electric Street Sweeper

ELECTRA MECCANICA

- SOLO All Electric Vehicle (BEV)

LIGHTNING SYSTEMS

- Battery Electric GM 6500XD Low Cab Forward Vehicle

THE LION ELECTRIC CO.

- LionC Electric School Bus

MACK TRUCKS

- Mack LR CNG Refuse Truck

MAXWELL VEHICLES

- Range-Extended Electric Cargo Van

MOTIV POWER SYSTEMS

- Zero Emissions Box Truck Built on All Electric EPIC Chassis

NORDRESA

- Isuzu NPR HD

ORANGE EV

- All Electric T-Series Terminal Tractor

US HYBRID

- Class 8 Fuel Cell Electric Drayage Truck

XOS TRUCKS

- ET-One All Electric Semi Truck

ZERONOX

- All Electric Class 5 Truck

PMSA Ride & Drive

12:00 pm to 1:30 pm | Long Beach Arena parking lot, east of the convention center

The Pacific Merchant Shipping Association (PMSA) has partnered with ACT Expo to provide a forum for terminal operators and other port stakeholders, including a separate ride & drive event. Take a spin in the advanced clean yard trucks and cargo handling equipment (CHE) options you've heard so much about. PMSA ride & drive vehicles will be located in the Long Beach Arena parking lot, to the east of the convention center. Walk north out of the convention center main doors to Seaside Lane, turn right (east) on Seaside Lane, and walk for approximately three blocks. Show a valid driver's license, sign a waiver, and pick up your wristband to participate.

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- All Electric Forklift

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- T2e Electric Terminal Truck

ORANGE EV

- All Electric Yard Truck

ZERONOX

- All Electric Forklift



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Ryder and In-Charge Energy Partner for Turnkey, Behind-the-Meter Charging Solution

Following a number of notable partnerships in the clean transportation industry with alternative fuel companies, including Chanje, Nikola, and Workhorse, Ryder System, Inc. [Booth #1647] has just announced one more. Ryder System recently partnered with California-based energy solutions company, In-Charge Energy [Booth #1647] to develop a comprehensive charging infrastructure solution for commercial fleets.

In-Charge provides nationwide turnkey energy and commercial electric vehicle infrastructure solutions to ensure customers are able to maximize the full economic benefits of adopting electric vehicles into their fleet. Their end-to-end model, focusing on behind the meter solutions, is an industry first.

In-Charge's comprehensive, scalable solutions are tailored to private and public commercial fleets, electric vehicle OEMs, ride-share operators, and municipalities, as well as both commercial and residential facility owners.

"This is a major milestone in this space," said Angela Strand, president of In-Charge

Energy. "We are excited to provide Ryder and its customers a one-stop approach to electric charging infrastructure that enables fleets to confidently incorporate alternative fuel vehicles into their operations. We look forward to working with Ryder, who continues to be at

the forefront of identifying fleet advancements and emerging technologies."

During ACT Expo, In-Charge Energy will be providing demonstrations of its electric vehicle solution on the show room floor in Ryder [Booth #1647].



Electriphi Inc. Announces Smart Charging Solution for Fleets

Leveraging artificial intelligence based tools and machine learning algorithms, Electriphi Inc. [Booth #1812] has launched a smart charging solution that helps reduce demand charges and lower energy costs while ensuring readiness for fleets.

To further help fleet managers plan their transition to electric vehicles, Electriphi is offering a free fleet TCO analysis—providing a comprehensive report of energy requirements, cost savings, and environmental impact—all tailored to their specific fleet.

Additionally, Electriphi has developed an open standards-based solution, designed to be compatible with any charging infrastructure or vehicle type. This includes a range of features, such as telematics integration, dynamic scheduling, fault reporting, service tracking, and other factors that improve fleet reliability, while reducing fueling and maintenance costs.

Parker's global presence in the CNG market with natural gas vehicles and fueling stations allow OEM revenue growth by selling into multiple geographies given the CSA (NA) and ECR (EMEA) approvals on CNG hoses and fittings. Seal-Lok® fittings, for CNG leak-free connection, reduce warranty costs and maintenance expenditures while providing a competitive advantage for customers in the CNG market. Engineered for on-vehicle application and fueling systems, Parker is your one source for all of your CNG hose and tube assemblies.

On display at ACTEXPO 2019
Parker Hannifin booth #747
<http://www.parker.com/alternative-fuel>



ENGINEERING YOUR SUCCESS.

Electra Meccanica Showcases Single-Passenger Electric Vehicle



Electra Meccanica Vehicles Corp., (Booth #1725) designer and manufacturer of electric vehicles, is bringing their breakthrough SOLO single-passenger EV to the ACT Expo show floor. With a range of 100 miles per charge and capable of traveling at highway speeds, the SOLO is intended to be a highly efficient and economical vehicle for daily commuting as well as urban delivery. It currently retails for \$15,500 and will be available to test drive on Friday at the ACT Expo ride & drive.

Lorenzo Capilli, senior vice president of sales and marketing at Electra Meccanica, said the company has seen great success to-date by offering the SOLO as a delivery vehicle in both Canada and the US.

"Brands both large and small have used the SOLO for urban package delivery—and as a result have both improved their brand image while drawing additional positive media coverage. We believe that our cost effective, environmentally friendly and bold SOLO can offer unique benefits as a delivery vehicle that no other vehicle can."

Noodoe Launches Technology Partnership for Businesses Entering EV Charging Market

Noodoe (Booth #1518), producer of EV charging infrastructure solutions geared towards the construction, retail, and hospitality industries, as well as the public sector, recently introduced a global technology partnership program, Powered by Noodoe, which intends to provide businesses with everything needed to instantly enter the EV charging market. The new technology partnership provides participating business partners with three key advanced technologies—EV charging stations, EV software, and EV OS cloud technology—empowering partner organizations to instantly expand their business scope and become advanced EV charging solution providers.

Noodoe recently signed Canada-based Green Dot Group, a company that works to leverage sustainable energy technologies for its customer base.

With as many as 120 million electric vehicles predicted to be on the road by 2030, EVs will soon require a dramatic increase in the number of charging stations available, and Noodoe is intent on providing solutions.

"We are on a mission to accelerate the world's transition to electric transportation," says Noodoe chairman John Wang. "We do this with well-designed EV charging infrastructure solutions that help businesses be part of the zero emissions revolution. Many



companies want to enter the market and become a supplier, but face engineering and time-to-market challenges. 'Powered by Noodoe' endeavors to solve this dilemma by providing the missing pieces, extending their business scope by becoming a supplier to a growing market."

Momentum Fuel Technologies Launches CNG Parts Ordering System

Momentum Fuel Technologies (Booth #1127), a division of Rush Enterprise, recently announced it is now offering all-makes natural gas parts for purchase on its website. With a new easy-to-use parts ordering system, Momentum features not only proprietary compressed natural gas (CNG) system parts, but an extensive cross-reference of all major CNG parts manufacturers. Momentum's product line covers nearly all Class 4-8 truck applications in North America, from over-the-road to vocational, with numerous configurations that

integrate with multiple body OEMs. In addition to offering the ability to purchase CNG parts online, Momentum is now offering enhanced content designed to meet customers' needs, such as valuable information on grants available for the purchase



of a new CNG vehicle.

"We are focused on providing solutions to our customers, and a convenient online parts purchasing experience is a natural extension of that," said Mike Zimmerman, general manager, Momentum Fuel Technologies. "The comprehensive selection of all-makes parts we offer online is unrivaled in the alternative fuel space and directly addresses the needs of our customers to find and purchase parts quickly and easily," he added.

CHBC Hosts Workshop on Hydrogen and Fuel Cells for Freight

The California Hydrogen Business Council hosted a half-day workshop on cargo handling at distribution centers and ports, and on-road medium- and heavy-duty goods movement. Speakers from Plug Power, Toyota Motor North America, Hyundai Motor Company, Nikola Motor Company, and more shared the latest developments in the fuel cell space from a variety of perspectives. Key takeaways included a comparison of technology platforms, perspectives from OEMs and operators, and the hydrogen infrastructure needed for refueling.

Electrification Coalition Workshop on Electrifying Fleets Through Aggregated Purchasing

Speakers from the Electrification Coalition, the City of Los Angeles, the City of Orlando, and Sourcewell shared tips and tricks on how to accelerate the deployment of EVs for municipal fleets. Public fleets represent a large, concentrated system of vehicles primed for electrification. Attendees learned how the Climate Mayors EV Purchasing Collaborative (the Collaborative) is reducing traditional barriers to EV procurement and how mayoral and sustainability offices are collaborating with fleets on their goals to set

metrics and save money.

Attendees walked away with examples of how fleets are leveraging the intra-departmental support for a more rapid acquisition and deployment of electric vehicles with supporting infrastructure. The Collaborative's partners are offering a cooperative purchasing program for EVs with competitively sourced solicitations with a high-quality selection of nationally leveraged contract solutions. Partners shared how to get connected to leverage these contacts.

BSR's Workshop Addressed How to Evaluate the Market for Sustainable Fuels and Clean Technology

BSR's Future of Fuels team led an action-oriented discussion on the current and expected availability and application of low-carbon fuels for commercial freight to help fleets understand and compare clean technologies and match them with specific needs.

Commercial freight transportation is at the cusp of a transition. Energy supply is changing with new fuels entering the market, increased cost volatility, and questions about the impacts of fuel. Yet low-carbon energy for commercial freight is in short supply and technological barriers to their adoption are daunting. Furthermore, mixed and competing claims obscure clarity on the sustainability of fuel choices. Credible, fuel-neutral analysis and solutions are needed to

drive the transition towards sustainability, the workshop concluded.

Attendees learned about which sustainable fuels can be delivered by suppliers today and how they can be scaled over the next few years. The workshop concluded with a one on one networking opportunity for buyers and suppliers to address specific challenges the attending fleets are experiencing.



NACFE Hosts a Workshop on the Future of Regional Freight Movement

With a new generation of Class 7 and 8 trucks hitting the market, it's crucial that fleets are up-to-speed on the latest technologies for saving money and reducing emissions. The North American Council for Freight Efficiency sparked a dialogue surrounding commercial battery electric vehicles to collect solutions and lessons for its fourth guidance report.

After a panel discussion on regional opportunities, electrification, and connectivity, the workshop broke into small group discussions on electric trucks, charging infrastructure, electric heavy-duty Class 8 tractor total cost of ownership, heavy-duty sleeper tractors, and more.

Fleet Owner's Workforce Development Workshop

Fleet Owner hosted a workshop on meeting the workforce challenges faced by commercial vehicle fleets and the suppliers who support them. Speakers from commercial fleets, training professionals, and workforce development leaders addressed how to develop and keep a trained team as technology evolves across today's increasingly complex and connected fleet. The workshop began with a discussion

of best practices for integrating alternative fuels and advanced technologies into fleet operations. In the afternoon, MaxGen Energy Services led a panel on training requirements for the electric vehicle ecosystem. The afternoon concluded with a discussion on how to develop and keep a trained team to support evolving alternative fuel and connected technology needs.



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Booth 1847.

