

# THE SOURCE

## GE Appliances Turns Up the Speed on Supply-Chain Upgrade

*Coronavirus-driven disruptions in demand and production added urgency to an effort aimed at building visibility and flexibility*

By Jennifer Smith, WSJ, Nov. 25, 2020

GE Appliances was in the midst of a digital supply-chain upgrade when the coronavirus pandemic hit, disrupting global supply lines while consumer demand soared for the company's refrigerators and washing machines. Instead of pausing the project to cope with the turmoil in retail markets, the appliance maker accelerated the pace of its upgrade even as a rush of orders from people staying at home, suddenly generating more piles of laundry and dirty dishes, pushed production capacity to its limits. For GE Appliances, the pandemic provided a fertile testing ground for digital tools intended to help balance manufacturing and demand by connecting parts of its supply chain that had been operating on separate tracks. The effort took on new urgency as skyrocketing orders cleared out the appliances the company kept on hand. Previously, the company made products based on demand forecasts then shipped the finished goods to distribution centers to wait for orders. "Now there's no inventory," said Melanie Cook, chief operating officer for GE Appliances. "Typically our customers would be used to placing an order, [and in] five to seven days they can get a product. Now we're still building them."

The real-time visibility GE Appliances was seeking in its supply-chain plan proved critical to the company's response to rapid swings in demand as consumers first hunkered down and then sought the equipment for their homes to outlast the lockdowns. "When the pandemic first hit us we saw a drop. Then all of a sudden freezers spiked to record levels," Ms. Cook said. As people stayed home, daily usage of appliances shot up. "Refrigerator doors are being opened 40% more," Ms. Cook said. "Washers and dryers are up 22%... We literally cannot keep up with the demand. We've invested, added capacity, and we're still flat out."

The new technology, from supply-chain software provider Blue Yonder, tracks the movement of goods from manufacturing plants to distribution centers. The software integrates that data with customer orders, using machine learning to anticipate delays and shortages and help companies decide how to allocate limited supply. Rival appliance-maker Whirlpool Corp. also has struggled to meet the heightened demand, and said supply-chain constraints contributed to product backlogs in North America in the third quarter. Louisville, Ky.-based GE Appliances, which is owned by China's Haier Group, was expanding its U.S. production capacity before the pandemic hit, spending some \$600 million since 2018 at its nine domestic plants and distribution centers. Those investments include digital upgrades that Ms. Cook said helped the company navigate its global parts supply chain during Covid-19 and boost output. The appliance maker increased production by 25% in the second half of the year to meet the surging demand. "We literally cannot keep up with the demand. We've invested, added capacity, and we're still flat out." — GE Appliances Chief Operating Officer Melanie Cook. But production took a hit in the early stages. The company took a week in late March to reorganize its facilities to meet health and safety standards in the face of Covid-19, spacing manufacturing stations six feet apart, erecting barriers and bringing in face shields for workers from a GE Appliances microfactory. Volunteers from the company's management and salaried workforce filled in for absent workers on the factory floor.

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## GE Appliance Supply Chain Upgrade

(Front page article continued)

with the rollout of software that allows GE Appliances to check stock levels at company distribution centers, track shipments from manufacturing plants and anticipate disruptions that could slow customer deliveries. The tools helped GE Appliances pinpoint one cause behind a rising order backlog that came even as the company’s inventory reserve was growing. It turned out some partial shipments weren’t being sent out under procedures put in place before the pandemic, when some customers wouldn’t accept incomplete orders. “We are now able to identify those and work with our customers to release” them, a change that wouldn’t have been possible before, a spokeswoman said. Blue Yonder’s technology pulls information from different programs, such as the company’s transportation or warehouse management systems, and harmonizes the data so managers can easily see how a delayed inbound shipment might affect customer orders or inventory levels. Before, “all those entities acted independently,” said Cary VandenAvond, the software company’s senior vice president of growth initiatives. “This allowed them to have a layer on top of that so all the players in that network are aligned to the same priorities.”

## Hyster and Capacity enter partnership to develop electric, hydrogen and automation-ready terminal tractors

By: AJOT | Dec 14 2020 | Ports & Terminals

Hyster-Yale Group and Capacity Trucks are joining forces to address growing demand for environmentally sustainable terminal tractor solutions in port, terminal and distribution center markets. The two companies signed a memorandum of understanding to co-develop electric and hydrogen-powered terminal tractors with automation-ready capabilities. Initial prototypes are targeted to be available in 2021 for market testing. The collaboration leverages each company’s product expertise in the global material handling solutions market, bringing together Capacity’s robust terminal truck platform and Hyster-Yale Group’s vast experience in lift truck electric powertrain technology and hydrogen fuel cell technology developed by its subsidiary company, Nuvera. VDL Automated Vehicles, a subsidiary of VDL Groep BV, is designated as the preferred integration partner and supplier for automation.

“We are working closely with our customers to achieve their zero-emissions goals and responding to their needs with the most robust electric and hydrogen fuel cell solutions through this strategic partnership with Hyster-Yale,” says Ryan Rockafellow, Vice President and General Manager, Capacity Trucks. “Together our companies bring best-in-class capabilities to provide and help our customers adapt to a changing marketplace with advanced technology.”

The agreement includes exclusive manufacturing and supply provisions, with units branded separately as either Capacity® or Hyster® – one of Hyster-Yale Group’s industry-leading forklift truck brands with an established presence in port, rail terminal and distribution center environments. In addition to co-developing products, the partnership is also designed to capitalize on the companies’ combined sales, distribution and service capabilities through their existing dealer networks and corporate sales teams.

“Partnering with Capacity enables us to leverage our investment in electrification and automation solutions to better serve our customers as a more comprehensive resource,” says David Leblanc, Vice President, Strategy, Planning and Business Development, Hyster-Yale Group. “We look forward to putting our combined power to work.”

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# TRIVIA QUESTIONS

- 1) **On the 8th day of Christmas, what was the present?**  
 A. Swimming Swans      B. Leaping Lords      C. Maids Milking      D. Dancing Ladies
- 2) **December is the 12 month in our calendar but in ancient Rome's calendar it was which numbered month?**  
 A. 6      B. 10      C. 9      D. 11
- 3) **Kwanzaa is a 7 day holiday beginning 12/26. What is its meaning?**  
 A. 1st Harvest      B. End of Year      C. Attempt to increase rainfall      D. Christmas
- 4) **How many countries celebrate Boxing Day?**  
 A. Iwo Jima (Pacific)      B. Tarawa (Pacific)      C. Chosin Reservoir (Korea)      D. Belleau Wood (France)
- 5) **How many ghosts appear in "A Christmas Carol"?**  
 A. 3      B. 5      C. 6      D. 4
- 6) **Which country started the tradition of putting up a Christmas Tree?**  
 A. Denmark      B. Germany      C. Belgium      D. Latvia

Answers Later In The Newsletter

## FUEL REPORT

U.S. On-Highway Diesel Fuel Prices\* (dollars per gallon) <http://www.eia.gov/petroleum/gasdiesel/>

	11/30/20	12/07/20	12/14/20	Change from ↑ week ago	↓ year ago
U.S. National Average	\$2.502	\$2.526	\$2.559	0.033	- 0.487

### EIA expects US energy-related carbon dioxide emissions to fall 11% in 2020

By: AJOT | Dec 09 2020

In 2020, carbon dioxide (CO<sub>2</sub>) emissions from the U.S. energy sector could be 11% lower than in 2019, according to U.S. Energy Information Administration (EIA) data through August and EIA estimates for September through December. According to values published in EIA's December Short-Term Energy Outlook (STEO), EIA expects CO<sub>2</sub> emissions in 2020 to fall by 19% for coal, by 13% for petroleum, and by 2% for natural gas. Many of this year's changes in energy-related CO<sub>2</sub> emissions are attributable to the economic and behavioral effects the COVID-19 pandemic has had on energy consumption.

EIA calculates energy-related CO<sub>2</sub> emissions by multiplying energy consumption, measured in British thermal units, by the carbon factor associated with each energy source. For this reason, changes in emissions reflect both changes in the overall amount of energy consumed and the mix of energy sources used. This year, U.S. energy consumption was heavily affected by responses to COVID-19, including working from home and other stay-at-home measures, closed or limited operating hours for several types of businesses, and travel restrictions. In April, when many parts of the country instituted measures to slow the spread of COVID-19, monthly U.S. energy consumption fell to a 30-year low and emissions fell to a record low.

**Petroleum** accounted for an estimated 45% of U.S. energy-related CO<sub>2</sub> emissions in 2020, and most of those emissions were from the transportation sector. CO<sub>2</sub> emissions from petroleum in the transportation sector fell to 102 million metric tons in April 2020, the lowest monthly level since February 1983.

**Natural gas**, which accounted for an estimated 36% of U.S. energy-related CO<sub>2</sub> emissions in 2020, is consumed in several sectors. The electric power sector consumes the most natural gas of any sector, and EIA estimates that in 2020, although electricity consumption declined slightly, the use of natural gas to generate electricity increased.

**Coal CO<sub>2</sub>** emissions this year could reach the lowest annual level (4,597 million metric tons, or 19% of the total) in EIA's annual emissions series that dates back to 1973. In the electric power sector, where most coal is consumed in the United States, coal has lost market share to natural gas and renewables since peaking in 2007.



## DHL helps relocate the world's loneliest elephant

By Damian Brett

07 / 12 / 2020

Editor's note: this article is from our *not previously used* article archive and is the "Interesting Logistics Story" from 2020



DHL Global Forwarding played a key role in organising the transport of the world's loneliest elephant, Kaavan, to his new home at a sanctuary in Cambodia. DHL said that with a weight of over four tons and a height of more than three meters, the transport of Kaavan had to be planned and handled carefully. "Over the years, DHL has transported different kinds of goods, overcoming several challenges. However, the transport of animals is always an extraordinary task," said

Thomas Mack, global head of airfreight at DHL Global Forwarding. "The multimodal journey had to be planned very carefully. Temperature was controlled throughout the flight and Kaavan was accompanied by veterinarians to make sure he is safe. With our expertise and our global network, we were able to successfully relocate him to his new long-term sanctuary."

After a medical check, the Asian elephant was transported by truck from Marghazar zoo to Islamabad International Airport to start the journey to his new home at Cambodia Wildlife Sanctuary November 30. To prepare for the journey, Kaavan received special training for several weeks to securely enter his crate. The elephant was accompanied by a team of wildlife veterinarians who watched over him and kept him calm.

The flight was carried out by Russian charter carrier Aviacon Zitotrans utilising one of its IL-76 aircraft. Aviacon Zitotrans charter sales executive Evelina Peshkova said it was important to connect those that had designed the Kaavan's bespoke container with the loadmasters, airport handlers both in Pakistan and Cambodia, and the flight deck crew who maintained recommended temperature and pressure onboard during the flight.

"This long-haul flight took months of careful and extensive planning by Four Paws, a global animal welfare organization, veterinary specialists and DHL Global Forwarding," the forwarder said. "The international freight specialist arm of Deutsche Post DHL Group took care of the logistics, including the necessary customs authorisation for the transportation of Kaavan, from his previous home at the Marghazar Zoo."

Kaavan, also known as the world's loneliest elephant, received global attention for his living conditions in the Marghazar Zoo.



### DEFINITION: Logistics

— noun, plural in form but singular or plural in construction  
lo·gis·tics | \ lō-'ji-stiks , lə-\

- 1: the aspect of military science dealing with the procurement, maintenance, and transportation of military matériel, facilities, and personnel
- 2: the handling of the details of an operation

### How are logistics and logic related?

Logistics follows the same pattern of other plural nouns—such as ballistics, linguistics, statistics, or physics—that represent fields of study and take either a singular or plural verb.

Logic, used strictly in the singular, is a science that deals with the formal principles of reason. If a visitor walks in the house with wet hair, it is logical for one to assume that it is raining outside. Logistics, which involves such concerns as the delivery of personnel or supplies in an efficient manner, can often employ logic, such as by reasoning out the path least likely to interrupt the flow of a delivery.

Both logic and logistics ultimately derive from the Greek logos, meaning "reason." But while logic derives directly from Greek, logistics took a longer route, first passing into French as *logistique*, meaning "art of calculating," and then into English from there.



## **XPO Logistics to Split Company in Two, Spin Off Contract Logistics Business**

By Jennifer Smith, WSJ, 12/2/20

*The plan to separate transportation and logistics operations comes after strategic review that also considered selling off parts of the company*

XPO Logistics Inc., one of the largest providers of warehousing, trucking and last-mile services in the U.S., plans to split itself into two separate, publicly traded companies and drop efforts to sell off pieces of the business. The company intends to spin off its global contract logistics business while keeping its trucking and freight brokerage operations as a stand-alone business, XPO said Wednesday. The split would shift course from the growth strategy the Greenwich, Conn.-based company undertook between 2011 and 2015, when it used a rapid series of acquisitions to build an operation that vaulted it into the top ranks of logistics providers and provided \$16.65 billion in revenue last year. The planned transaction would be tax-free to XPO shareholders, who would own stock in both companies, the company said. The deal is expected to close in the second half of 2021, subject to various conditions, including the refinancing of XPO's debt on terms to be approved by its board. Brad Jacobs would remain chairman and chief executive of XPO and serve as chairman of the new company, which would have a separate board and management team.

The planned split follows a strategic review XPO launched earlier this year to evaluate the possible sale or spinoff of one or more business units. "Our transportation and logistics businesses are both industry leaders in their own right and already outperform the competition on key metrics," Mr. Jacobs said in an interview. Separating the company into two pure-play businesses would remove what he called "the conglomerate discount in our stock," unlocking "substantial equity value," and make it easier for investors to compare both entities' performances against their peers, he said. XPO shares were trading at around \$110 Wednesday afternoon, up from this year's low of \$40.69 in late March, when the coronavirus pandemic hit the U.S. XPO said in January it was exploring strategic alternatives and had hired Goldman Sachs Group Inc. and JPMorgan Chase & Co. "to run four simultaneous auction processes" for all business units except for its less-than-truckload division, which consolidates shipments for multiple customers onto single trucks. Mr. Jacobs said at the time that XPO was trading "well below the sum of our parts and at a significant discount" to its peers, but that the company could also end up not selling any segments.

The notice followed a challenging period for the company, including a 2018 short seller report that sent XPO's stock price tumbling and sidelined a planned acquisition bid. XPO received "strong interest" from potential buyers, Mr. Jacobs said Wednesday, but after the pandemic hit the company, it didn't pursue the process until it was approached a few months ago by companies interested in its European logistics business. After reviewing its options, XPO decided "the clear best path to create very substantial value, to unlock substantial equity value, is to spin off the logistics business," he said. The planned spinoff narrows XPO's focus to transportation, where the company ranks among the largest U.S. trucking players.

XPO is the third-largest U.S. less-than-truckload company by 2019 revenue, according to SJ Consulting Group Inc., and the second-largest provider of domestic transportation management and freight brokerage, according to research firm Armstrong & Associates Inc. XPO also has a sizable last-mile delivery business for big and bulky items, where demand has surged as people have ordered more furniture and exercise and office equipment online during the coronavirus pandemic. The company's transportation segment generated \$2.68 billion in third-quarter revenue, roughly the same as in the prior-year period. The rush to e-commerce also has boosted XPO's contract logistics business, which provides supply-chain services such as warehousing and e-commerce fulfillment to customers such as IKEA, Boeing Co. and Inditex SA's Zara. XPO is the second-largest North American warehousing provider on a square-foot basis, according to Armstrong & Associates. That segment logged \$1.58 billion in quarterly revenue, up 4.6% from the third quarter in 2019.

## **ATA Calls for Prioritized Vaccine Access for Trucking Workforce**

*Industry cites truckers' essential role in vaccine distribution and national supply chain.*

Press Release December 1, 2020

Today, the American Trucking Associations called on policymakers to remember the trucking industry's essential status as a national vaccine distribution strategy is being formulated by officials across various levels of government. In letters sent to the White House, the CDC Advisory Committee on Immunization Practices, President-elect Biden and the National Governors Association, ATA asked that the trucking industry's workforce be included in prioritized access pools along with other essential workers.

"Our workforce represents a central and critical link in the nation's supply chain and will play an essential role in the imminent COVID-19 vaccine distribution process," wrote ATA's executive vice president for advocacy, Bill Sullivan. "As the trucking industry is called upon to deliver vaccines across the country, it is imperative that truck drivers have prioritized access to the vaccine to minimize the potential for supply chain delays and disruptions."

Since the onset of the pandemic, the trucking industry has been crucial throughout all phases of the national response effort, providing direct and indispensable support to workers of every category across the frontline – from healthcare professionals and first responders to grocers and pharmacists. This invaluable role now expands further as the nation begins mobilizing for the largest vaccine distribution campaign in our history.

The letters cite the industry's designation as essential by the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency, noting that more than 80% of U.S. communities rely exclusively on trucks to receive necessary goods.



**Answers to Trivia**

**House Lawmaker Introduces Rural Infrastructure Bill** December 11, 2020 / Transport Topics

Legislation meant to assist rural transportation corridors was introduced this month by Rep. Carol Miller. The Reinvesting in Essential Partnerships And Infrastructure for Rural America, or REPAIR, Act, would aim to reduce regulatory requirements for rural communities while seeking to provide flexibility for reallocating funds to non-urban areas. Additionally, the bill would look to enhance mobility options that would facilitate commutes to work and health care facilities, according to background from the congresswoman’s office. “America’s small towns are the backbone of this country and are in need of a substantial transportation infrastructure overhaul,” Miller (R-W.Va.) said Dec. 4. “I’m introducing the REPAIR Act to ensure that all Americans living in rural communities have better access to hospitals, schools, jobs and other communities. This important legislation will help revitalize rural economies, strengthen our roadways and connect our small towns.”

Miller is a member of the Transportation and Infrastructure policy committee. The bill was referred to the panel for consideration. Miller’s Republican colleagues on the committee backed the bill. For several years, the GOP caucus in the House, as well as many Democrats, have sought to highlight priorities for rural areas, such as the need for broadband and mobility options. Rep. Sam Graves (R-Mo.), the transportation panel’s ranking member, insists future negotiations on the next federal highway policy bill need to prioritize streamlining permitting regulations, as well as address rural infrastructure programs. Earlier this year he unveiled legislation that sought to expand broadband access across the rural landscape. “With North Missourians currently being asked to stay home due to the global COVID-19 pandemic, the necessity of access to broadband service is more clear than ever,” Graves said at the time. “Completing the ‘last mile,’ in particular, is critical to ensuring that rural Americans are able to access high-speed internet.” He added, “Looking beyond the nation’s current health emergency and toward our economic recovery, providing more avenues to develop broadband will also help these communities attract more jobs and business.”

On the Senate side, Commerce Committee Chairman Roger Wicker (R-Miss.) recently introduced a bill that would establish a pilot program that would assist rural communities and municipalities with utilizing U.S. Department of Transportation financing tools. Wicker’s Rural Infrastructure Advancement Act would authorize funding to establish a five-year pilot program designed to help agencies with financial, technical and legal assistance. The bill also would direct the department to proceed with an online presence for receipt of pilot program applications, as well as issue notices regarding each application. Wicker’s bill also would direct the department to post online details about the application process, and the status of submitted applications. “This bill would provide professional technical assistance to rural communities interested in utilizing existing financing programs. It is important that we provide these resources to support and advance rural infrastructure,” said Wicker. The committee has jurisdiction over freight transportation.

Last year, the U.S. Department of Transportation launched the Rural Opportunities to Use Transportation for Economic Success, or ROUTES. The initiative is meant to expand access to freight and passenger corridors along rural places, as well as enhance grant funding, loan programs, data sharing and transit service in those rural areas. Transportation Secretary Elaine Chao has called for advancing efforts to highlight concerns across rural transportation corridors. Earlier this year, the secretary told a Senate panel: “After a period of great neglect, we are finally beginning to address the needs of rural America.”



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Holiday Season this Year of the Pandemic



Stay Safe

Stay Healthy



## Lufthansa Cargo and Compensaid enable CO2-neutral cargo flights

*Air freight customers can have the CO2 emissions of their shipments calculated during the booking process*

By: AJOT | Dec 14 2020 | Air Cargo News

Since November, Lufthansa Cargo customers can easily check the CO2 emissions of their shipment's transport during the booking process. This is made possible by the new online booking portal eBooking, which Lufthansa Cargo launched in November. With the integrated carbon calculator, all customers have the opportunity to determine the CO2 emissions caused by the transport and to offset them in the future. At the end of November, Lufthansa Cargo and DB Schenker already carried out the first CO2-neutral freight routing, which was completely covered by Sustainable Aviation Fuel (SAF). As of the summer flight schedule, Lufthansa Cargo plans to offer CO2-neutral airfreight on a regular basis as a product for the shipping industry.

The offer was jointly developed by Lufthansa Cargo and Compensaid, the central compensation platform of the Lufthansa Group. Once customers have determined their CO2 emissions, they can offset them by using Sustainable Aviation Fuel (SAF). In addition, it is also possible to offset through reforestation projects. If SAF is used, Compensaid ensures that the corresponding sustainable fuel is purchased and fueled to compensate for the resulting emissions. For this purpose, Compensaid works closely with Lufthansa Group Fuel Management and with SAF manufacturers located around the world. Digital technologies of the compensation platform, which was launched in 2019, enable Compensaid to make the process from calculation to fueling transparent and efficient.

"Lufthansa Cargo supplies people and markets with urgent goods and raw materials. We are part and driver of globalization, which stands for economic progress and opens up new opportunities for every individual. And that does not exclude sustainability. We will focus more strongly on it - both in an economic and social sense. In addition to investments in a modern freighter fleet, our commitment to alternative fuels also contributes to the United Nations' 'Climate Action' sustainability goal. Through the possibility of using Sustainable Aviation Fuel (SAF), we are actively driving forward research in this area and can thus relieve the environment in the long term," explains Peter Gerber, CEO Lufthansa Cargo.

"CO2 compensation in the business customer sector is an important and effective step towards CO2-neutral aviation," says Gleb Tritus, Managing Director Lufthansa Innovation Hub. "Through the larger B2B volumes, we are increasing demand and thus promoting awareness, availability and cost-effectiveness of alternative fuels."

SAF is added to conventional kerosene as so-called drop-in-fuel. The SAF quantity corresponding to the fuel requirements of a flight, for example, is fed into the fueling system at Frankfurt Airport. This means that the SAF is distributed to all flights that are afterwards fueled. However, CO2 neutrality is attributed to this particular flight.

## 7 Advantages to Outsource Inc

Today, ninety percent of Fortune 500® companies rely on 3PLs for outsourced logistics and supply chain services, according to an Armstrong & Associates report. Whether you're a B2C or B2B company, how promptly and efficiently you react to customer orders has a direct bearing on customer loyalty, retention and earnings.

- |                                   |   |   |
|-----------------------------------|---|---|
| <b>1. Focus on Core Business</b>  | <b>2. Gain Access to Technology</b>     | <b>3. Drive Efficiency and Cost Savings</b> |
| <b>4. Improve Risk Management</b> | <b>5. Acquire Custom Solutions</b>      | <b>6. Develop Internal Staff</b>            |
|                                   | <b>7. Improve Customer Satisfaction</b> |   |

**Call John Nickandros at 774 222-0087 or email at [johnickandros@outsourcelfreight.com](mailto:johnickandros@outsourcelfreight.com)**

## Trucking Takes Initial Steps Toward a Zero-Emission Future Transit Topics, December 10, 2020

(Editor's note: Click the link to read the full article [Trucking Takes Steps Toward a Zero-Emission Future | Transit Topics \(ttnews.com\)](#) )

Diesel has long reigned as commercial trucking's primary fuel, due in large part to its abundant availability, widespread fueling infrastructure and reliance on mature technology. Today, there's no question that diesel is king, but it is becoming clearer with each passing year that electric is the heir apparent. Although significant hurdles remain, recent advances in electric-vehicle technology and the broader movement to reduce carbon emissions are creating market conditions that are increasingly favorable for electrification. In 2020, truck manufacturers and their key suppliers continued to expand testing and development of battery-electric models and componentry, with many also investing in complementary hydrogen fuel cell technology. And fleet customers are beginning to line up. Some major corporations have pledged to adopt electric vehicles in the years and decades ahead as part of their sustainability goals.

### Major Fleets Commit to Electric Vehicles

Several major companies with large fleet operations have announced bold plans to roll out electric vehicles as a key element of reaching their corporate sustainability targets. Walmart, the world's largest retailer, announced in September that it intends to electrify all of its vehicles, including longhaul trucks, by 2040 on its journey toward its stated goal of achieving zero emissions within its global operations. "These goals are ambitious, and we will need innovation and infrastructure to get there," CEO Doug McMillon said in a statement. With a fleet of 7,400 tractors, Walmart ranks No. 3 on the Transport Topics Top 100 list of the largest private carriers in North America.

As part of its own sustainability pledge, e-commerce giant Amazon.com Inc. has ordered 100,000 fully electric delivery vans from Rivian, a zero-emission vehicle manufacturer based in Plymouth, Mich. The first of these customized vehicles will begin making deliveries to Amazon customers in 2021, the company said. Amazon plans to have 10,000 of the electric vans operating in the United States and Europe by early 2022 and expects all 100,000 to be on the road by 2030.

### Electric Trucks Hit the Road

A growing number of major trucking and transportation companies have begun testing electric vehicles. Fleets such as NFI Industries, Penske Truck Leasing and Dependable Highway Express have been among the first to deploy heavy-duty electric trucks in their operations, and an expanding list of trucking companies has been joining them. Knight-Swift Transportation Holdings has deployed its first battery-electric vehicle, a Freightliner eCascadia tractor, in the Los Angeles area.

The truckload carrier also announced in September that it has set a goal to cut its carbon emissions in half by 2035. "While we have made significant strides in improving our environmental footprint over the years, we believe that setting an ambitious public goal to reduce carbon emissions generated by our fleet by 50% over the next 15 years quantifies our commitment," Knight-Swift CEO Dave Jackson said in the statement. The fleet said it intends to achieve that goal with a range of tractor and trailer technologies, including battery-electric and hydrogen fuel cell trucks, along with cleaner diesel vehicles. "While we will likely have to take some risk, we believe that being environmentally responsible and being profitable are not mutually exclusive," said Dave Williams, Knight-Swift's senior vice president of equipment and government relations. "We expect these technologies to reduce emissions and to be cost-effective." Knight-Swift, based in Phoenix, ranks No. 7 on the Transport Topics Top 100 list of the largest for-hire carriers in North America.

### Regulators Push for Electrification

### Truck Makers Launch Electric Models

### Fuel Cell Investments Ramp Up

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