United States House Committee on Transportation and Infrastructure Hearing
"The Business Case for Climate Solutions"
Testimony of Frederick W. Smith
Chairman and Chief Executive Officer
FedEx Corporation
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Chairman DeFazio, Ranking Member Graves and members of the committee, thank you for inviting me to testify before the committee today on "The Business Case for Climate Solutions." Addressing climate change is bigger than one business, and this committee recognizes for the United States to remain a global economic leader we must work together on responsible policy and innovative solutions for the health of our planet.

For FedEx, sustainability is a relatively simple concept: to connect the world responsibly and resourcefully. FedEx has a long history of keeping sustainability at the center of our business, and we know the future of our operations is tied to the future of our environment. Building on that longstanding commitment, earlier this month FedEx announced an enterprise-wide ambitious new goal to achieve carbon-neutral operations globally by 2040, which I look forward to discussing in detail today.

FedEx Corporation

FedEx has grown tremendously since its first night of operations in April of 1973. FedEx Corporation now consists of six independent operating companies that work collaboratively to provide our customers and communities we serve with innovative business solutions to meet their emerging needs. We have a fleet of over 680 aircraft including the new Boeing 777 freighter model, one of the most efficient freighter aircraft in the world. We serve over 650 airports in the U.S. and abroad. On the ground, we operate 200,000 motorized vehicles. Across

all FedEx operating companies, we cover over 2.5 billion highway miles per year. Our fleet also includes the latest in all-electric and hybrid trucks, some of which traverse the streets of Washington, D.C., each day. Together, our 600,000 team members operate one of the largest logistics and transportation companies in the world, serving more than 220 countries and territories.

- Our global FedEx Express integrated air-ground network offers time-definite air express shipping for parcels and freight shipping and links the American economy to more than 99 percent of the world's GDP. As one illustration of the power of this network, since January 2020, FedEx Express has transported nearly 80 kilotons of personal protective equipment — including more than 2 billion masks — around the world as part of our response to the COVID-19 pandemic. We are now shipping approved COVID-19 vaccines, related ingredients, and supplies throughout the U.S., Canada, and to more than 20 other countries around the world. We are prepared to ship vaccines to more than 220 countries and territories for as long as necessary to help eradicate COVID-19.

- Our FedEx Ground and FedEx Freight networks use both road and rail to transport products from business-to-business as well as business-to-consumer services, which have proven to be essential services as communities work to combat the spread of COVID-19.

- Our FedEx Logistics business provides a suite of supply chain solutions, including heavy air and ocean cargo services, customs brokerage, and trade management tools and data.

Connecting people with goods, services, ideas, and technologies creates opportunities that fuel innovation, energize businesses and lift communities to higher standards of living. At FedEx, we believe that a connected world is a better world, and that belief guides everything we do. And we recognize that with the privilege of connecting the world also comes the responsibility of being good stewards of the planet.

Reduce, Replace, Revolutionize

The topic of today's hearing, climate solutions, has been a central focus at FedEx for a very long time. For example, nearly 20 years ago, FedEx was the first delivery company to use hybrid vehicles for pickup and delivery. In 2006, I joined with General P.X. Kelley (Ret.), 28th Commandant of the U.S. Marine Corps, and a group of business and former military leaders to form the Energy Security Leadership Council. Later that year, we released a plan to improve U.S. energy security as well as crucial follow-up reports and policy briefs. The council continues to support mitigating oil dependence through fuel efficiency standards, increased domestic oil production, and deployment of alternatives in transportation through technologies such as electric vehicles. That plan was instrumental in advancing the FedEx sustainability strategy: Reduce, Replace, Revolutionize.

This three-pronged approach has the following goals:

- Specific to **Reduce**, this includes minimizing or eliminating the effects of our activities and operations.
- For **Replace**, we apply the right solutions in the right applications across our business.
- And within **Revolutionize**, we are continuously discovering and adopting cutting-edge technologies and solutions to drive impact.

Since 2012, this strategy has helped us save 1.43 billion gallons of jet fuel and avoid over 13.5 million metric tons of CO2. In fiscal year 2019, we avoided more than 3 million metric tons of CO2 emissions as a result of our enterprise-wide fuel and energy saving initiatives. That's equivalent to the carbon sequestered by more than 4 million acres of U.S. forests in one year. Over a 10-year period from 2009 to 2019 these efforts contributed to an approximately 40% reduction in CO2 emissions intensity on a revenue basis across the enterprise while package volume increased 99%.

Building on this longstanding commitment to sustainability, as I mentioned, earlier this month, we set a goal to achieve carbon neutrality for our global operations by 2040. To get there, we will invest in solutions and make necessary changes across our enterprise — from our packaging to our fleet and more — to deliver lasting benefits for our industry and our planet.

Carbon Neutral by 2040

To help us achieve this goal, FedEx is designating more than $2 billion of initial investment in three key areas: vehicle electrification, sustainable energy, and carbon sequestration, as outlined below.

- **Vehicle Electrification:** By 2040, the entire FedEx parcel pickup and delivery (PUD) fleet will be zero–emission electric vehicles. This will be accomplished through phased programs to replace existing vehicles. For example, by 2025, 50% of FedEx Express global PUD vehicle purchases will be electric, rising to 100% of all purchases by 2030. Our work with General Motors will be key in helping us achieve this objective. As the first customer of their new commercial electric vehicle brand, BrightDrop, we look

forward to taking delivery of 500 vehicles this year alone.

- **Sustainable Customer Solutions:** FedEx will work with customers to offer end-to-end sustainability options for their supply chains through carbon–neutral shipping offerings and sustainable packaging solutions.

- **Sustainable Fuels (SAFs):** FedEx will continue to work with industry, government agencies, academia, and alternative fuel suppliers to seek development and invest in cost-effective alternative fuels to reduce aircraft and vehicle emissions. These investments build on our work in 2018 with Boeing, when FedEx supplied a B777 to Boeing for the 2018 ecoDemonstrator program, testing 35 separate technologies, some of which focused on achieving greater fuel savings. In addition, the aircraft flew on 100 percent biofuel. More investment and development are needed if we are to see the benefits of SAFs. Given the consumption rate of conventional aviation fuel as demonstrated in the attached chart, more investment and development are needed if we are to see the true benefits of SAFs.

- **Fuel Conservation and Aircraft Modernization:** FedEx will build on its successful FedEx Fuel Sense initiatives designed to reduce fuel consumption in its aircraft and continue to invest in new aircraft. For example, by the end of 2022, we plan to retire our fleet of MD-10s while continuing to acquire cleaner and more fuel efficient aircraft. We also will continue working with the U.S. Federal Aviation Administration to advance and

modernize the National Airspace System.

- **Facilities:** FedEx will continue efforts to make its more than 5,000 facilities worldwide more sustainable through continued investments in efficient facilities, renewable energy, and other energy management programs. Across our FedEx Ground network, we have solar installations in service at 16 facilities and a number of projects in progress or in the planning phase at additional U.S. locations. Significant efforts are already underway as well to modernize major Express hubs in Memphis, Tenn., and Indianapolis, Ind.

- **Natural Carbon Sequestration:** FedEx will commit $100M over five years to help establish the Yale Center for Natural Carbon Capture to support applied research into natural carbon sequestration solutions.

The path toward sustainability requires new strategies for removing and storing Earth's excess carbon. The Yale Center for Natural Carbon Capture will catalyze interdisciplinary research across the natural sciences and engineering to accelerate this work.

Center researchers will develop methods that build on natural carbon storage systems, including biological ecosystems and the geological carbon cycle, improving, where possible, how quickly carbon can be absorbed, how much can be contained, and how long it can be stored. The center's first focus will be helping to develop strategies that offset greenhouse gas emissions equivalent to current emissions produced by aircraft. This effort is critical as we look forward and plan for the growth of this dynamic industry.

The growth of aviation is essential to our collective future. Airplanes enable humanity's innate historical desire to travel and trade and have uniquely helped create a more connected, prosperous world. It was only 118 years ago that the Wright brothers took flight in their homemade machine. Today, global air services now comprise an industry with nearly 88 million jobs [1]. In 2019, airplanes transported over 4.5 billion passengers around the world[2] and were responsible for over 30% of the value of all international trade[3]. And while COVID-19 has temporarily disrupted passenger travel, international air cargo services have proven essential to helping the world combat this crisis, by keeping critical supply chains open to ensure the timely delivery of much needed supplies and goods.

Unlike other transport activities that can be powered by batteries or other low-carbon fuels, achieving true sustainability in aviation has proven to be an intractable problem as there are few viable alternatives on the horizon to replace carbon-based jet fuels. Along with investing in the modernization of aircraft, the aviation industry will continue research and development of sustainable plant and waste-based biofuels, synthetic carbon-based fuels, "electrofuels," and "green hydrogen." However, the massive costs of new sustainable aircraft fuels, suitable new aircraft designs to use them, and associated infrastructure make the prospects for carbon-neutral aviation challenging. As Bill Gates documents in his new book "How to Avoid a Climate Disaster," absent scientific breakthroughs in chemistry, flying would necessarily revert to a "premium" mode of transport — significantly decelerating future global prosperity and improvements in health.

[1] International Air Transport Association
[2] International Civil Aviation Organization
[3] Bernstein research

Developing a portfolio of natural solutions for carbon sequestration is an ambitious but realistic approach to this problem. Building upon initial successes in the aviation sector, the Yale center will broaden its scope to address additional global sources of emissions – publishing and sharing its findings so that other businesses, industries, and governments can benefit from work that will accelerate the adoption and implementation of natural carbon capture strategies around the world.

Future-focused strategies

This partnership with Yale University is only one of many future-focused sustainability strategies underway at FedEx. As we maintain a market-leading portfolio for e-commerce — the fastest growing segment of our business — we do so with a sharp focus on customer needs and the environment as we explore and develop emerging technologies that will help create a safer, efficient, and sustainable operation for the future. Roxo™, the FedEx SameDay Bot holds promise for deliveries in congested or difficult delivery locations and is all electric — using only batteries that produce zero localized emissions. In 2019, FedEx launched its participation in a small package, small drone delivery pilot program operated by Wing Aviation LLC, a subsidiary of Alphabet Inc. The pilot program is being conducted in Christiansburg, Va., as part of the U.S. Department of Transportation's Unmanned Aircraft Systems Integration Pilot Program. Working to meet customer needs in an ever-changing marketplace, the collaboration was designed to evaluate enhancing last-mile delivery for same-day delivery of urgent shipments and other exceptional delivery needs.

Regarding surface transportation, we must focus on creating sound and efficient trucking policies while also investing in infrastructure. As seen during the COVID-19 pandemic, the U.S. trucking industry is a critical link in maintaining supply chains, accommodating rapid growth in e-

commerce and meeting fast changing consumer demands. Yet the industry remains stuck with aging infrastructure and dated federal equipment standards for twin 28-foot trailers that have not been changed since 1982. We must continue to advocate for common sense, environmentally friendly solutions to maximize trucking efficiency and increase environmental gains. One such common sense approach with immediate environmental benefits would be a modest 5-foot increase to twin 28' trailers – not an increase to the weight limits. This increased capacity in our nation's transportation system could reduce annual fuel use by 225 million gallons per year and reduce carbon emissions by 3 million tons per year, all at no cost to road safety or taxpayers.

Last year, this committee and this chamber did important work in drafting an infrastructure package that incorporated climate solutions. This included incentivizing commercial electric vehicles, promoting the building of zero emission vehicle charging infrastructure, and advancing research into low-emission and alternative aviation fuels. There was also significant work done to modernize the electric grid to accommodate more renewable energy and prepare the grid for the largescale deployment of electric vehicles. This is a good start, but there is more that needs to be done. As noted earlier, if we want to see the full benefit of SAFs, we need to invest in a manner that will facilitate development and create a sufficient supply of SAFs that can meet and adjust to operator demand. We also need to prioritize modernizing our air traffic control system. Beyond technology updates and staffing, we need to focus on updating air traffic management policies and guidance in a way that balances sustainability and efficiency objectives, with community impact.

Our ambitious agenda at FedEx shows that businesses can and will lead in the effort to create a sustainable future for us all. However, we cannot do this alone. Government, industry stakeholders, and academia must continue to work together to adopt policies and regulations that

help create a performance-based path that will foster and promote innovation in this field, ensuring that the U.S. maintains its status as a global leader in climate change policy, while also stimulating economic growth and job development.

These are just a few of the priorities we must focus on as we work together to drive innovation and develop solutions to address our climate crisis. I look forward to discussing those shared goals with you today.