

C0. Introduction

C0.1

**(C0.1) Give a general description and introduction to your organization.**

United's shared purpose is "Connecting People. Uniting the World." We are more focused than ever on our commitment to customers through a series of innovations and improvements designed to help build a great experience: Every customer. Every flight. Every day. In 2019, prior to the novel coronavirus (COVID-19) pandemic, United Airlines and United Express together operated approximately 4,900 flights a day to 361 airports across six continents, and operated more than 1.7 million flights carrying more than 162 million customers. United is proud to have one of the world's most comprehensive route network, including U.S. mainland hubs in Chicago, Denver, Houston, Los Angeles, New York/Newark, San Francisco, and Washington, D.C. As of December 31, 2019, United's operations included 791 mainline aircraft and the airline's United Express carriers operated 581 regional aircraft. Beginning in the first quarter of 2020, United began experiencing a significant decline in passenger demand related to the COVID-19 pandemic. In response to decreased demand, United reduced 57% of its scheduled capacity in 2020 vs. 2019. United is a founding member of Star Alliance, which in 2019 provided service to 195 countries via 28 member airlines. For more information, visit united.com, follow @United on Twitter and Instagram or connect on Facebook. The common stock of United's parent, United Airlines Holdings, Inc., is traded on the Nasdaq under the symbol "UAL".

United's environmental commitment is core to the mission to connect people and unite the world. Every day, we celebrate the people and communities across our planet—which is why we understand the need for bold action now to combat climate change. At United, we're on a mission to make sustainable flying the new standard, with our path to reducing our "wingprint," extending from in the air, to the ground, and into our communities. United has been recognized for years for its leadership in advancing sustainable aviation, such as in 2016, when it became the first airline to begin using sustainable aviation fuel (SAF) on an ongoing daily basis, marking a significant milestone in the airline industry, by moving beyond demonstrations and test programs to the use of SAF in ongoing operations. In 2018, United Airlines ranked No. 1 among global carriers in Newsweek's Global 500 Green Rankings, one of the most recognized environmental performance assessments of the world's largest publicly traded companies. In 2019, United flew the most eco-friendly commercial flight of its kind in the history of aviation: on the Flight for the Planet, United became the first known airline to demonstrate all of the following key actions on a single commercial flight: utilization of SAF, zero cabin waste efforts, operational efficiencies, and using carbon offsets to address the remaining greenhouse gas (GHG) emissions associated with the flight.

In 2020 we announced our "100% Green" climate commitment: a goal to achieve carbon neutrality by 2050 without the use of traditional carbon offsets. That same year, The Carbon Disclosure Project (CDP) named United as the only airline globally to its 2020 Climate 'A List' for the airline's actions to cut emissions, mitigate climate risks and develop the low-carbon economy, marking the seventh consecutive year that United had the highest CDP score among U.S. airlines. And in June 2021, for the third time since launching its industry-leading Eco-Skies program, United Airlines was named the Eco-Airline of the Year by Air Transport World magazine. The award recognizes an airline globally for its environmental leadership as demonstrated by consistent and impactful environmental action within the company and in the airline industry. Today, we consume more of the global supply of SAF than any other airline through daily flights departing from Los Angeles, demonstrating a commitment to and support for the growing market for lower carbon alternatives.

United's four-pillar commitment to the environment consists of:

- 1) Fuel efficiency and emissions reduction: increasing fuel efficiency and reducing emissions through technology and process innovation
- 2) Sustainable fuel sources: investing in and operating on environmentally responsible and cost-efficient sustainable fuels
- 3) Carbon capture and sequestration: carbon capture and sequestration technology that removes CO2 from the ambient air
- 4) Innovation for the future: investing in innovative technology that can help reduce GHG emissions

C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	No	<Not Applicable>

C0.3

**(C0.3) Select the countries/areas for which you will be supplying data.**

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-T00.7/C-TS0.7

(C-T00.7/C-TS0.7) For which transport modes will you be providing data?

Aviation

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The Public Responsibility Committee of the Board of Directors of United Airlines Holdings, Inc. (the Board) provides board oversight for United's policies and positioning with respect to environmental sustainability, social responsibility, and public policy. In addition to scheduled Public Responsibility Committee meetings, members of the committee meet with certain United officers to receive updates and discuss key issues directly relevant to its purpose as described above. On a regular, but at least annual basis, the Public Responsibility Committee is updated on United's environmental programs and policies, initiatives related to climate change, environmental regulations that impact United, and progress in fulfilling United's environmental sustainability objectives and commitments. While United's climate mitigation strategy in 2020 was not decided at Board level—and rather at the officer-level, by both the CEO and President—the Board was updated many times on climate-related matters, including focused discussions on specific pillars of United's decarbonization strategy.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding annual budgets Overseeing major capital expenditures, acquisitions and divestitures	<Not Applicable>	United's climate strategy is focused primarily on mitigating GHG emissions from its aircraft, as 99% of United's Scope 1 and Scope 2 emissions result from jet fuel consumption. Jet fuel consumption was United's third largest cost in 2020 (comprising 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses). United's fuel costs and their impact on the company's financial performance are communicated to the Board at all scheduled meetings by the Chief Financial Officer (CFO) and/or other officers.
Scheduled – some meetings	Reviewing and guiding risk management policies	<Not Applicable>	Climate-related risks are integrated into the company's overall risk management process; the Audit Committee of the Board receives updates on and monitors management's strategies to protect the company from risks identified by this process.

C1.2

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
President	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Financial Officer (CFO)	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	Quarterly

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

United's Chief Executive Officer (CEO) reports directly to the Board. The CEO has responsibility for climate-related issues because this position oversees the strategy, objectives, and long-term planning of the company, thus ensuring that these issues are truly integrated into business governance and strategy. As part of their responsibilities, the CEO has overall responsibility for all aspects of the company's business, including assessing and managing United's fuel costs and climate-related risks and opportunities. The CEO also is directly apprised of investment and partnership opportunities in the climate space—including decisions on investing in decarbonization technology, where they act as the key decision-maker—and has personally appeared on industry panels and events to discuss the need for a decarbonized future and advocate for policy incentives to drive supply in sustainable fuels and technology. The CEO has identified climate risk mitigation as a priority for United.

Beyond the CEO, the President reports to the CEO and assesses and manages United's climate risk management and United's environmental programs and policies, including climate change; other relevant departments, including Government Affairs, Regulatory Affairs, and Risk Management also report to the President. The President is also apprised of decarbonization technology investment and partnership opportunities, particularly ensuring environmental benefit and/or emissions reduction potential where the technology allows.

The Chief Financial Officer (CFO) assesses climate-related risks and opportunities by overseeing long-term investments in more fuel-efficient aircraft, low-carbon fuel sources, and decarbonization technologies, and is directly apprised of technology investment and partnership opportunities, to ensure diligence and financial benefit where the investment allows. The investment activity done through United's Corporate Development team falls under the CFO's responsibility, with the team itself directly reporting to that position. United's climate strategy is focused primarily on mitigating GHG emissions from its aircraft, as 99% of United's Scope 1 and Scope 2 emissions result from jet fuel consumption. Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel was United's second largest expense (23% of expenses). United's fuel costs and their impact on the company's financial performance are communicated to the Board at all scheduled meetings by the CFO and/or other officers.

United's climate monitoring process involves assessment of external factors that could impact climate-related issues, including changes to current legislation, future legislation, and changes to policy and taxes. An example of this is the monitoring of ICAO's (International Civil Aviation Organization, the UN agency for aviation) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA); the CEO, President, and CFO oversee the monitoring of policy developments of the scheme, and act to ensure that the company is prepared for its implementation in such a way that best protects United's financial performance and minimizes its reputational risk.

Day-to-day responsibility for environmental matters resides with United's Managing Director of Global Environmental Affairs and Sustainability. This position reports to the Senior Vice President of Government Affairs & Global International Policy, who in turn reports to the President.

**C1.3**

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	United's climate strategy is focused on mitigating GHG emissions from its aircraft, as 99% of United's Scope 1 and Scope 2 emissions result from jet fuel consumption. Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses). Including and through the first quarter of 2020, United's executives and certain other managers received long-term and annual incentive awards with value linked to performance metrics, including financial performance, of the company. United also offers a Profit Sharing Plan, which enables eligible employees to share in the company's financial success when United is profitable. Further details of all these incentives can be found in the response to Question C1.3a.

**C1.3a**

**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Efficiency target	United executives and certain other managers receive long-term and stock-based and annual incentives, whose value is linked to the company's financial performance, among other performance metrics. Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses).
Management group	Monetary reward	Efficiency target	United executives and certain other managers receive stock-based long-term and annual incentive awards whose value is linked to the company's financial performance, among other performance metrics. Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel, and thereby reducing GHG emissions, an important factor in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses).
All employees	Monetary reward	Efficiency target	United's Profit Sharing Plan enables eligible employees to share in the company's financial success when United is profitable and earns more than \$10 million in pre-tax income during the fiscal year. Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses).

**C2. Risks and opportunities**

**C2.1**

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

**C2.1a**

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	2	In this timeframe, United has flexibility to change near-term aspects of its business strategy, such as its planned flying capacity.
Medium-term	2	10	In this timeframe, United has flexibility to change longer-term aspects of its business strategy.
Long-term	10	30	In this timeframe, United has flexibility to change all aspects of its business strategy. The useful lifetimes of aircraft generally extend toward the upper end of this range.

**C2.1b**

**(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

United defines a substantive or strategic impact on the business as any internal or external event or circumstance that could impact United's ability to achieve its strategic/business objectives. United's climate-related risk management process is part of its overall company-wide risk assessment. United has an Enterprise Risk Management (ERM) process. The ERM process has an ERM Committee comprised of officers and executives of the company, who then appoint Risk Teams.

The senior management-level Risk Teams oversee risk identification, risk measurement, and risk response for their respective area(s) of expertise; Environmental Affairs participates in United's ERM process. The Risk Teams use several risk identification techniques including but not limited to subject matter expertise, evaluation of prior exposures, perils and hazards, interviews with the business, and outside consultants. Asset-level risks are identified and managed through multiple departments' processes, including Corporate Insurance, Corporate Real Estate, Corporate Safety, Environmental Affairs, Finance, Internal Audit, Legal, and numerous operations departments.

A substantive or strategic impact is determined by an analysis of likelihood and impact scales which are assessed by the Risk Teams. Financial materiality thresholds are established in coordination with the Treasury and Accounting departments, based on the status and strength of United's balance sheet and financial situation. Once the financial impact analysis and likelihood ratings have been completed, risks that qualify as enterprise risks are rated by leadership in Communications, Government Affairs, Human Resources, Marketing, and Sales to then be assigned one of five reputational impact risk ratings. The higher of the financial impact and reputational risk rating is the final rating that is presented to leadership and the Board of Directors and used to quantify the risk as one that could cause substantive or strategic impact.

**C2.2**

**(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

**Value chain stage(s) covered**

Direct operations

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

More than once a year

**Time horizon(s) covered**

Short-term

Medium-term

Long-term

**Description of process**

The ERM team holds comprehensive risk workshops with Risk Teams annually (more frequently if needed), to update assessments of existing risks and to identify and rate new or emerging risks. This process primarily focuses on risks that may occur within a three-year time horizon, while the ratings focus on the upcoming 12 months. Additionally, the process also looks ahead to a medium-term and long-term time horizon to determine if any new risks should be included in the ERM reporting process. In direct operations, risks may be tied to the fleet itself, which has a long-term time horizon, due to the useful lifetime of an aircraft. In 2020, additional Risk Teams were created, to address concerns like COVID-19 as well as emerging concerns like environmental, social, and governance (ESG) strategy, and additional ERM Committee meetings were held. For physical risks and opportunities such as increases in extreme weather, United constantly evaluates and responds to weather-related events. In addition, in 2016 the company increased the amount of out-and-back flying (flying that begins at a hub, travels to another airport, and returns directly back to the hub). At the beginning of 2016, United increased flying in this pattern from approximately 35% of flights to approximately 70%. In addition to reducing operational complexity, this helps isolate the impact of weather- and Air Traffic Control-related events to that hub while mitigating the impact on other hubs. United believes that this change drives improved reliability and efficiency and provides a better experience for customers and employees. For transitional risks and opportunities such as emerging regulations, United was part of the airline industry leadership that helped lay the foundation for ICAO's Carbon Offsetting and Reduction Scheme (CORSIA). Through Airlines for America and the International Air Transport Association, United assisted in identifying financial exposure from a patchwork of regulatory and tax schemes related to environmental by several countries, and modeled the potential financial impact from such schemes vs. CORSIA, and assisted in the design framework via ICAO working groups to ensure CORSIA was approved and is being implemented. In 2020 United also evaluated domestic carbon policies and incentives, resulting in United leading advocacy for incentive-based policy mechanisms to grow sustainable aviation fuel supply in the U.S.

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**C2.2a**

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**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Local, state, federal, and international regulations regarding the environment create compliance and financial risks to United. Examples of international agreements include ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSA), for which 2019 was the first reporting year. The unprecedented nature of the COVID-19 pandemic prompted ICAO to include only 2019 emissions as the baseline upon which offsetting obligations would be calculated for the first phase (2021-23) of the scheme. The applicable baseline for the subsequent phases of the scheme, however, is still uncertain, as CORSA only applies to the flights between countries that have volunteered for the first phase. Approximately 33% of United's pre-COVID-19 capacity (including regional partners) was flown between country-pairs that have volunteered for the first phase of CORSA. If additional countries join in subsequent years, this number is expected to increase. Related state regulations include California's AB 32 (The 2006 Global Warming Solutions Act), which created a Low Carbon Fuel Standard (LCFS) in California that aims to reduce the carbon intensity of the state's transportation fuel pool by approximately 20% by 2030 via both mandates and incentives. The LCFS program has helped facilitate a market for lower-carbon fuels, for which there is currently insufficient supply in aviation, while contributing to upward price pressure for road-based conventional fuels. As the California LCFS has matured, other states/regions within the United States are proposing similar low carbon-fuel policies. These risks are identified and assessed by Environmental Affairs and Regulatory Affairs as existing regulations continue to evolve. These departments then proactively evaluate the financial impact of these regulations to determine the most appropriate risk response, and report these results to the Enterprise Risk Management (ERM) Committee, United officers, and the Board.
Emerging regulation	Relevant, always included	United continuously monitors the regulatory environment as it evolves to identify and evaluate new exposures and its risk response. United participates in various industry groups including Airlines for America, the International Air Transport Association, and the Air Transport Action Group, which have environmental, fuel, and other groups that monitor and share information on emerging environmental risks that impact the airline industry. A prior example of this risk was the introduction of the European Union Emissions Trading Scheme (EU ETS), which could have applied to nearly all of United's routes to Europe, were the company and these industry groups not successful in advocating the scheme apply to only intra-EU routes, thereby helping to avoid a patchwork of different and potentially conflicting emission schemes levied against international air transport. Instead, the industry championed CORSA, a sole international and cooperative global market-based policy solution for aviation GHG emissions. A further example of regulatory risk is the emergence of sustainable aviation fuel (SAF) mandates, which could require a volume of SAF that is not yet existing in supply and potentially lead to market distortion. Instead, United is currently advocating with the U.S. EU, and other governments for positive incentives to encourage supply in the long-term. Most recently, on July 14, 2021, the European Commission proposed comprehensive climate change legislation (styled as "Fit for 55" – the Commission's plan to set the EU on course to reduce EU GHG emissions by 55% by 2030) that would introduce a blending mandate for SAF. This proposal must navigate the legislative process, and United will continue to make the case that incentives are more effective than mandates in promoting the production and use of SAF. These risks are identified and assessed by Environmental Affairs and Regulatory Affairs as existing and new regulations continue to evolve. These departments then proactively evaluate the financial impact of these regulations to determine the most appropriate risk response and report these results to the ERM Committee, United officers, and the Board.
Technology	Relevant, sometimes included	Technology-related risks relevant to United include product efficiency regulations and standards such as ICAO's CO2 efficiency standard (which the U.S. EPA adopted in late 2020) that applies to aircraft designs, and the ability of aircraft manufacturers to meet the standard. These risks apply to all of United's current and future aircraft types. These risks are identified and assessed by Environmental Affairs and Regulatory Affairs as existing regulations continue to evolve. These departments then proactively evaluate the financial impact of these regulations to help determine the most appropriate response, and report these results to the ERM Committee, United officers, and the Board.
Legal	Relevant, sometimes included	Legal risks relevant to United include, among others, litigation, regulatory, or administrative proceedings related to environmental issues. The Legal department works with other departments within the company, including Environmental Affairs and Regulatory Affairs, to evaluate and assess these risks. Examples of legal risk include litigation, regulatory, or administrative proceedings that municipalities have initiated against the industry on climate-related issues, or against government agencies seeking more aggressive regulations. For example, in Brazil the State Public Prosecutor filed lawsuits against all airlines operating at Sao Paulo Guarulhos International Airport seeking damages due to GHG emissions, in the form of land restoration projects, or a fixed fee per passenger to offset perceived environmental issues. The case was dismissed in March 2021. Failure to properly respond to such actions could lead to financial penalties as well as negatively impact United's reputation. By way of further example, airlines face exposure to significant penalties for breach of strict noise standards in certain countries where United operates, such as Belgium.
Market	Relevant, sometimes included	Market risks relevant to United include consumer preferences for lower carbon travel, which could lead to shifts in demand from international to domestic air travel, or shifts in demand away from air travel to alternate modes of transportation or shifts away from business travel towards virtual meetings and events. These risks are identified and assessed by Network Planning as markets continue to evolve. This department evaluates changes in market demand on an ongoing basis.
Reputation	Relevant, sometimes included	Reputational risks relevant to United include shifts in consumer preferences that may impact demand for United's travel services, or increased expectations regarding decarbonization and emissions reductions activities, including reporting and disclosure of these initiatives, such as decarbonization investments or use of emissions-reducing sustainable aviation fuel. If United is not viewed as market leader in terms of disclosure and emissions reduction, the reputational impact could lead to customers seeking to use alternative airlines. These risks are identified and assessed by Environmental Affairs, Corporate Communications, and Investor Relations. These departments monitor public opinion and expectations and investor interest and expectations around climate commitments, and the perceptions of its stakeholders regarding United's and other airlines' impact on climate change.
Acute physical	Relevant, sometimes included	Acute physical risks relevant to United include changes in weather intensity that may result in impacts to United's flight operations, such as the extreme polar vortex event that occurred in the Midwest in 2019, which created extreme delays in aircraft fueling, impacting service and operations by necessitating normally nonstop flights international flights to make fueling stops in other cities. In 2017 United temporarily suspended service to Delhi due to poor air quality concerns from pollution. In September 2020, wildfires in the Pacific Northwest restricted visibility, requiring United to cancel flights at certain airports in the region. These risks are identified and assessed by Airport Affairs, Environmental Affairs, Network Operations, and Risk Management. These departments constantly evaluate and respond to weather-related events, focus on improving aircraft performance, and work with local airport authorities to ensure that adequate airport runway capacity and operating capabilities are in place.
Chronic physical	Relevant, always included	Chronic physical risks relevant to United include changes in mean (average) temperature, changes in mean (average) precipitation, and sea level rise that may result in impacts to United's flight operations as well as changes in consumer preferences that may impact demand for United's travel services. For example, there may be changes to traditional winter sports vacation destinations if temperature increases impact the desirability of these destinations. By way of further example, in winter 2017-18 there was lower than normal snowfall in markets such as Colorado and Montana that resulted in reduced travel demand. These risks are identified and assessed by Airport Affairs, Environmental Affairs, and Network Operations. These departments constantly evaluate and respond to weather-related events, focus on improving aircraft performance, and work with local airport authorities to ensure adequate airport runway capacity and operating capabilities are in place.

**C2.3**

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Mandates on and regulation of existing products and services
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**Primary potential financial impact**

Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Climate change-related regulations on fuel or mandates to purchase sustainable aviation fuel (SAF), like that which entered effect in Sweden in 2019, could cause the price of fuel to rise and increase the company's operational costs. During normal operating conditions, and prior to the COVID-19 pandemic, jet fuel consumption was United's second largest cost (comprising of 23% of operating expenses), so any increase in fuel prices due to regulations is expected to cause operational costs to rise.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

89530000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This figure assumes a 1% increase in United's fuel expense, which was \$9.0 billion pre-COVID-19 (representing typical operations). This figure is only for demonstrative purposes of how one could start to estimate the potential financial impact, and should not be construed as an accurate projection of United's future financial impact. The financial implications cannot be estimated at this time due to the lack of certainty around the policy actions of numerous countries. The financial impacts to United include the potential for increased fuel costs, carbon taxes or fees, and/or a requirement to purchase carbon instruments

**Cost of response to risk**

290000000

**Description of response and explanation of cost calculation**

United's "100% Green" climate commitment—a goal to achieve carbon neutrality by 2050 without the use of traditional carbon offsets—aligns with the strategy and direction of today's many consumers, policymakers, and investors: transitioning to a clean energy economy by 2050. United has been an aviation industry leader, in promoting sustainable aviation fuel (SAF) production and adoption through both purchasing SAF volumes and investing in SAF producers. To date, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years (this supply has not yet begun). Most recently, United launched United Airlines Ventures, a corporate venture capital fund of \$200 million that will concentrate on sustainability technology investments. Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer. In 2020, United announced a commitment to invest in carbon capture and sequestration technology, through planned investment in 1PointFive, the developer of the world's largest direct air capture facility, to broaden its decarbonization technology portfolio. In 2019, United made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies. Taking delivery of new and more fuel-efficient aircraft is an important factor in United's long-term fleet strategy. United took delivery of eight fuel-efficient 737 MAX aircraft in 2020, and an additional nine to date in 2021. These aircraft are significantly more fuel-efficient than the previous model and United expects to receive delivery of 15 additional 737 MAX aircraft by the end of 2021.

**Comment**

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Downstream

**Risk type & Primary climate-related risk driver**

Reputation	Shifts in consumer preferences
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**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

United monitors public opinion and investor interest in climate change, and the perceptions of its stakeholders regarding airlines' impact on the climate. United understands that climate change is increasingly attracting public, investor, and political attention worldwide. As a result, United recognizes the importance of addressing these concerns and communicating with the company's stakeholders—customers, investors, employees, shareholders, and communities—to raise awareness and provide updates on the company's environmental efforts. If stakeholder perceptions negatively influence consumer choice and loyalty, this could reduce demand for United's services and possibly impact the company's revenue. While customer surveys have shown that mitigating GHG emissions is customers' top environmental concern for United, United has not identified any shifts in consumer preferences at this time.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

43259000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This figure assumes a 0.1% reduction in revenue, which was \$43.3 billion pre-COVID-19 (representing typical operations). This figure is only for demonstrative purposes of how one could start to estimate the potential financial impact, and should not be construed as an accurate projection of United's future financial impact. The financial implications cannot be estimated at this time due to lack of certainty around the degree to which stakeholder perceptions are affecting consumer choice and loyalty.

**Cost of response to risk**

100000

**Description of response and explanation of cost calculation**

Recognizing the increased focus on climate-related risk mitigation across corporations worldwide, and the need to aid in the transition to a clean energy economy, United announced its "100% Green" climate commitment: a goal to achieve carbon neutrality by 2050 without the use of traditional carbon offsets. This commitment aligns with the expectation of today's many consumers, policymakers, and investors, who are expecting a transition toward a clean energy (or net-zero) economy no later than 2050. United focuses on enhancing and improving its climate programs to reduce the company's impact on the environment. United is committed to pursuing reductions in fuel consumption including, but not limited to, improvements in aircraft fuel efficiency. In the short term, United is pursuing a number of fuel efficiency measures and has taken a leading role in developing the market for sustainable aviation fuel (SAF). In the medium-term, United anticipates the use of the increased market supply of SAF. In the long-term, United will expand upon its SAF usage and utilize more advanced-stage technologies, such as direct air capture and potentially zero-emissions (e.g., electric) aircraft. United also mitigates its impact on climate change through investments in more fuel-efficient aircraft. Second, utilizing proprietary channels such as the company's corporate responsibility report, corporate website, the Flying Together employee intranet, Hemispheres inflight magazine, and inflight educational videos, United shares information with its customers, employees, shareholders, and communities to inform them of the activities that the company is undertaking to reduce its impact on the environment. In 2012, 2014, and 2020 United undertook materiality assessments to better understand the environmental issues and impacts that concern United's stakeholders, with climate-related issues ranking high in terms of stakeholder interests. Improved fuel efficiency and aircraft performance, reputation management, and communications have long been embedded into United's business strategy, so they are considered fundamental costs of doing business. The cost of management is \$100,000; the approximate cost of 100% of one employee's time to monitor this risk.

**Comment**

**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Current regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

In 2016 the International Civil Aviation Organization (ICAO) adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). CORSIA is expected to address any annual increase in total GHG emissions from airlines' international flying above baseline levels. Due to the COVID-19 pandemic, ICAO recently amended CORSIA such that 2019 emissions will be the baseline year, against which emissions in future years are compared. As part of the scheme, airlines will need to offset any growth in emissions from 2021 onward. This obligation is expected to increase United's operating costs due to the need to offset emissions. Approximately 33% of United's pre-COVID-19 (representing typical operations) capacity was flown between country-pairs that have volunteered for the first phase of CORSIA (2021-23). If additional countries join in subsequent years, this number is expected to increase.

**Time horizon**

Medium-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

15000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This figure is based on ICAO and International Energy Agency estimates of the airline industry's CORSIA costs to buy carbon instruments in 2025, and assumes that United is responsible for 1% of industry costs (\$1.5 billion) under ICAO's Optimistic scenario (with Additional Low carbon price). This figure is only for demonstrative purposes of how one could start to estimate the potential financial impact, and should not be construed as an accurate projection of United's financial exposure. Attributing a

cost to CORSIA is not currently possible due to numerous uncertainties, including (see Comment section, insufficient space due to character limits).

**Cost of response to risk**

70000000

**Description of response and explanation of cost calculation**

United supports CORSIA as a cooperative global solution for international aviation GHG emissions, as opposed to a patchwork of different and conflicting emission taxes and regulatory programs across the globe. CORSIA's impact is a function of international, or long-haul, flight emissions, and management of the risk requires a review of all methods of aircraft emissions reductions, including implementing fuel efficiency measures, investing in sustainable aviation fuel (SAF), and investing in new technology and aircraft, and factoring this incremental cost of offsetting requirements into the company's pricing and revenue models. United is constantly focused on reducing emissions by improving its fuel efficiency and aircraft performance, both through its own internal efforts and in conjunction with its suppliers and partners; each new generation of aircraft has a 15%-20% improvement in fuel efficiency. In addition to addressing this risk, these efforts also serve to reduce United's overall GHG emissions and operational costs. To date, United has made the largest investments by an airline in SAF development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years (this supply has not yet begun). In 2019 United made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies. SAF procurement that is eligible under the CORSIA standards will be prioritized so as to manage this climate risk.

**Comment**

Uncertainty arises from a number of sources: - How much of United's network will be included due to United's constantly evolving route network and CORSIA's voluntary nature through 2026; for example, in 2018 China announced that it would not be participating in the Voluntary Phase as previously anticipated, which decreased United's 2018 CORSIA obligation flown between countries that volunteered for the first phase relative to total operational capacity (including regional partners) from 39% to 32% - The price of CORSIA-eligible carbon instruments, given the volatility of these credits' pricing within the carbon markets - United vs. the airline industry's GHG emissions as compared to the CORSIA baseline, as an airline's offsetting obligation is calculated based on its share of the total industry's emissions - Proposed government investments in technology and infrastructure that would reduce GHG emissions and therefore United's CORSIA costs

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C2.4

**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

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C2.4a

**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of lower-emission sources of energy

**Primary potential financial impact**

Reduced indirect (operating) costs

**Company-specific description**

United has extended its industry leadership in decarbonization by broadening its investment scope from sustainable aviation fuel (SAF) to include additional decarbonization technologies, such as carbon capture and sequestration and aircraft innovation. To create structure around this portfolio of climate-related investments, United this year launched United Airlines Ventures, a corporate venture capital fund that will concentrate its portfolio on decarbonization technology ventures.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

89530000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This figure assumes a 1% decrease in United's fuel expense, which was \$9.0 billion pre-COVID-19 (representing typical operations). This figure is only for demonstrative purposes of how one could start to estimate the potential financial impact, and should not be construed as an accurate projection of United's future financial impact. The financial implications cannot be estimated at this time due to the lack of certainty around the policy actions of numerous countries, future oil prices, and the future availability and costs of SAF.

**Cost to realize opportunity**

290000000

**Strategy to realize opportunity and explanation of cost calculation**

As a leader in advancing the SAF market, United is actively working with strategic partners to generate SAF capable of reducing the company's GHG emissions and providing energy diversification. United is vertically integrating into the biofuel supply chain and production because it believes SAF represents an important pathway for the airline industry to reduce its dependence on traditional fossil fuels, lower its emissions, enhance national security, and support economic growth. To date, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years (this supply has not yet begun). Most recently, United launched United Airlines Ventures, a corporate venture capital fund of \$200 million that will concentrate on sustainability technology investments. Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer. In 2020 United announced a commitment to invest in carbon capture and sequestration technology, through planned investment in 1PointFive, the developer of the world's largest direct air capture facility, to broaden its decarbonization technology portfolio. In 2019, United made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies.

**Comment**

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**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Shift in consumer preferences

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

United's CarbonChoice program allows participating corporate customers to receive customized enterprise-level GHG emissions reports specific to their travel on United. Regulations that require businesses to report their Scope 3 emissions could result in an increased demand for this service. In addition, because United has historically had better fuel efficiency than its largest competitors, the company may have opportunities to enhance its customer relationships with corporate customers who value lower Scope 3 emissions from travel.

**Time horizon**

Medium-term

**Likelihood**

About as likely as not

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

43259000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This figure assumes a 0.1% increase in revenue, which was \$43.3 billion pre-COVID-19 (representing typical operations). This figure is only for demonstrative purposes of how one could start to estimate the potential financial impact, and should not be construed as an accurate projection of United's future financial impact. The financial implications cannot be estimated at this time due to lack of certainty around the degree to which this program leads to increased corporate customer loyalty.

**Cost to realize opportunity**

75000

**Strategy to realize opportunity and explanation of cost calculation**

Recognizing that one of the major roadblocks, particularly after the financial impact of the COVID-19 pandemic, to procuring larger volumes of sustainable aviation fuel (SAF) is the incremental cost over traditional fuel, United this year launched its Eco-Skies Alliance program. The program offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for SAF. This contribution goes beyond traditional carbon offsets and create a demand signal for low emissions fuels. The cost to realize this opportunity is \$75,000 which represents the approximate cost of 75% of one employee's time (assumed salary of \$100,000) to manage this opportunity.

**Comment**

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**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resilience

**Primary climate-related opportunity driver**

Participation in renewable energy programs and adoption of energy-efficiency measures

**Primary potential financial impact**

Reduced indirect (operating) costs

**Company-specific description**

United believes air traffic control (ATC) reform is necessary to expedite and ensure the efficient modernization of the U.S. ATC system and ATC systems globally. The implementation of a modernized air traffic system will create greater efficiencies in flight paths and will lead to greater fuel efficiency for aircraft. The airline industry's proposals to separate the U.S. ATC function from the federal government and move it to a newly created not-for-profit organization as well as modernize global ATC systems may also help advance the timeline for the airline industry to meet its GHG emissions goals.

**Time horizon**

Medium-term

**Likelihood**

About as likely as not

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

10280000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

In 2015 the Federal Aviation Administration estimated that FAA's Next Generation Air Transportation System (NextGen ATC) would provide airlines with \$51.4 billion in cost savings from 2013 to 2030. This figure assumes that 20% of these benefits accrue to United. This figure is only for demonstrative purposes of how one could start to estimate the potential financial impact and should not be construed as an accurate projection of United's future financial impact.

**Cost to realize opportunity**

100000

**Strategy to realize opportunity and explanation of cost calculation**

United is working closely with its industry trade organizations, Airlines for America, the International Air Transport Association, and the Air Transport Action Group, to develop and implement new technologies (including sustainable aviation fuel) to increase fuel and operational efficiencies, to improve ATC systems and infrastructure, and to advocate for supportive government policies and investment. This work includes fully implementing the NextGen ATC, which would transform the U.S. air traffic control system from a radar-based system with radio communication to a satellite-based system. GPS technology would be used to shorten routes, save time and fuel, reduce air traffic delays, and permit controllers to monitor and manage aircraft with greater safety margins. United and its trade organizations also continue to advocate for modernization of the ATC system in the EU and other international regions, due to the environmental benefits and associated cost savings. Supporting technology innovation and air traffic management have long been embedded into United's business strategy, so they are considered fundamental costs of doing business. The cost of management presented here represents the approximate cost of 100% of one employee's time to manage this opportunity.

**Comment**

**C3. Business Strategy**

**C3.1**

**(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?**

Yes, and we have developed a low-carbon transition plan

**C3.1a**

**(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?**

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, but we intend it to become a scheduled resolution item within the next two years	

**C3.2**

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

Yes, qualitative and quantitative

**C3.2a**

**(C3.2a) Provide details of your organization's use of climate-related scenario analysis.**

Climate-related scenarios and models applied	Details
ZDS	<p>United has been reviewing use of a 2° C scenario due to its applicability toward impact analysis specific to airlines, including greenhouse gas (GHG) emissions measures increasing United's fuel-related costs, physical impacts to United's operating environment, and changes in demand for air travel. This scenario has been selected because it is endorsed by the UN IPCC, International Energy Agency, and the COP21 agreement as being economically feasible and cost effective, while also limiting the impacts of climate change. Although IPCC estimates suggest that a 2° C increase will not be reached for several decades, United considers impacts on a shorter time horizon (e.g., up to 10 years) due to the high degree of uncertainty beyond this time frame. To date, this analysis has focused primarily on cost impacts from market-based measures for GHG emissions and physical impacts to United's operating environment. United's entire business has been considered as part of this analysis, with particular focus on fuel use, as 99% of United's Scope 1 and Scope 2 emissions result from jet fuel consumption. The analysis shows coastal areas where some of United's markets are located—like United hubs in Houston, Los Angeles, New York/Newark, and San Francisco—could be most impacted by climate change due to sea level rise and population migration. Approximately 70% of United's 2019 capacity departed or arrived from these hubs pre-COVID-19. United's analysis indicates that an increase in fuel-related costs due to GHG emissions is possible but dependent on implementation of sweeping carbon policy. These results have informed United's business strategy, indicating that United should continue its existing strategy of actively investing in more fuel-efficient technologies and aircraft. To date, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years (this supply has not yet begun). Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer. In 2020 United announced a commitment to invest in carbon capture and sequestration technology, through planned investment in 1PointFive, the developer of the world's largest direct air capture facility, to broaden its decarbonization technology portfolio. This information directly influenced United's recent corporate strategy become the first U.S. airline to publicly commit to a 100% reduction in GHG emissions—without the use of traditional carbon offsets (representing the equivalent of removing 12 million vehicles from the road each year). Newer and more fuel-efficient aircraft is an important factor in United's long-term fleet strategy. United took delivery of eight fuel-efficient 737 MAX aircraft in 2020, and an additional nine to date in 2021. These aircraft are significantly more fuel-efficient than the previous model and United expects to receive delivery of 15 additional 737 MAX aircraft by the end of 2021. United currently has 13 of the Boeing 787-10 aircraft in its fleet and an additional eight 787-10s on order, which offers substantially reduced fuel consumption and GHG emissions.</p>

**C3.3**

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	While the main contributor to United's carbon footprint is a function of the fuel it consumes, there is a known risk posed by potential shifts in consumer preferences due to climate change. United has made the medium-term business decision to test and offer products that can respond to those shifts. In 2019 United flew the most eco-friendly commercial flight of its kind in the history of aviation: on the Flight for the Planet, United became the first known airline to demonstrate all of the following key actions on a single commercial flight - utilization of sustainable aviation fuel, zero cabin waste efforts, carbon offsetting, and operational efficiencies. While United previously has offered its passengers and cargo customers the ability to offset GHG emissions associated with their air travel through the company's CarbonChoice program, in 2021 United launched its Eco-Skies Alliance program, now allowing those passengers and customers the ability to contribute toward paying for sustainable aviation fuel (SAF) as a long-term solution for addressing the airline's emissions. United's CO2 calculator—which calculates emissions footprints—is based on actual routes, aircraft used, load factors, and fuel consumption. Corporate customers can receive customized GHG emissions reports.
Supply chain and/or value chain	Yes	United's climate strategy is focused on mitigating GHG emissions from its aircraft, as 99% of United's Scope 1 and Scope 2 emissions result from jet fuel consumption. As of December 31, 2020, United had \$24.3 billion in capital commitments, which primarily relate to business decisions such as the acquisition of aircraft, related spare engines, and aircraft improvements, but also includes other capital purchase commitments. The time horizon for most of these capital commitments is long-term, due to the useful lifetimes of aircraft. United has been the global launch customer for seventeen new aircraft types; each new generation of aircraft has a 15%-20% improvement in fuel efficiency. As of December 31, 2020, United had 298 mainline aircraft on order; these aircraft are expected to replace older, less efficient aircraft currently in service. United also operates a fleet of varied aircraft sizes, allowing it to align capacity and demand to optimally serve markets as demand in various markets shifts seasonally and over time, thereby reducing United's GHG emissions. Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer.
Investment in R&D	Yes	For transitional risks and opportunities such as emerging regulations, United continues its aviation industry leadership by promoting sustainable aviation fuel (SAF) production and adoption through both purchasing SAF volumes and investing in SAF producers. To date, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years (this supply has not yet begun). Most recently, United launched United Airlines Ventures, a corporate venture capital fund of \$200 million that will concentrate on sustainability technology investments. Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer. In 2020 United announced a commitment to invest in carbon capture and sequestration technology, through planned investment in 1PointFive, the developer of the world's largest direct air capture facility, to broaden its decarbonization technology portfolio. In 2019, United made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies.
Operations	Yes	Climate change's impact, in the short term, impacts United's operational strategy. Because United's business utilizes jet fuel and, as a result, is tied to the physical environment and GHG emissions, United recognizes the need to adapt its operations and to proactively develop appropriate responses to climate change. In order to maximize fuel efficiency, United's business decision to actively pursue an array of fuel efficiency measures include: optimizing flight procedures, maintaining aircraft for optimal fuel efficiency, reducing weight of items on board aircraft, reducing fuel consumption on the ground, and optimizing the network and schedule. Since 2013 United has had a long-term mainline upgauging initiative; replacing smaller aircraft with fewer flights on larger aircraft generally results in even higher fuel efficiency benefits than just replacing aircraft with newer generation aircraft. United has also found opportunities to address climate-related risks through its ground handling operations. In 2019 United partnered with ITW GSE to pilot the first electric ground power unit in North America, and has since deployed six across its hub operations.

**C3.4**

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments	United's climate strategy is focused on mitigating GHG emissions from its aircraft, as 99% of United's Scope 1 and Scope 2 emissions result from jet fuel consumption. For new GHG regulations, United seeks to determine the most effective levers for managing the risk, which could include reducing the company's GHG emissions by further investing in new technology and aircraft over the next 2-10 years. As of December 31, 2020, United had \$24.3 billion in capital commitments, which primarily relate to the acquisition of aircraft, related spare engines, and aircraft improvements, but also includes other capital purchase commitments; a 1% increase would result in \$267 million in additional capital expenditures. United believes the magnitude of impact on financial planning processes around capital expenditures is low. For new GHG regulations, United seeks to determine the most effective levers for managing the risk, which could include factoring this incremental cost into the company's pricing and revenue models. Over the next 2-10 years, reputational impacts could also result in positive or negative impacts to United's revenue, which was \$43.3 billion prior to the COVID-19 pandemic (representing typical operations). Based on pre-COVID-19 earnings, a 0.1% change to United's revenue is approximately \$43.3 million per year. United believes the magnitude of impact on financial planning processes around revenues is low. Another lever for managing risk around new GHG regulations could include carbon market-based measures. ICAO and International Energy Agency forecasts estimate the cost to the airline industry of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in 2025 to be \$1.5 billion under ICAO's Optimistic scenario (with Additional Low carbon price); a 1% exposure to such costs would increase United's operational costs by \$15 million in 2025. Physical impacts could also result in impacts to United's fuel costs, which were \$9.0 billion prior to the COVID-19 pandemic, or to United's operational performance over the next 10-30 years; an estimate from FAA figures suggest delay costs for United were as high as \$1.3 billion in 2017 (FAA estimated \$6.4 billion for all U.S. airlines × United's approximately 20% share of the U.S. domestic market); a 1% increase in such costs to United would result in \$13 million in additional costs. United believes the magnitude of impact on financial planning processes around operating impacts is low. New GHG regulations and United's "100% Green" commitment to carbon neutrality will also factor into United further investing in sustainable fuels over the next 2-10 years. In addition to sustainable fuels, United continues to actively invest in other decarbonization technologies, such as new aircraft and engine technologies. United has been an aviation industry leader, in promoting sustainable aviation fuel (SAF) production and adoption through both purchasing SAF volumes and investing in SAF producers. To date, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years (this supply has not yet begun). Most recently, United launched United Airlines Ventures, a corporate venture capital fund of \$200 million that will concentrate on sustainability technology investments. Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer. In 2020 United announced a commitment to invest in carbon capture and sequestration technology, through planned investment in 1PointFive, the developer of the world's largest direct air capture facility, to broaden its decarbonization technology portfolio. In 2019, United made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies.

**C3.4a**

**(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).**

**C4. Targets and performance**

**C4.1**

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Both absolute and intensity targets

**C4.1a**

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

**Target reference number**

Abs 1

**Year target was set**

2020

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1+2 (location-based) +3 (upstream & downstream)

**Base year**

2007

**Covered emissions in base year (metric tons CO2e)**

44888416

**Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

**Target year**

2050

**Targeted reduction from base year (%)**

100

**Covered emissions in target year (metric tons CO2e) [auto-calculated]**

0

**Covered emissions in reporting year (metric tons CO2e)**

19940767

**% of target achieved [auto-calculated]**

55.5770312768443

**Target status in reporting year**

New

**Is this a science-based target?**

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

**Target ambition**

1.5°C aligned

**Please explain (including target coverage)**

United is pledging to become 100% green by reducing its GHG emissions by 100% by 2050. United, which in 2018 became the first U.S. airline to commit to reducing its greenhouse gas emissions by 50% by 2050, will advance towards carbon neutrality by continuing its leadership in advancing the sustainable aviation fuels (SAF) market and by making a multimillion-dollar investment in revolutionary atmospheric carbon capture technology known as Direct Air Capture (DAC) – rather than indirect measures like carbon offsetting. The planned investment will support the construction of the largest DAC plant in the world, capable of capturing up to 1 million tons of CO2 directly from the atmosphere every year. This plant is the first of its kind in the U.S. and is expected to capture as much CO2 as the work of 40 million trees.

**Target reference number**

Abs 2

**Year target was set**

2015

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1

**Base year**

2015

**Covered emissions in base year (metric tons CO2e)**

865546

**Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

2.8

**Target year**

2030

**Targeted reduction from base year (%)**

80

**Covered emissions in target year (metric tons CO2e) [auto-calculated]**

173109.2

**Covered emissions in reporting year (metric tons CO2e)**

0

**% of target achieved [auto-calculated]**

125

**Target status in reporting year**

Underway

**Is this a science-based target?**

No, but we are reporting another target that is science-based

**Target ambition**

&lt;Not Applicable&gt;

**Please explain (including target coverage)**

In 2015, United made a \$30 million equity investment in Fulcrum BioEnergy, whose sustainable aviation fuel (SAF) is to be derived from municipal solid waste and is expected to have a greater than 80% reduction in lifecycle GHG emissions. This interim target supports the U.S. airline industry goal—as announced earlier this year by the U.S. airline trade association, Airlines for America—to make 2 billion gallons of SAF available to U.S. operators by 2030. United has a long-term supply agreement with Fulcrum for 90 million gallons of SAF per year for a minimum of 10 years, but this supply has not yet begun.

C4.1b

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Year target was set**

2009

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1

**Intensity metric**

Other, please specify (Metric tonnes CO2e per revenue ton-mile)

**Base year**

2009

**Intensity figure in base year (metric tons CO2e per unit of activity)**

0.00146

**% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure**

99.6

**Target year**

2020

**Targeted reduction from base year (%)**

15.3

**Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]**

0.00123662

**% change anticipated in absolute Scope 1+2 emissions**

2.5

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year (metric tons CO2e per unit of activity)**

0.000587

**% of target achieved [auto-calculated]**

390.813859790492

**Target status in reporting year**

Achieved

**Is this a science-based target?**

Yes, we consider this a science-based target, but it has not been approved by the Science Based Targets initiative

**Target ambition**

2°C aligned

**Please explain (including target coverage)**

United's goal of improving mainline fuel efficiency on a revenue ton-mile basis by 1.5% per year is consistent with IATA's fuel efficiency goal for airlines. The goals outlined by IATA also call for carbon-neutral growth starting in the year 2020, which is expected to mark the conclusion of this goal. This goal therefore covers the jet fuel component of United's Scope 1 emissions. In July 2019, the Transition Pathway Initiative (TPI) published a study analyzing the emissions intensity of the most carbon-intensive publicly traded companies. United was included in TPI's analysis of the airline industry and determined to be aligned with a below 2° C scenario; only 12% of the 160 companies received this distinction. Prior to the COVID-19 pandemic, United was closer to achieving this goal, with 72% of the target achieved in 2019. However, the impacts of the pandemic on the aviation industry had corresponding negative effects on mainline fuel efficiency, as the significantly reduced demand on air travel resulted in our operation of aircraft with low capacity.

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**C4.2**

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Net-zero target(s)

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**C4.2c**

**(C4.2c) Provide details of your net-zero target(s).**

**Target reference number**

NZ1

**Target coverage**

Company-wide

**Absolute/intensity emission target(s) linked to this net-zero target**

Abs1

**Target year for achieving net zero**

2050

**Is this a science-based target?**

Yes, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

**Please explain (including target coverage)**

United is pledging to become 100% green by reducing its GHG emissions by 100% by 2050. United—which became the first U.S. airline, in 2018, to commit to reducing its greenhouse gas emissions by 50% by 2050—will advance towards carbon neutrality by continuing its leadership in advancing the sustainable aviation fuels (SAF) market and by making a multimillion-dollar investment in revolutionary atmospheric carbon capture technology known as Direct Air Capture (DAC) – rather than indirect measures like carbon offsetting. This planned investment will support the construction of the largest DAC plant in the world, capable of capturing up to 1 million tons of CO2 directly from the atmosphere every year. This plant is the first of its kind in the U.S. and is expected to remove as much CO2 as the work of 40 million trees. We have determined based on our internal analysis, that this target is aligned with the Science-Based Targets initiative but is not validated yet externally as the aviation industry’s sector-based Science-Based Targets methodology and standards are still under development.

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	23	
To be implemented*	1	692437
Implementation commenced*	23	2753374
Implemented*	22	59138482
Not to be implemented	0	

**C4.3b**

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Energy efficiency in operations - new equipment type)
-----------------------	--

**Estimated annual CO2e savings (metric tonnes CO2e)**

29994376

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

6873014798

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Buy new aircraft – Taking delivery of new and more fuel-efficient aircraft is an important factor in United’s long-term fleet strategy. As of December 31, 2020, United had 298 mainline aircraft on order. These aircraft are expected to replace older, less efficient aircraft currently in service; each new generation of aircraft has a 15%-20% improvement in fuel efficiency. Because aircraft typically have a lifetime of approximately 25 years, buying new aircraft is an extremely long-term investment. Savings

figures shown reflect United's improvement in mainline fuel efficiency since 1977 (the oldest year for which we have fuel efficiency data), adjusted for company size (in available seat-miles) for 2019. Monetary savings were determined by multiplying the gallons of fuel saved by United's consolidated fuel price pre-COVID-19 (representing typical operations). As of December 31, 2020, United had \$24.3 billion in capital commitments, which primarily relate to the acquisition of aircraft and related spare engines, and aircraft improvements, but also includes other capital purchase commitments. However, renewing the aircraft fleet has long been embedded into United's business strategy, so they are considered fundamental costs of doing business rather than incremental cost drivers.

**Initiative category & Initiative type**

Company policy or behavioral change	Resource efficiency
-------------------------------------	---------------------

**Estimated annual CO2e savings (metric tonnes CO2e)**

448366

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

114222222

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Optimize flight procedures – United works collaboratively across the organization and with ATC providers to improve fuel efficiency through the implementation of best practices, by providing training to its pilots and dispatchers, and supplying them with the tools needed to execute on those strategies. United has ongoing initiatives in this area, including: - Choosing more optimal flight paths - Flying at optimal speeds and altitudes - Adopting continuous descents prior to landing - Optimizing traffic flow in cooperation with ATC providers to reduce time spent in inefficient holding patterns - Investing in navigation technology on current aircraft, allowing shorter and more efficient approaches In 2015 the Federal Aviation Administration estimated that NextGen ATC would provide airlines with \$51.4 billion in cost savings from 2013 to 2030. The savings figure shown assumes that 20% of these benefits accrue to United. Supporting technology innovation and air traffic management have long been embedded into United's business strategy, so they are considered fundamental costs of doing business rather than incremental cost drivers.

**Initiative category & Initiative type**

Company policy or behavioral change	Other, please specify (Change in maintenance procedures)
-------------------------------------	--

**Estimated annual CO2e savings (metric tonnes CO2e)**

900000

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

1866785

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Maintain the aircraft – United works collaboratively across the company to improve fuel efficiency through the implementation of best practices, by providing training to its mechanics, and supplying them with the tools needed to execute on those strategies. United has ongoing initiatives in this area: - Adding winglets to aircraft - Washing aircraft to reduce drag - Washing engines to remove unwanted materials and improve efficiency - Real-time monitoring of aircraft performance to identify problems 100% of United's eligible mainline aircraft have been refitted beyond the base design with fuel-saving winglets. These winglets improve fuel efficiency by 3-5%. In addition, United was the launch partner for the Scimitar winglet, which improves fuel efficiency by an additional 2% over the standard winglets on the Boeing 737 and Boeing 757, and has over 350 aircraft equipped with Scimitar winglets. The savings figures shown reflect the addition of winglets to these aircraft only, and not further initiatives. Monetary savings were determined by multiplying the gallons of fuel saved by United's consolidated fuel price pre-COVID (representing typical operations). Reducing fuel use has long been embedded into United's business strategy and considered a fundamental cost of doing business rather than an incremental cost driver. The expected payback period of this initiative is proprietary information. Because we are required to provide a value we have opted to respond 'No payback.'

**Initiative category & Initiative type**

Waste reduction and material circularity	Other, please specify (Weight optimization )
--	--

**Estimated annual CO2e savings (metric tonnes CO2e)**

412828

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

856289

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Reduce aircraft weight – United reviews virtually everything on the aircraft for lighter-weight alternatives, as lighter aircraft use less fuel and produce less emissions. United has ongoing initiatives in this area, including: - Reducing unnecessary fuel on board - Reducing unnecessary water on board - Using lighter cabin materials - Switching from steel to carbon-fiber brakes The savings figure shown assumes a 1% reduction in United's pre-COVID-19 operations (using fuel use figures that represent typical operations). Monetary savings were determined by multiplying the gallons of fuel saved by United's consolidated pre-COVID-19 fuel price. Reducing fuel use has long been embedded into United's business strategy, so it is considered a fundamental cost of doing business rather than an incremental cost driver.

**Initiative category & Initiative type**

Company policy or behavioral change	Resource efficiency
-------------------------------------	---------------------

**Estimated annual CO2e savings (metric tonnes CO2e)**

412828

**Scope(s)**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

856289

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Reduce fuel consumption on the ground – United has ongoing initiatives in this area, including: - Using a single engine to taxi - Avoiding waiting to park at the gate - Avoiding APU use at the gate - Towing aircraft to/from hangars instead of taxiing - Switching from fuel- to electric-powered GSE The savings figure shown assumes a 1% reduction in United's pre-COVID-19 operations (using fuel use figures that represent typical operations). Monetary savings were determined by multiplying the gallons of fuel saved by United's consolidated pre-COVID-19 fuel price . Reducing fuel use has long been embedded into United's business strategy, so it is considered a fundamental cost of doing business rather than an incremental cost driver.

**Initiative category & Initiative type**

Other, please specify	Other, please specify (Efficiency in operational processes - optimize network and schedule)
-----------------------	---

**Estimated annual CO2e savings (metric tonnes CO2e)**

26965394

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

5860102826

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Optimize network and schedule – United has ongoing initiatives in this area, including: - Optimizing passenger loads through revenue management - Upgauging to larger, more efficient aircraft on a route - Using aircraft appropriately sized for the market - Using alliance partners to serve distant cities Savings figures shown reflect United's improvement in mainline fuel efficiency since 1977 (the oldest year for which we have fuel efficiency data) attributable to load factor improvements, adjusted for company

size (in revenue passenger-miles) for 2019. Monetary savings were determined by multiplying the gallons of fuel saved by United's consolidated fuel price pre-COVID-19 (representing typical operations). Optimizing the network and schedule has long been embedded into United's business strategy, so they are considered fundamental costs of doing business rather than incremental cost drivers.

**Initiative category & Initiative type**

Low-carbon energy consumption	Liquid biofuels
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**Estimated annual CO2e savings (metric tonnes CO2e)**

3838

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

0

**Investment required (unit currency – as specified in C0.4)**

70000000

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Develop and use sustainable aviation fuel (SAF) – In 2015 United made a \$30 million equity investment in Fulcrum BioEnergy, whose SAF is to be derived from municipal solid waste and is expected to have a greater than 80% reduction in lifecycle GHG emissions as compared to traditional jet fuel. United has a long-term supply agreement with Fulcrum for 90 million gallons of SAF per year for a minimum of 10 years, but this supply has not yet begun. In 2019 United also made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies. In 2016 United became the first airline to begin using SAF on an ongoing daily basis. United has worked with World Energy since 2009 to achieve this milestone and in 2019 renewed its purchase agreement to buy up to 10 million gallons over the next two years; through the end of 2020, over 4 million gallons of this fuel have been purchased. United has integrated this fuel and its nearly 80% reduction in lifecycle GHG emissions as compared to traditional jet fuel into its everyday operations at Los Angeles International Airport, the largest continuous use of SAF in the airline industry to date. The payback period of this initiative is proprietary information. Because we are required to provide a value, we have opted to respond 'No payback.'

**C4.3c**

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Compliance with regulatory requirements/standards	The majority of United's international routes and their associated emissions are expected to be included in the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA), and company and airline industry growth above the CORSA baseline would require United to reduce or offset some of its GHG emissions. United's Environmental Affairs, Fleet Strategy, Finance, and Fuel Efficiency departments are working together to determine the optimal strategy to meet United's obligations through a combination of newer, more efficient aircraft purchases, fuel efficiency strategies, sustainable aviation fuel adoption, and carbon offsets.
Dedicated budget for energy efficiency	United makes ongoing investments into renewing its aircraft fleet. As of December 31, 2020, United had 298 mainline aircraft on order. These aircraft are expected to replace older, less efficient aircraft currently in service; each new generation of aircraft has a 15%-20% improvement in fuel efficiency. As of December 31, 2020, United had \$24.3 billion in capital commitments, which primarily relate to the acquisition of aircraft, related spare engines, and aircraft improvements, but also includes other capital purchase commitments.
Dedicated budget for low-carbon product R&D	United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years, but this supply has not yet begun. In 2019 United also made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies. In 2020, in conjunction with committing to carbon neutrality by 2050, United announced its commitment to investing in direct air capture (DAC) technology, with a project led by 1PointFive, who is planning the construction of the largest commercial scale DAC facility in the world, licensing Carbon Engineering's technology. In 2021 United launched United Airlines Ventures, a corporate venture capital fund that will focus on investments in companies bringing innovation and technology advancements to sustainability and revolutionary aerospace developments.
Dedicated budget for other emissions reduction activities	United's fuel efficiency team analyzes and implements numerous fuel efficiency initiatives, including the areas of: - Optimizing flight procedures - Maintaining the aircraft - Reducing aircraft weight - Reducing fuel consumption on the ground
Employee engagement	Some United work groups have key performance indicators (KPIs) focused on fuel efficiency, such as reducing fuel consumption from running aircraft Auxiliary Power Units while parked at the gate, and safely reducing the level of Remaining Fuel on Arrival. United also periodically schedules pilot and dispatcher operational efficiency training sessions specifically designed to harmonize and reinforce United's fuel efficiency policies and procedures. United has implemented automatic reports with KPIs targeting the work groups that impact fuel use and efficiency.
Financial optimization calculations	United uses financial savings to drive GHG emissions reductions. During normal operating conditions, and prior to the COVID-19 pandemic, jet fuel consumption was United's second largest cost (comprising of 23% of operating expenses), and was responsible for 99% of United's Scope 1 and Scope 2 emissions, making conserving fuel and reducing GHG emissions important factors in the company's financial success.
Internal incentives/recognition programs	United executives and certain other managers receive stock-based and annual incentive cash-based awards, whose value is linked to the company's financial performance, among other performance metrics. In addition, United's Profit Sharing Plan enables eligible employees to share in the company's financial success when United is profitable and earns more than \$10 million in pre-tax income during the fiscal year. Finally, the United 100 program recognizes United employees for going above and beyond the normal course of their jobs. United employees can nominate a co-worker for the United 100 program, which has three levels: Nominee, Quarterly Award Winner, and Annual Award Winner. This recognition program is available to all employees, and projects related to fuel efficiency or emissions reduction projects could provide a basis for recognition. In 2018, two United employees were recognized as Quarterly Award winners for their work on emissions reductions, one of whom was further recognized as an Annual Award winner.
Partnering with governments on technology development	United is working closely with the FAA toward the full implementation of the FAA's Next Generation Air Transportation System, which would transform the U.S. air traffic control system from a radar-based system with radio communication to a satellite-based system. GPS technology would be used to shorten routes, save time and fuel, reduce air traffic delays, and permit controllers to monitor and manage aircraft with greater safety margins.

**C4.5**

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**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

**C4.5a**

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**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

**Level of aggregation**

Company-wide

**Description of product/Group of products**

United's services allow for the safe, fast, and efficient transportation of passengers and cargo. Unlike other modes of transport, aviation's speed and network make possible the efficient transportation of passengers and goods across great distances. Air passenger transportation is often incorrectly perceived as extremely carbon intensive. However, according to data from the Bureau of Transportation Statistics, in 2015 U.S. highway travel required 38.6 gallons of fuel per 1,000 passenger-miles. In contrast, in 2019 United's consolidated fuel efficiency was 18.0 gallons of fuel per 1,000 passenger-miles, or 54% lower, a large reduction in passengers' Scope 1 and/or Scope 3 emissions. Had all of United's customers who flew within the United States' contiguous 48 states and Canada in 2018 traveled instead via highway, this would have required an additional 2.5 billion gallons of fuel and resulted in an additional 24 million metric tons of CO<sub>2</sub>e.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Comparison against other transport modes)

**% revenue from low carbon product(s) in the reporting year**

51

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

The % revenue figure reflects the percentage of United's scheduled capacity within the United States' contiguous 48 states and Canada pre-COVID-19 (representing typical operations).

---

**Level of aggregation**

Company-wide

**Description of product/Group of products**

United's services allow for the safe, fast, and efficient transportation of passengers and cargo. Unlike other modes of transport, aviation's speed and network make possible the efficient transportation of passengers and goods across great distances. Part of United's network strategy is to use its well-located hubs and Boeing 787 fleet to serve international destinations with less demand directly from its hubs rather than via third countries or by requiring passengers to connect with alliance partners. These additional stopovers require additional passenger time and also generate more GHG emissions because of the additional landing and takeoff involved. In 2019 United flew to 19 international destinations that were not served or were not served nonstop from the U.S. by other U.S. network airlines. For example, in 2017 United launched nonstop service from San Francisco to Singapore; on other U.S. airlines (or previously on United), flying to Singapore requires/required a stopover in Tokyo or Hong Kong. This strategy directly reduces passengers' Scope 3 emissions.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Comparison against sector peers)

**% revenue from low carbon product(s) in the reporting year**

5

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

The % revenue figure reflects the percentage of United's scheduled capacity to/from one of the 19 international destinations that were not served or were not served nonstop from the U.S. by other U.S. network airlines pre-COVID-19 (representing typical operations).

---

**Level of aggregation**

Company-wide

**Description of product/Group of products**

On March 11, 2016 United made aviation history by becoming the first airline to begin using sustainable aviation fuel (SAF) on an ongoing daily basis. The launch marked a significant milestone in the airline industry by moving beyond demonstration flights to the use of SAF for United's ongoing operations, and is the largest use of SAF in the airline industry to date. This SAF is produced by World Energy from sustainable feedstocks such as non-edible natural oils and agricultural wastes. This SAF provides a nearly 80% reduction in lifecycle GHG emissions as compared to traditional jet fuel. United has worked with World Energy since 2009 and in 2019 renewed its purchase agreement to buy up to 10 million gallons over the next two years from World Energy's previously idle refinery in Paramount, California. United is vertically integrating into the SAF supply chain because it believes SAF represents an important pathway for the airline industry to reduce its dependence on traditional fossil fuels, lower its emissions, enhance national security, and support economic growth.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product

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**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Low-Carbon Investment (LCI) Registry Taxonomy

**% revenue from low carbon product(s) in the reporting year**

4

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

The % revenue figure reflects the percentage of United's scheduled capacity departing from Los Angeles pre-COVID-19 (representing typical operations).

---

**Level of aggregation**

Product

**Description of product/Group of products**

One of the major hurdles, particularly after the financial impact of the COVID-19 pandemic, to procuring larger volumes of sustainable aviation fuel (SAF) is in the higher cost vs. conventional jet fuel. In 2021 United launched its Eco-Skies Alliance program. The program offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for SAF. This contribution goes beyond traditional carbon offsets and create a demand signal for low-carbon flying.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Comparison against business as usual)

**% revenue from low carbon product(s) in the reporting year**

0

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

The % revenue figure is 0 because United does not create any revenue through the purchase of SAF. All money received funds United's purchase of SAF.

---

**Level of aggregation**

Product

**Description of product/Group of products**

Since 2007 United has offered its passengers the ability to offset GHG emissions associated with their air travel through the company's CarbonChoice offset program. United's CO2 calculator—updated annually—is based on actual routes, aircraft used, load factors, and fuel consumption.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Comparison against business as usual)

**% revenue from low carbon product(s) in the reporting year**

0

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

The % revenue figure is 0 because United does not receive any of the proceeds from CarbonChoice. All money received is collected by Conservation International to offset GHG emissions.

---

**Level of aggregation**

Group of products

**Description of product/Group of products**

United works closely with its United Express partners to reduce their fuel consumption and associated GHG emissions. United sets targets and holds consistent benchmarking meetings with each partner to review their progress towards a more fuel-efficient operation. In 2021, United entered the electric aircraft space by investing in Heart Aerospace, a regional electric aircraft manufacturer, developing a 19-seater electric aircraft. In addition to the investment, United has conditionally agreed to purchase 100 of these electric aircraft for use in its regional network.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Comparison against business as usual)

**% revenue from low carbon product(s) in the reporting year**

11

**% of total portfolio value**

<Not Applicable>

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**Asset classes/ product types**

<Not Applicable>

**Comment**

The % revenue figure reflects the percentage of United's scheduled capacity flown by United's regional partners pre-COVID-19 (representing typical operations).

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**C5. Emissions methodology**

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**C5.1**

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**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

**Scope 1**

**Base year start**

January 1 2007

**Base year end**

December 31 2007

**Base year emissions (metric tons CO2e)**

44888416

**Comment**

United's baseline year for Scope 1 emissions is 2007, which is the year United's Eco-Skies program was launched.

**Scope 2 (location-based)**

**Base year start**

January 1 2008

**Base year end**

December 31 2008

**Base year emissions (metric tons CO2e)**

395804

**Comment**

United first began measuring its Scope 2 emissions in 2008.

**Scope 2 (market-based)**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

201763

**Comment**

United first began measuring its Scope 2 emissions using market-based emissions factors in 2018.

**C5.2**

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**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

ISO 14064-1

**C6. Emissions data**

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**C6.1**

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**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

15485363

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

99.4% of this figure is from jet fuel from 1/1/2020 through 12/31/2020

C6.2

---

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

For most of United's smaller facilities, payment of electricity use is built into the lease of the associated space. In addition, it is possible that electricity use at some United buildings/areas may be tracked at some locations but not others. These two barriers make it difficult to track United's electricity use completely and accurately. For facilities where data was not available, United has adopted accepted modeling approaches to fill the data gaps.

C6.3

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**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

196066

**Scope 2, market-based (if applicable)**

175087

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

Scope 2 emissions from 1/1/2020 through 12/31/2020

C6.4

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**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

C6.4a

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**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

**Source**

F-gas refrigerants

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

No emissions excluded

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

No emissions excluded

**Explain why this source is excluded**

United expects this to be a de minimis source of emissions (<0.01% of total GHG emissions), therefore quantities and types are not centrally tracked.

---

**Source**

F-gas suppressants

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

No emissions excluded

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

No emissions excluded

**Explain why this source is excluded**

United expects this to be a de minimis source of emissions (<0.01% of total GHG emissions), therefore quantities and types are not centrally tracked.

---

**Source**

F-gases used in some aerosol containers

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

No emissions excluded

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

No emissions excluded

**Explain why this source is excluded**

United expects this to be a de minimis source of emissions (<0.01% of total GHG emissions), therefore quantities and types are not centrally tracked.

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**C6.5**

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**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

3523963

**Emissions calculation methodology**

United conducted an initial estimate of its emissions from the goods and services it purchased. This estimate was made using United's 2020 spend on non-fuel suppliers and multiplying by Trucost's 2015 estimate for Scope 1 and 2 emissions per revenue intensity for U.S. companies. This category has not been verified and is not part of United's official emissions inventory and is therefore excluded from other parts of this year's CDP response.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

## Capital goods

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

124294

### Emissions calculation methodology

United conducted an initial estimate of its emissions from purchasing aircraft. This estimate was made using the weight of aircraft purchased in 2020 and multiplying by the emissions intensity for aluminum production. The key assumptions in this estimate are that aircraft are made 100% from aluminum (aluminum comprises 80% of a typical airliner's airframe weight), and the aluminum was produced in China, which has the most emissions-intensive production in the world. This category has not been verified and is not part of United's official emissions inventory and is therefore excluded from other parts of this year's CDP response.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

4551715

### Emissions calculation methodology

United conducted an initial estimate of its emissions related to the production of jet fuel the company used. This estimate was made using the megajoules (MJ) of jet fuel purchased in 2020 and multiplying by ICAO's standard value of 89 grams CO2 per MJ, and then subtracting combustion-related emissions as reported in our Scope 1 and Scope 3, category 4 (regional partners) emissions. This category has not been verified and is not part of United's official emissions inventory and is therefore excluded from other parts of this year's CDP response.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

Upstream emissions of purchased fuels

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

3904923

### Emissions calculation methodology

The vast majority of United Express operations are comprised of regional partners operating under a Capacity Purchase Agreement (CPA), under which United purchases and provides their fuel. The source of data for United Express fuel consumption is the same fuel accounting system that provides United's mainline jet fuel consumption. Emission factors and calculation methodology for the United Express operations were also the same. Emissions from GSE not owned by United but operated by CPA regional partners used a simplified estimation methodology. The listed figure has been externally verified and is part of United's official emissions inventory and is therefore included in responses elsewhere in this year's CDP response. The emissions have been calculated by multiplying the total of each energy type by the relevant emissions factor from The Climate Registry. General Reporting Protocol, Version 2.0. March 2013.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

Regional partner aircraft (jet fuel) and ground fleet (diesel)

## Waste generated in operations

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation, so waste generated is expected to be de minimis and therefore not relevant. Emissions from this source would be less than 1% of total Scope 3 emissions.

## Business travel

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

Nearly all of United's business travel is on United's fleet and therefore incorporated into the Scope 1 and Scope 3, category 4 (regional partners) emissions calculations. Emissions from this source would be less than 1% of total Scope 3 emissions.

## Employee commuting

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

80980

### Emissions calculation methodology

This figure was determined using United's 2020 employee headcount, estimating the number of commutes per year by work group, assuming that all employees drive to work (likely overstating this figure), and multiplying by the U.S. average commuting distance and average vehicle fuel economy. The COVID-19 pandemic has caused a drastic increase in the number of employees teleworking, and United has factored this into calculations. Although many United employees commute to work via flights, most such travel is on United and therefore incorporated into the Scope 1 and Scope 3, category 4 (regional partners) emissions calculations. This category has been externally verified and is part of United's official emissions inventory and is therefore included in other parts of this year's CDP response.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation, so upstream leased assets are not relevant. Emissions from this source would be less than 1% of total Scope 3 emissions and upstream leased assets (i.e., office space, hangars) are accounted for in Scope 1 and Scope 2 emissions.

## Downstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation, so distribution of products is not relevant. Emissions from this source would be less than 1% of total Scope 3 emissions.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation which does not require further processing, so the processing of sold products is not relevant. Emissions from this source would be less than 1% of total Scope 3 emissions.

## Use of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation, so the use of sold products is not relevant. Emissions from this source would be less than 1% of total Scope 3 emissions. Emissions from sold flights are accounted for in Scope 1 emissions.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation so the end of life treatment of sold products is not relevant. United provides transportation services, thus there is no end of life treatment. Emissions from this source would be less than 1% of total Scope 3 emissions.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

United's main product is transportation, so downstream leased assets are not relevant. While United does lease aircraft to other airlines, these are all to United's regional partners, so these emissions are included in the category Fuel-and-energy-related activities (not included in Scope 1 or 2).

## Franchises

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

162170

### Emissions calculation methodology

United currently has one regional partner, SkyWest Airlines, which flies under the United Express banner on an 'at-risk' basis, paying United for the rights to use United's reservations system and brand, but taking on the commercial risk of operating the flights, including purchasing their own jet fuel. SkyWest operates select routes under the Essential Air Service program; emissions associated with jet fuel used in this operation are included as Scope 3 emissions.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

Regional partner aircraft (jet fuel) and ground fleet (diesel)

**Investments**

**Evaluation status**

Relevant, calculated

**Metric tonnes CO2e**

132244

**Emissions calculation methodology**

On June 26, 2015, United made an equity investment in Azul Brazilian Airlines; United increased its equity investment further in April 2018. Azul publishes data on its jet fuel purchases as part of its financial statements. United determined Azul's total jet fuel-related GHG emissions and multiplied this figure by United's weighted average ownership stake for the year. On June 30, 2015, United made a \$30 million equity investment in Fulcrum BioEnergy, a start-up sustainable aviation fuel producer. Fulcrum provided United with their current GHG emissions, which are currently only for their feedstock processing facility near Reno, Nevada. United multiplied the reported GHG emissions by the appropriate GWP factors and by United's ownership stake in Fulcrum. This category has been externally verified and is part of United's official emissions inventory and is therefore included in other parts of this year's CDP response.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

100

**Please explain**

**Other (upstream)**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

No other relevant emissions to report.

**Other (downstream)**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

No other relevant emissions to report.

**C6.7**

---

**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

Yes

**C6.7a**

---

**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	5939	In 2016 United became the first airline to begin using sustainable aviation fuel (SAF) on an ongoing daily basis. United has worked with World Energy since 2009 to achieve this milestone and in 2019 renewed its purchase agreement to buy up to 10 million gallons over the next two years. United has integrated this fuel and its nearly 80% reduction in lifecycle GHG emissions as compared to traditional jet fuel into its everyday operations at Los Angeles International Airport, the largest continuous use of SAF in the airline industry to date.

**C6.10**

---

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

**Intensity figure**

0.0010199

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

15660450

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

15355000000

**Scope 2 figure used**

Market-based

**% change from previous year**

27.5

**Direction of change**

Increased

**Reason for change**

Due to the COVID-19 pandemic, United's Scope 1 and Scope 2 emissions decreased by 54.7% in 2020, United's total revenue decreased by 64.5%. United's 2020 intensity figure increased due to a reduction in travel demand causing United to fly less fuel-efficient aircraft with a reduction in passengers. As travel demand increases, we expect intensity levels to return to normal.

---

**Intensity figure**

0.0012742

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

19565263

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

15355000000

**Scope 2 figure used**

Market-based

**% change from previous year**

32.4

**Direction of change**

Increased

**Reason for change**

Because part of United's revenue is from its regional partners' jet fuel consumption, the numerator in this row includes United's Scope 3 (Upstream transportation and distribution) emissions from United Express partners operating under a Capacity Purchase Agreement (CPA), under which United purchases and provides their fuel. United believes answering the question in this manner provides readers with a more comprehensive understanding of United's emissions intensity. Due to the COVID-19 pandemic, these emissions decreased by 53% in 2020, United's total revenue decreased by 64.5%. United's 2020 intensity figure increased due to a reduction in travel demand causing United to fly less fuel-efficient aircraft with a reduction in passengers. As travel demand increases, we expect intensity levels to return to normal.

---

C-TS6.15

**(C-TS6.15) What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?**

**Aviation**

**Scopes used for calculation of intensities**

Report Scope 1 + 2 + 3 (category 4)

**Intensity figure**

0.000264

**Metric numerator: emissions in metric tons CO2e**

19565263

**Metric denominator: unit**

p.mile

**Metric denominator: unit total**

73883000000

**% change from previous year**

52.2

**Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.**

Due to the COVID-19 pandemic, United's GHG emissions for this breakdown decreased by 53% in 2020, United's RPMs (revenue passenger-miles) decreased by 69.1%.

**ALL**

**Scopes used for calculation of intensities**

Report Scope 1 + 2

**Intensity figure**

0.000587

**Metric numerator: emissions in metric tons CO2e**

15660450

**Metric denominator: unit**

t.mile

**Metric denominator: unit total**

26672000000

**% change from previous year**

-56

**Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.**

This breakdown represents United's progress towards the airline industry's goal of improving fuel efficiency by an average of 1.5% per year from 2009 to 2020. The impacts of the COVID-19 pandemic on the aviation industry had corresponding negative effects on mainline fuel efficiency, as the significantly reduced demand on air travel resulted in our operation of aircraft with low capacity. Due to the COVID-19 pandemic, United's GHG emissions for this breakdown decreased by 54.7% in 2020, United's RTMs (revenue ton-miles) increased by 2.8%.

**C7. Emissions breakdowns**

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**C7.1**

---

**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

**C7.1a**

---

**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	15368628	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	3211	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	113526	IPCC Fifth Assessment Report (AR5 – 100 year)

**C7.2**

---

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	7539246
Other, please specify (International Airspace)	7940939
Other, please specify (Non-U.S.A.)	5177

**C7.3**

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

- By business division
- By facility
- By activity

**C7.3a**

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

Business division	Scope 1 emissions (metric ton CO2e)
Aircraft	15387784
Natural gas	67279
Ground support equipment	24766
San Francisco Maintenance Facility assets	26851
Dry ice from catering	2015

**C7.3b**

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Aircraft	15387786	0	0
Ground support equipment	24766	0	0
San Francisco International Airport	27226	37.6167	-122.3833
Newark Liberty International Airport	6434	40.7	-74.1667
Denver International Airport	7886	39.8667	-104.6667
Chicago O'Hare International Airport	8361	41.9667	-87.9
Houston Bush Intercontinental Airport	4812	29.9833	-98.3333
Willis Tower	2	41.8833	-87.63333
Washington Dulles International Airport	1257	38.95	-77.46667
Los Angeles International Airport	80	33.9333	-118.4
Natural gas and other fuel use at airports	12053	0	0
Natural gas use at other facilities	2685	0	0
Dry ice from catering	2015	0	0

**C7.3c**

**(C7.3c) Break down your total gross global Scope 1 emissions by business activity.**

Activity	Scope 1 emissions (metric tons CO2e)
Mobile sources	15412550
Stationary sources	72813

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

**(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.**

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	15485363	<Not Applicable>	

**C7.5**

**(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
United States of America	171426	150447	440848	59577
Other, please specify (Non-U.S.A.)	24640	24640	45072	0

**C7.6**

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

- By facility
- By activity

**C7.6b**

**(C7.6b) Break down your total gross global Scope 2 emissions by business facility.**

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Houston Bush Intercontinental Airport	27150	27150
Newark Liberty International Airport	26069	20700
Willis Tower	23948	23948
Chicago O'Hare International Airport	29710	29710
Denver International Airport	18714	15640
San Francisco International Airport	12301	0
Los Angeles International Airport	1756	1756
Washington Dulles International Airport	1520	1520
Other airports	16873	16638
Other facilities	38024	38024

**C7.6c**

**(C7.6c) Break down your total gross global Scope 2 emissions by business activity.**

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Electricity purchases	196066	175087
Steam purchases	0	0

**C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7**

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	196066	175087	

**C7.9**

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

**C7.9a**

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	1756	Decreased	0.0006	% change value is actually -0.0062% of gross global emissions. United saved 4,708 metric tons CO2e through the continued use of sustainable aviation fuel (SAF) in its operations in 2020. Due to decreased operations during the COVID-19 pandemic, United's available seat-miles (ASM) decreased by 57% (to 122,803,561). Despite this decrease in overall fuel usage, United used proportionally more SAF in its 2020 operations than in 2019. $(-4,708 / 122,803,561) - (-6,850 / 284,998,911) = -0.000014 - (-0.000014 * 122,803,561) = -1,756 (-1,756 / 284,998,911) = -0.00062\%$
Other emissions reduction activities	3311	Decreased	0.0012	United saved 3,311 metric tons CO2e through its reduced fuel usage and continued electrification of its ground operations and service equipment. Due to decreased operations during the COVID-19 pandemic, United's available seat-miles (ASM) decreased by 57% (to 122,803,561). United continued its emission reduction activities in 2020 however, due to the impacts of the COVID-19 pandemic, United's ground operations and fuel usage decreased due to reduced travel demand. Over 4,200 pieces of United's GSE are powered by electricity rather than conventional fuel. At the end of 2020, 42% of United's eligible GSE fleet had been electrified. In 2019, United partnered with ITW GSE to pilot the ITW 7400 electric mobile ground power unit (GPU), which drastically cuts GHG emissions by 90% and reduces workplace noise pollution. The pilot is the first use of this equipment in North America, and United is the first major U.S. airline to use a fully electric GPU for its fleet, and has since deployed 6 across its hub operations. $(24,766 / 122,803,561) - (65,161 / 284,998,911) = -0.000027 (0.000027 * 122,803,561) = -3,311 (-3,311 / 284,998,911) = -0.0012\%$
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	162190283	Decreased	56.9	Due to decreased demand through the COVID-19 pandemic, United's mainline output (as measured in available seat-miles) decreased by 56.9% in 2020, resulting in lower year-over-year emissions. Using widely accepted rate-volume variance calculations for each of United's emissions sources not otherwise discussed here, the volume variance from United's 56.9% decrease in mainline output is 162,190,283 metric tons. $(122,803,561 - 284,998,911) = -162,195,351 (-162,195,351 - (-1,756 - -3,311)) = -162,190,283 (-162,190,283 / 284,998,911) = -56.9\%$
Change in methodology	0	No change	0	
Change in boundary	0	No change	0	
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

**C7.9b**

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Market-based

**C8. Energy**

**C8.1**

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 10% but less than or equal to 15%

**C8.2**

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

**C8.2a**

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	744	59510331	59511075
Consumption of purchased or acquired electricity	<Not Applicable>	59577	426343	485920
Consumption of purchased or acquired heat	<Not Applicable>	0	370724	370724
Consumption of purchased or acquired steam	<Not Applicable>	0	0	0
Consumption of purchased or acquired cooling	<Not Applicable>	2015	0	2015
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	62336	60307398	60369734

**C8.2b**

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

**C8.2c**

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Fuels (excluding feedstocks)**

Compressed Natural Gas (CNG)

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

5869

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

6.3136

**Unit**

kg CO2e per gallon

**Emissions factor source**

The Climate Registry. General Reporting Protocol, Version 2.0. March 2013

**Comment**

---

**Fuels (excluding feedstocks)**

Diesel

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

59703

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

10.29514

**Unit**

kg CO2 per gallon

**Emissions factor source**

The Climate Registry. General Reporting Protocol, Version 2.0. March 2013

**Comment**

---

**Fuels (excluding feedstocks)**

Jet Kerosene

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

59409580

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

9.61718

**Unit**

kg CO2 per gallon

**Emissions factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 3, Table 3.6.5: Non-CO2 Emission Factors

**Comment**

---

**Fuels (excluding feedstocks)**

Motor Gasoline

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

34221

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

8.8523

**Unit**

kg CO2e per gallon

**Emissions factor source**

The Climate Registry. General Reporting Protocol, Version 2.0. March 2013

**Comment**

**Fuels (excluding feedstocks)**

Propane Gas

**Heating value**

HHV (higher heating value)

**Total fuel MWh consumed by the organization**

1701

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

5.59

**Unit**

kg CO2 per gallon

**Emissions factor source**

The Climate Registry. General Reporting Protocol, Version 2.0. March 2013

**Comment**

**C8.2d**

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	0	0	0	0
Heat	0	0	0	0
Steam	128924	128924	0	0
Cooling	0	0	0	0

**C8.2e**

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**

Other, please specify (Contract with suppliers or utilities (e.g. green tariff), not supported by energy attribute certificates))

**Low-carbon technology type**

Solar

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**

United States of America

**MWh consumed accounted for at a zero emission factor**

59577

**Comment**

United's electricity purchases at San Francisco International Airport (SFO) were zero-emissions in 2020. United purchases its electricity through the airport, which has achieved certification for being net-zero emissions through multiple low-carbon technology types, including solar PV and hydropower. SFO represented 12% of United's electricity purchases in 2020.

---

**C-TS8.5**

---

**(C-TS8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.**

**Activity**

Aviation

**Metric figure**

0.01526

**Metric numerator**

Other, please specify (gallons of fuel)

**Metric denominator**

Available seat.mile

**Metric numerator: Unit total**

1600000000

**Metric denominator: Unit total**

104830000000

**% change from last year**

8.5

**Please explain**

This figure represents the gallons of jet fuel consumed per available seat-mile flown by United Airlines' mainline aircraft (Scope 1 emissions).

---

**Activity**

Aviation

**Metric figure**

0.02554

**Metric numerator**

Other, please specify (gallons of fuel)

**Metric denominator**

p.mile

**Metric numerator: Unit total**

1600000000

**Metric denominator: Unit total**

62635000000

**% change from last year**

52.9

**Please explain**

This figure represents the gallons of jet fuel consumed per revenue passenger-mile flown by United Airlines' mainline aircraft (Scope 1 emissions).

---

**Activity**

Aviation

**Metric figure**

0.1834

**Metric numerator**

Other, please specify (gallons of fuel)

**Metric denominator**

Revenue-ton.mile

**Metric numerator: Unit total**

1600000000

---

**Metric denominator: Unit total**

8725000000

**% change from last year**

37.3

**Please explain**

This figure represents the gallons of jet fuel consumed per revenue ton-mile (i.e., both passengers and cargo) flown by United Airlines' mainline aircraft (Scope 1 emissions).

---

**Activity**

Aviation

**Metric figure**

0.01632

**Metric numerator**

Other, please specify (gallons of fuel)

**Metric denominator**

Available seat.mile

**Metric numerator: Unit total**

2004000000

**Metric denominator: Unit total**

122804000000

**% change from last year**

8.4

**Please explain**

This figure represents the gallons of jet fuel consumed per available seat-mile flown by both United Airlines' mainline aircraft (Scope 1 emissions) and United Express regional partners (Scope 3 emissions).

---

**Activity**

Aviation

**Metric figure**

0.02712

**Metric numerator**

Other, please specify (gallons of fuel)

**Metric denominator**

p.mile

**Metric numerator: Unit total**

2004000000

**Metric denominator: Unit total**

73883000000

**% change from last year**

51.3

**Please explain**

This figure represents the gallons of jet fuel consumed per revenue passenger-mile flown by both United Airlines' mainline aircraft (Scope 1 emissions) and United Express regional partners (Scope 3 emissions).

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**C9. Additional metrics**

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**C9.1**

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**(C9.1) Provide any additional climate-related metrics relevant to your business.**

**C-TO9.3/C-TS9.3**

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**(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.**

**Activity**

Aviation

**Metric**

Fleet adoption

**Technology**

Other, please specify (Winglets on mainline aircraft)

**Metric figure**

100

**Metric unit**

Other, please specify (% of eligible aircraft equipped)

**Explanation**

The value stated is a percentage. 100% of United's eligible mainline aircraft have been refitted beyond the base design with fuel-saving winglets.

**Activity**

Aviation

**Metric**

Yearly purchase

**Technology**

Other, please specify (Sustainable aviation fuel (SAF))

**Metric figure**

624730

**Metric unit**

Other, please specify (Gallons of SAF bought)

**Explanation**

In 2016 United became the first airline to begin using SAF on an ongoing daily basis. United has worked with World Energy since 2009 and in 2019 renewed its purchase agreement to buy up to 10 million gallons over the next two years; through the end of 2020 over 4 million gallons of this fuel have been purchased. This SAF has a nearly 80% reduction in lifecycle GHG emissions as compared to traditional jet fuel.

**Activity**

Aviation

**Metric**

Fleet adoption

**Technology**

Other, please specify (Electric ground support equipment (GSE))

**Metric figure**

42

**Metric unit**

Other, please specify (% eligible GSE that are electric-powered)

**Explanation**

The value stated is a percentage. Over 4,200 pieces of United's GSE are powered by electricity rather than conventional fuel. At the end of 2020, 42% of United's eligible GSE fleet had been electrified. In 2019, United partnered with ITW GSE to pilot the ITW 7400 electric mobile ground power unit (GPU), which drastically cuts GHG emissions by 90% and reduces workplace noise pollution. The pilot is the first use of this equipment in North America, and United is the first major U.S. airline to use a fully electric GPU for its fleet, and has since deployed six across its hub operations.

**C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6**

**(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

	Investment in low-carbon R&D	Comment
Row 1	Yes	Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses) so United invests in research and development that provide low-carbon alternatives to jet fuel. These investments include newer, more fuel-efficient aircraft; sustainable aviation fuel (SAF); and electric ground support equipment (GSE).

**C-TO9.6a/C-TS9.6a**

**(C-TO9.6a/C-TS9.6a) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.**

**Activity**

Aviation

**Technology area**

Alternative fuels

**Stage of development in the reporting year**

Small scale commercial deployment

**Average % of total R&D investment over the last 3 years**

≤20%

**R&D investment figure in the reporting year (optional)****Comment**

In 2016 United became the first airline to begin using sustainable aviation fuel (SAF) on an ongoing daily basis. United has worked with World Energy since 2009 to achieve this milestone and in 2019 renewed its purchase agreement to buy up to 10 million gallons over the next two years. United had integrated this fuel, and its nearly 80% reduction in lifecycle GHG emissions as compared to traditional jet fuel, into its everyday operations at Los Angeles International Airport, the largest continuous use of SAF in the airline industry to date.

**Activity**

Aviation

**Technology area**

Alternative fuels

**Stage of development in the reporting year**

Full/commercial-scale demonstration

**Average % of total R&D investment over the last 3 years**

≤20%

**R&D investment figure in the reporting year (optional)****Comment**

United continues to actively invest in more fuel-efficient technologies and aircraft. In addition, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy for 90 million gallons of SAF per year for a minimum of 10 years, but this supply has not yet begun. Most recently, United launched United Airlines Ventures, a corporate venture capital fund of \$200 million that will concentrate on sustainability technology investments, including SAF.

**Activity**

Aviation

**Technology area**

Other, please specify (Carbon removals)

**Stage of development in the reporting year**

Full/commercial-scale demonstration

**Average % of total R&D investment over the last 3 years**

≤20%

**R&D investment figure in the reporting year (optional)****Comment**

In 2020, in conjunction with announcing its climate target for carbon neutrality by 2050, United announced its commitment to investing in direct air capture (DAC) technology, with a project led by 1PointFive, who is planning the construction of the largest commercial scale DAC facility in the world, licensing Carbon Engineering's technology.

**Activity**

Aviation

**Technology area**

Propulsion

**Stage of development in the reporting year**

Small scale commercial deployment

**Average % of total R&D investment over the last 3 years**

≤20%

**R&D investment figure in the reporting year (optional)****Comment**

In 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer.

**Activity**

Aviation

**Technology area**

Ground handling operations

**Stage of development in the reporting year**

Pilot demonstration

**Average % of total R&D investment over the last 3 years**

≤20%

**R&D investment figure in the reporting year (optional)**

**Comment**

While 42% of United's eligible ground support equipment (GSE) fleet is electrified, rather than powered by conventional fuel, there is still a portion of the fleet for which there are no commercially available electric alternatives. In 2019, United partnered with ITW GSE to pilot the ITW 7400 electric mobile ground power unit (GPU), which drastically cuts GHG emissions by 90% and reduces workplace noise pollution. The pilot is the first use of this equipment in North America, and United is the first major U.S. airline to use a fully electric GPU for its fleet and has since deployed six across its hub operations.

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**C10. Verification**

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**C10.1**

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**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

**C10.1a**

---

**(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/ section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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**C10.1b**

---

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/ section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 2 approach**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/ section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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## C10.1c

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(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

**Scope 3 category**

Scope 3: Upstream transportation and distribution

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Employee commuting

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

---

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Investments

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Franchises

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

United 2020 Emissions Assurance Statement.pdf

**Page/section reference**

1

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

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C10.2

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(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

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**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Other, please specify (Scope 1 and 2 per Revenue Scope 1, 2, and 3 (category 4) per Revenue)	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C7. Emissions breakdown	Year on year change in emissions (Scope 1)	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C7. Emissions breakdown	Year on year change in emissions (Scope 2)	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C7. Emissions breakdown	Year on year change in emissions (Scope 3)	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C7. Emissions breakdown	Other, please specify (Year on year change in emissions (Scope 1 and Scope 2, location-based))	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C7. Emissions breakdown	Other, please specify (Year on year change in emissions (Scope 1 and Scope 2, market-based))	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C7. Emissions breakdown	Other, please specify (Year on year change in emissions (Scope 1 and Scope 3, category 4))	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf
C8. Energy	Other, please specify (Scope 1, 2, and 3 (category 4) per Consolidated ASM Scope 1, 2, and 3 (category 4) per Consolidated RPM)	ISO14064-3	ERM Certification and Verification Services Inc. (ERM CVS) provided assurance for United's greenhouse gas inventory and related metrics. United 2020 Emissions Assurance Statement.pdf

**C11. Carbon pricing**

**C11.1**

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

**C11.1a**

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

California CaT - ETS

EU ETS

Other carbon tax, please specify (ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA))

**C11.1b**

**(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.**

## California CaT

### % of Scope 1 emissions covered by the ETS

0.15

### % of Scope 2 emissions covered by the ETS

0

### Period start date

January 1 2020

### Period end date

December 31 2020

### Allowances allocated

0

### Allowances purchased

0

### Verified Scope 1 emissions in metric tons CO2e

23333

### Verified Scope 2 emissions in metric tons CO2e

0

### Details of ownership

Facilities we own and operate

### Comment

0.1507% is the true value of emissions covered by California CaT. In 2017 United demonstrated a third consecutive year, within a triennial compliance period, of verified covered GHG emissions below the California Cap-and-Trade threshold of 25,000 metric tons. This qualified United to opt out of the compliance program. Rather than leave the program entirely, United is now a Voluntarily Associated Entity, which allows it to purchase, hold, sell, or retire allowances or ARB offset credits without future year compliance obligations

## EU ETS

### % of Scope 1 emissions covered by the ETS

0

### % of Scope 2 emissions covered by the ETS

0

### Period start date

January 1 2020

### Period end date

December 31 2020

### Allowances allocated

0

### Allowances purchased

0

### Verified Scope 1 emissions in metric tons CO2e

396

### Verified Scope 2 emissions in metric tons CO2e

0

### Details of ownership

Other, please specify (Aircraft we operate, owned and leased)

### Comment

.0026% is the value of emissions covered by EU ETS. United was not required to undergo verification due to an EU ETS Directive (amended on December 29, 2017) extending the option of simplified reporting procedures to aircraft operators with annual GHG emissions from intra-EEA flights of less than 3,000 metric tons. Operational improvements that United has implemented have resulted in fewer diversions that require intra-EU flights within the current scope of the EU ETS, which allows United to maintain its status as a small emitter under the EU ETS. Per EU ETS Simplified Reporting Procedures, United used Eurocontrol CRCO records to submit its 2020 EU ETS emissions.

## C11.1c

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**(C11.1c) Complete the following table for each of the tax systems you are regulated by.**

**Other carbon tax, please specify**

**Period start date**

January 1 2021

**Period end date**

December 31 2035

**% of total Scope 1 emissions covered by tax**

33

**Total cost of tax paid**

0

**Comment**

While the Paris Agreement does not apply to international aviation, ICAO's (International Civil Aviation Organization, the UN agency for aviation) global market-based measure in the form of CORSIA complements the domestic-focused Paris Agreement, which did not address international aviation emissions. CORSIA, adopted by ICAO in 2016, addresses any annual increase in total GHG emissions from airlines' international flying above baseline levels. Due to the COVID-19 pandemic, ICAO recently amended CORSIA such that 2019 emissions will be the baseline year, against which emissions in future years are compared. Approximately 33% of United's 2019 capacity (including regional partners) was flown between country-pairs that have volunteered for the first phase of CORSIA, which began in 2021. If additional countries join in subsequent years, this number is expected to increase.

**C11.1d**

**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

United's climate strategy is primarily focused on mitigating GHG emissions from its aircraft, as 98% of United's emissions result from jet fuel consumption. Jet fuel consumption was United's third largest cost in 2020 (comprising of 15% of operating expenses), making conserving fuel and reducing GHG emissions important factors in the company's financial success. Prior to the COVID-19 pandemic, and during normal operating conditions, jet fuel is United's second largest expense (23% of expenses). United is committed to pursuing reductions in fuel consumption including, but not limited to, aircraft fuel efficiency measures. In the short term, United is pursuing several fuel efficiency measures. In the long term, United's leading role in developing the market for sustainable aviation fuel will result in emission reductions. In addition, United mitigates its impact on climate change through investments in its aircraft fleet.

United has actively engaged and prepared for both the administrative and financial aspects of compliance with the European Union Emissions Trading Scheme (EU ETS) since the EU amended the legislation, in 2008, to include aviation emissions in the scheme. United has established the required monitoring, reporting, and verification methods for its GHG emissions regulated under the EU ETS, met all regulatory requirements, and surrendered all necessary allowances since the legislation was adopted. As a result of the UK's withdrawal from the EU, United will report to the EU ETS under a different authority and additionally report under the newly adopted UK ETS, covering the emissions associated with domestic UK flights and flights from the UK to countries in the European Economic Area (EEA). United has been engaged in the regulatory process but has very limited compliance obligations because we do not operate scheduled services within the UK or between the UK and the EEA.

From 2012 to 2019, United was subject to California's Greenhouse Cap-and-Trade Program due to the stationary source emissions generated by the company's San Francisco Maintenance Center operations. United has demonstrated its emissions below the compliance threshold for the program, and is therefore no longer a compliance entity, only a voluntary entity in the scheme.

In 2016 ICAO adopted a global market-based measure in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) to address any annual increase in total GHG emissions from airlines' international flights above a baseline level. To allow time for ICAO to develop and implement CORSIA, the European Commission adopted an amendment to the EU ETS Directive, narrowing the scope of EU ETS to flights only within the European Economic Area (intra-EEA) until December 31, 2023. The European Commission is currently monitoring CORSIA's implementation and will be issuing a revision to EU ETS in July 2021 as part of its "Fit for 55" package of climate change legislation to meet its new goal of reducing greenhouse gas emissions by 55% by 2030.

The majority of United's international routes and the associated emissions are expected to be included in CORSIA, and company and airline industry growth above the CORSIA baseline would require United to reduce or offset some of its GHG emissions. United's Environmental Affairs, Fleet Strategy, Finance, and Fuel Efficiency departments are working together to determine the optimal strategy to meet United's obligations through a combination of aircraft purchases, fuel efficiency strategies, sustainable aviation fuel (SAF) adoption, and eligible offset purchases. United also continues to actively invest in more fuel-efficient technologies and aircraft.

United has been an aviation industry leader in its promotion of sustainable aviation fuel (SAF) production and adoption through both purchasing SAF volumes and investing in SAF producers. To date, United has made the largest investments by an airline in sustainable aviation fuel (SAF) development through its purchase agreement with World Energy and its \$30 million equity investment and long-term supply agreement with Fulcrum BioEnergy. Most recently, United launched United Airlines Ventures, a corporate venture capital fund that will concentrate on sustainability technology investments. Earlier in 2021, United entered the electric aircraft space by investing \$20 million in Archer Aviation, a company designing, manufacturing, and operating electric vertical takeoff and landing (eVTOL) aircraft, as well as Heart Aerospace, a regional electric aircraft manufacturer. In 2020 United announced a commitment to invest in carbon capture and sequestration technology, through a project led by 1PointFive, the developer of the world's largest direct air capture facility. In 2019, United made an additional \$40 million commitment toward a new investment vehicle focused on accelerating the development of SAF and other decarbonization technologies.

**C11.2**

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

Yes

**C11.2a**

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**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

**Credit origination or credit purchase**

Credit purchase

**Project type**

Forests

**Project identification**

The Alto Mayo project, located in Peru's Alto Mayo Protected Forest, provides forest protection, conservation, and reforestation across 450,000 acres. Beyond the natural carbon mitigation benefits, this project promotes sustainable communities by increasing community productivity and local income.

**Verified to which standard**

VCS (Verified Carbon Standard)

**Number of credits (metric tonnes CO2e)**

4106

**Number of credits (metric tonnes CO2e): Risk adjusted volume**

4106

**Credits cancelled**

Yes

**Purpose, e.g. compliance**

Voluntary Offsetting

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**C11.3**

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**(C11.3) Does your organization use an internal price on carbon?**

Yes

**C11.3a**

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**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

**Objective for implementing an internal carbon price**

Navigate GHG regulations

**GHG Scope**

Scope 1

**Application**

United has started to incorporate a carbon price into its fleet purchase and fuel efficiency investment decisions. The most immediate need is to address United's upcoming compliance obligations as part of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). CORSIA is expected to address any annual increase in total GHG emissions from airlines' international flying above baseline levels. Due to the COVID-19 pandemic, ICAO amended CORSIA such that 2019 emissions will be the baseline year, against which emissions in future years are compared. In any year from 2021 onward when international aviation's GHG emissions covered by the scheme exceed this baseline, this difference represents international aviation's offsetting requirements for that year.

**Actual price(s) used (Currency /metric ton)**

8

**Variance of price(s) used**

United is currently evaluating a range of carbon prices rather than a specific carbon price due to numerous uncertainties regarding CORSIA, including: - Lack of uncertainty of the CORSIA baseline for latter phases of the scheme (the amendment to 2019 emissions for the baseline is currently only applicable for the first phase, 2021-23) - Lack of certainty around the price of these carbon instruments The \$8 per metric ton figure in this table represents the Low scenario in the IEA's (International Energy Agency) forecast for 2020 carbon prices. ICAO uses IEA forecasts to estimate the cost to the airline industry of CORSIA in 2025 to be \$1.5 billion under ICAO's Optimistic scenario (with Additional Low carbon price), at a price of \$6 per metric ton. Price forecasts for 2020 range from \$6 to \$20 per metric ton.

**Type of internal carbon price**

Shadow price

**Impact & implication**

A 1% exposure to ICAO's industry estimate would cost United \$15 million in 2025. United uses an internal price of carbon to determine the future impact of CORSIA. The majority of United's international routes and the emissions are expected to be included in CORSIA, and company and airline industry growth above the CORSIA baseline would require United to reduce or offset some of its GHG emissions. United's Environmental Affairs, Fleet Strategy, Finance, and Fuel Efficiency departments are working together to determine the optimal strategy to meet United's obligations through a combination of aircraft purchases, fuel efficiency strategies, sustainable aviation fuel adoption, and offset purchases.

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**C12. Engagement**

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C12.1

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**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

C12.1a

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**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Compliance & onboarding

**Details of engagement**

Climate change is integrated into supplier evaluation processes

**% of suppliers by number**

74

**% total procurement spend (direct and indirect)**

59

**% of supplier-related Scope 3 emissions as reported in C6.5**

98

**Rationale for the coverage of your engagement**

Where possible, United seeks out suppliers with commitments to sustainable business practices in order to enhance the sustainability of United's operations, products, and services. Because nearly all of United's emissions are related to jet fuel consumption, United has worked closely with the following groups of suppliers for many years to improve its fuel efficiency: - Aircraft and engine manufacturers: United has long been a global launch customer for seventeen new aircraft types, and through its fleet investments and focus on fuel efficiency, has been able to improve its fuel efficiency by 80% since the first generation of jets. - Maintenance providers: United was among the first airlines to use Pratt & Whitney's EcoPower system, which uses atomized water to improve fuel efficiency and reduce GHG emissions by washing engines. United was also the first airline to fly with Aviation Partners Boeing's new Scimitar winglets, which improve fuel efficiency by an additional 2% beyond the standard winglets available on the Boeing 737 and Boeing 757. - Airports: United has partnered to develop sufficient runway capacity while also ensuring that airports have the necessary infrastructure to power aircraft using electricity while parked at the gate. More recently United has partnered with airports to provide infrastructure to convert its ground fleet from fuel- to electric-powered, and also partnered with Los Angeles International Airport to provide sustainable aviation fuel (SAF) for the company's aircraft. - ATC providers: United has worked with ATC providers to ensure optimal flight paths and altitudes while reducing time spent in inefficient holding patterns. - Onboard suppliers: United strongly encourages suppliers to develop lighter materials for use on board aircraft, as lighter materials require less fuel to carry them. For example, in 2017 United switched to a lighter, 10% recycled content paper for its inflight service guide. While each guide became lighter by a mere 1.1 ounce, this change saves 220,000 gallons of fuel and 2,100 metric tons of CO<sub>2</sub>e per year.

**Impact of engagement, including measures of success**

United measures its success by the overall improvement in fuel efficiency. Through these collaborations, United has been able to improve its fuel efficiency by 80% since the first generation of jets. Starting with certain key suppliers, United has also integrated environmentally focused questions into its Request for Proposal process. Success is measured by how the use of suppliers' product or services reduces United's impact on the environment. For example, for our Hemispheres magazine United reduced the weight of each magazine by 0.8 ounces by switching to a lighter paper. This saves 170,000 gallons of fuel per year and nearly 200 trees per year. In 2014 United surveyed its suppliers to help it better understand suppliers' environmental performance and make better procurement decisions. The initiative underscored United's commitment to environmental sustainability and also aligned with United's participation in the United Nations Global Compact, which encourages signatories to promote environmental practices throughout their supply chains. United was the first U.S. airline to join the Global Compact. Supplier engagements are prioritized based on their expected fuel efficiency improvement. In addition, suppliers of SAF hold the greatest GHG emissions reduction potential, so United has sought out suppliers who could provide significant volumes of SAF. United measures its success by the size of the investments it has made, the lifecycle CO<sub>2</sub> reductions the SAF would achieve, and the company's history of firsts in SAF, including: -2009: first demonstration flight by a U.S. airline -2011: first commercial passenger flight by a U.S. airline -2013: first definitive, ongoing agreement by an airline globally -2016: first airline globally to fly on an ongoing daily basis -2019: first airline to renew a SAF agreement

**Comment**

The % of supplier figures are as a percentage of United suppliers with spend in excess of \$1 million in 2020. Because nearly all of United's emissions are related to jet fuel consumption, the % emissions figure has been answered covering all of United's Scope 1, 2, and 3 emissions. United believes answering the question in this manner provides readers with a more comprehensive understanding of United's engagement with its suppliers.

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**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Offer financial incentives for suppliers who reduce your downstream emissions (Scopes 3)

**% of suppliers by number**

1

**% total procurement spend (direct and indirect)**

13

**% of supplier-related Scope 3 emissions as reported in C6.5**

91

**Rationale for the coverage of your engagement**

United Express partners are a key part of reducing United's GHG emissions. These regional partners enable United to fly the right size aircraft for a given route or time to avoid excess fuel consumption and the associated GHG emissions. In addition, they allow United to offer nonstop rather than multi-stop service to smaller cities, further saving fuel and emissions. These partners have been chosen as they represent the majority of United's Scope 3 emissions.

**Impact of engagement, including measures of success**

In 2020, United announced its "100% Green" climate commitment: a goal to achieve carbon neutrality by 2050 without the use of traditional carbon offsets. Beyond network strategy, United works closely with its United Express partners. United sets targets and holds consistent benchmarking meetings with each regional partner to review their progress towards a more fuel-efficient and less GHG intensive operation. United's Express Partners' GHG emissions are included in United's Scope 3 emissions and are included in United's commitment to carbon neutrality by 2050. United measures the success of its United Express partners by evaluating their ability to deliver results against these targets.

**Comment**

The % of supplier figures are as a percentage of United suppliers with spend in excess of \$1 million in 2020.

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**C12.1b**

**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

**Type of engagement**

Education/information sharing

**Details of engagement**

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

**% of customers by number**

100

**% of customer - related Scope 3 emissions as reported in C6.5**

**Portfolio coverage (total or outstanding)**

<Not Applicable>

**Please explain the rationale for selecting this group of customers and scope of engagement**

In 2021 United launched its Eco-Skies Alliance program, which offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for sustainable aviation fuel (SAF). United has offered this campaign to all of its corporate customers, with more than a dozen corporate entities participating. This contribution specifically targets the increased scale and production of SAF, as the near-term solution for decarbonizing aviation and addressing the emissions associated with the combustion of fossil fuel, going beyond traditional carbon offsets and create a demand signal for sustainable fuels. In launching the program, United also launched an educational and advocacy campaign surrounding SAF, providing all passengers with the opportunity to contribute to the purchase and development of additional SAF as well as the opportunity to contact their elected officials to advocate for policy incentives to drive greater production and supply of SAF.

**Impact of engagement, including measures of success**

It is not only important to engage customers on ways to reduce their GHG emissions, but to also educate passengers on long-term solutions to reduce their emissions. United considers a measure of success for this engagement strategy to be more than a dozen corporate customers joining the launch of the Eco-Skies Alliance program, representing approximately \$400 million in annual revenue, committing to the collective purchase of 3.4 million gallons of SAF (enough SAF to eliminate 31,000 metric tons of GHG emissions). Because nearly all of United's emissions are related to jet fuel consumption, the % emissions figure has been answered covering all of United's Scope 1, 2, and 3 emissions. United believes answering the question in this manner provides readers with a more comprehensive understanding of United's engagement with its customers.

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**Type of engagement**

Education/information sharing

**Details of engagement**

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

**% of customers by number**

100

**% of customer - related Scope 3 emissions as reported in C6.5**

**Portfolio coverage (total or outstanding)**

<Not Applicable>

**Please explain the rationale for selecting this group of customers and scope of engagement**

The size of engagement figure is the percentage of customers booking via united.com. all of whom have access to this information. This is a sizeable portion of our overall customer base and is why we chose to engage with this group. While United's decarbonization strategy specifically excludes the use of traditional carbon offsets, it recognizes that not all customers are able to purchase SAF at its high premium. Since 2007 United has offered its passengers the ability to offset GHG emissions associated with their air travel through the company's CarbonChoice offset program. United's CO2 calculator is based on actual routes, aircraft used, load factors, and fuel consumption. Corporate customers can receive customized GHG emissions reports and can purchase offsets to counterbalance the GHG emissions associated with their transportation, effectively allowing them to travel and ship carbon-neutral on United. Offset projects offered by United's environmental partner Conservation International are also designed to provide social and economic benefits to communities where those projects are located.

**Impact of engagement, including measures of success**

United's CarbonChoice program allows it to engage passengers, many of whom are unable to financially contribute to SAF production through the Eco-Skies Alliance program, to still be mindful of and reduce their GHG emissions. United considers a measure of success for this engagement strategy to be a year-over-year increase in customers engaging with the CarbonChoice program (or engaging in the advocacy campaign of United's other climate-related engagement strategy: the Eco-Skies Alliance program). Because nearly all of United's emissions are related to jet fuel consumption, the % emissions figure has been answered covering all Scope 1, 2, and 3 emissions. United believes answering the question in this manner provides readers with a more comprehensive understanding of United's engagement with its customers.

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**C12.1d**

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**(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

United engages with numerous other partners in the value chain as part of its four-pillar commitment to the environment.

**Fuel efficiency and emissions reduction**

For years, United has partnered with airports to electrify the airline's ground fleet, thereby reducing GHG emissions and local air pollutants in the communities where we fly. Together, United and airports have successfully applied for grant funding from federal, state, and local governments to enable reductions in these emissions for airports, their employees, and surrounding communities.

**Sustainable fuel sources**

In addition to purchasing from and directly investing in sustainable aviation fuel (SAF) producers, United has worked with numerous partners to advance SAF development. In addition to supporting organizations such as the Commercial Aviation Alternative Fuels Initiative (CAAIFI) and the Aviation Sustainability Center (ASCENT) to advance the long-term economic and operational viability of SAF, United was one of two airlines in 2020 to participate in the World Economic Forum's Clean Skies for Tomorrow Coalition's Demand Signal working group, which also includes climate leading tech, financial, and professional service firms, as well as aerospace manufacturers, fuel producers, and airports. This working group has developed the SAF certificate (SAFc) to unlock new capital to enable the SAF industry to scale up, as we are demonstrating through our Eco-Skies Alliance program. The SAFc equips businesses and individuals to cover their flights and cargo with lower-carbon fuels, giving investors confidence that there is growing demand for SAF.

Alongside this work, United from 2019 to 2021 served on the steering committee of the Sustainable Air Freight Alliance (SAFA), a collaboration between shippers, freight forwarders, and air freight carriers to track and reduce CO2 emissions from air freight and promote responsible freight transport. SAFA has a standardized reporting template that collects emission factors from airlines and qualitative information on overall sustainability performance. Ongoing webinars and in-person best practice sharing enable peers to integrate sustainability criteria into procurement processes and learning from airlines about current performance challenges and opportunities, and engagement with SAFA members was a critical factor in developing United's Eco-Skies Alliance.

United is also the co-chair of San Francisco International Airport's SAF Working Group. This coalition of 150 airlines, conventional and alternative fuel providers, and other organizations works collaboratively towards expanding the development and use of SAF at SFO and throughout California. In 2018 SFO hosted multiple SAF-fueled flights departing for destinations across California and around the world, totaling nearly 400,000 gallons of SAF and avoiding roughly 100 metric tons of CO2. The working group in 2019 delivered an Infrastructure, Logistics, Supply Chain and Financing Study to identify the key strategies that SFO can deploy to increase SAF volumes at the airport.

**Carbon capture and sequestration**

In 2020, United announced a commitment to invest in carbon capture and sequestration technology, through planned investment in 1PointFive, the developer of the world's largest direct air capture facility. This commitment to commercialize and scale direct air capture, a carbon removal technology that captures carbon dioxide from ambient air and either permanently stores or utilizes it, is set broaden United's decarbonization technology portfolio. Direct air capture represents a scalable decarbonization pathway for not only United, but for industry as a whole—by addressing the emissions of yesterday.

Beyond looking at technology investment opportunities, United has also partnered with organizations that share in the view that carbon capture and sequestration are critical to meet worldwide climate targets. In 2021, United announced a slate of new community partners, including Carbon180, an organization working with scientists, businesses, and policymakers to build a world that removes more carbon than it emits.

**Innovation for the future**

In addition to the innovation and technology advancements to sustainability and revolutionary aerospace developments that United's newly-launched United Airlines Ventures' portfolio includes (like Heart Aerospace, a regional electric aircraft manufacturer), United this year has begun working with more environmental non-profit partners than any other U.S. airline. Two of these partner organizations, Elemental Excelerator and Los Angeles Cleantech Incubator (LACI) are focused specifically on advancing and scaling early stage clean technologies.

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**C12.3**

**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

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**C12.3a**

**(C12.3a) On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Global market carbon control)	Support	United is working closely with its industry trade organizations, Airlines for America, the International Air Transport Association, and the Air Transport Action Group, to develop and implement new technologies including sustainable aviation fuel (SAF), to increase fuel and operational efficiencies, improve air traffic control systems and infrastructure, and advocate for supportive government policies and investment. This work has included the development of a CO2 efficiency standard for aircraft and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), both of which were adopted by ICAO in 2016. United is also actively involved in the ICAO process through its membership as an expert in ICAO's Committee on Aviation Environmental Protection (CAEP) Working Group 4 and Fuels Task Group, which conduct technical work to facilitate the development of CORSIA and the inclusion of sustainable fuels in the scheme.	An international and cooperative global solution for aviation GHG emissions, as opposed to a patchwork of different and conflicting emission taxes and regulatory programs across the globe.
Climate finance	Support	United, working closely with Airlines for America and a coalition of low-carbon fuel producers, has been advocating for a federal incentive structure to grow the sustainable aviation fuel (SAF) market in the U.S. The current SAF market, though largely located in the U.S., represents less than 1% of the total fuel needed by the aviation industry. This is due to large capital costs to construct new production facilities, and disparity in the incentive structures available for on-road renewable fuels instead. The advocacy effort, in which United has been a leader, calls for incentives available for SAF production at parity with those available for on-road alternative renewable fuels.	United is advocating for a SAF-specific blender's tax credit that would replace the existing credit available for renewable diesel today, driving toward parity for companies to produce SAF instead of or alongside renewable diesel.
Energy efficiency	Support	United is working closely with its industry trade organizations, Airlines for America, the International Air Transport Association, and the Air Transport Action Group, to develop and implement new technologies including SAF to increase fuel and operational efficiencies, improve air traffic control systems and infrastructure, and advocate for supportive government policies and investment. This work includes fully implementing the Federal Aviation Administration's Next Generation Air Transportation System for air traffic control (FAA NextGen ATC), which would transform the U.S. air traffic control system from a radar-based system with radio communication to a satellite-based system. GPS technology would be used to shorten routes, save time and fuel, reduce air traffic delays, and permit controllers to monitor and manage aircraft with greater safety margins.	Separating the ATC function from the federal government and moving it to a newly created not-for-profit organization. The proposed ATC organization would be governed by a board that both represents and is accountable to users of the system and is paid for by user fees, ensuring a stable source of funding. The FAA would continue to focus on its most important mission, ensuring airspace safety. United believes ATC reform is necessary to expedite and ensure the efficient modernization of the U.S. ATC system, leading to increased safety of operations, significantly lower GHG emissions, and reduced operating costs. United and its trade organizations also continue to advocate for modernization of the ATC system in the EU and other international regions, due to the environmental benefits and associated cost savings.
Climate finance	Support	United assembled a broad coalition of aviation industry stakeholders to lobby to expand California's Low Carbon Fuel Standard, a per-gallon credit for producers of low-carbon fuels.	United's SAF was excluded from generating credits prior to 2019. United worked with the California Air Resources Board (CARB) to provide the technical analyses necessary to include aviation fuel in this crediting system effective January 1, 2019, further spurring the development of the SAF industry. United continues to seek additional incentives for SAF in multiple geographies.

**C12.3b**

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

Yes

**C12.3c**

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

**Trade association**

Airlines for America (A4A)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

A4A member airlines have a long-standing commitment to improving fuel efficiency and promoting the commercialization of sustainable aviation fuel, thereby reducing their CO2 emissions. A4A's commitment supports a global market-based measure approach to aviation climate change policy under ICAO, and promotes critical technology, air traffic management, and energy and infrastructure advances. In 2020 A4A announced climate goals that align with United's long-term climate ambition. These goals are: 1) Net-zero carbon emissions by 2050 2) The production and deployment of commercially viable sustainable aviation fuel (SAF) to make 2 billion gallons of SAF available to U.S. aircraft operators in 2030

**How have you influenced, or are you attempting to influence their position?**

United has engaged in the development of CORSIA since 2009. United was chair of A4A's Environment Council in 2016 and in 2017 was chair of the International Noise and Emissions Committee.

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**Trade association**

International Air Transport Association (IATA)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

IATA's climate goals, set in 2009, are: 1) Improving fuel efficiency by an average of 1.5% per year from 2009 to 2020 2) Stabilizing CO2 emissions from 2020 with carbon-neutral growth, subject to appropriate government investment in technological and infrastructure improvements 3) Reducing net CO2 emissions from aviation by 50% by 2050, relative to 2005 levels

**How have you influenced, or are you attempting to influence their position?**

United is a member of IATA and was a member of IATA's Climate Change Task Force that developed the airline industry's commitment to action on climate change; United remains engaged through its observer status in IATA's CORSIA Working Group that continues this work. In 2017 United served as vice-chair of IATA's Environment Committee (ENCOM), which drives IATA's global environmental policy.

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**Trade association**

Air Transport Action Group (ATAG)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

ATAG is an association promoting aviation's sustainable growth on behalf of all aviation companies, including airlines, airports, aircraft and engine manufacturers, and ATC providers. ATAG's policy position is very similar to IATA's, both of which also engage directly in the work of ATAG. In 2020 ATAG released its ATAG Waypoint 2050 report, which evaluated technology pathways required to achieve 50% reduction in CO2 emissions across the global industry by 2050 (aligned with the IATA goal), as well as a further evaluation of what it would take the industry to achieve a 100% reduction in CO2 emissions.

**How have you influenced, or are you attempting to influence their position?**

United regularly advises ATAG on its outreach and communications efforts, and participated in the development of the ATAG Waypoint 2050 Report.

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**C12.3d**

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**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

Yes

**C12.3e**

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**(C12.3e) Provide details of the other engagement activities that you undertake.**

United is a member of IATA and was a member of IATA's Climate Change Task Force that developed the airline industry's commitment to action on climate change. United remains engaged through its observer status in IATA's CORSIA Working Group that continues this work. In 2017, United served as vice-chair of IATA's Environment Committee (ENCOM), which focuses on global environment policy, and is also actively involved in the ICAO process through its membership as an expert in ICAO's Committee on Aviation Environmental Protection (CAEP) – CORSIA Working Group 4 and the Fuels Task Group.

These groups advocate the goals set forth in the international airline industry's commitment to action on climate change. These goals are:

- 1) Improving fuel efficiency by an average of 1.5% per year from 2009 to 2020
- 2) Stabilizing GHG emissions from 2020 with carbon-neutral growth, subject to appropriate government investment in technological and infrastructure improvements
- 3) Reducing net GHG emissions from aviation by 50% by 2050 relative to 2005 emission levels

Notably, the U.S. airline industry's commitment to action on climate change has extended further, with a goal of net-zero emissions by 2050 and a sustainable aviation fuel (SAF) production target of 2 billion gallons available to U.S. aircraft operators by 2030.

These groups engage in this work by conducting technical work to facilitate the development of CORSIA, the aircraft CO2 efficiency standard, and the commercialization of sustainable aviation fuel.

In 2020 United became a member of the Roundtable for Sustainable Biomaterials (RSB). RSB is an international entity that develops sustainability standards and certification for sustainable fuels, including the SAF that United uses to power its aircraft. This participation in RSB demonstrates United's commitment toward SAF as a long-term technology solution to decarbonizing aviation.

United engages in this work by participating in ongoing meetings to drive global and regional policy and address financial barriers to the scale-up of sustainable fuels.

**C12.3f**

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**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

United's engagement on environmental policy issues is coordinated with its International Regulatory Affairs and Government Affairs departments to ensure consistency across business divisions and geographies. At the senior executive level, environmental programs and policies, including climate change, are overseen by the President and the Senior Vice President of Government Affairs & Global International Policy. United's Managing Director of Global Environmental Affairs and Sustainability has day-to-day responsibility for environmental matters, and, beginning in 2020, reports to the Senior Vice President of Government Affairs & Global International Policy. United's engagement in climate policy activities include increased cadence with policymakers at the federal, state, and local levels, working to create market-ready solutions to scale much-needed decarbonization technologies (like sustainable aviation fuel, or SAF). United also engaged its customers with the launch of its Eco-Skies Alliance program, earlier this year, when it created a portal for customers to write to their local elected official and support the implementation policy incentives needed to scale SAF.

The Public Responsibility Committee of the Board provides board oversight for United's policies and positioning with respect to social responsibility and public policy, including environmental responsibility. In addition to scheduled Public Responsibility Committee meetings, members of the committee meet regularly with certain United officers to receive updates and discuss key issues directly relevant to its purpose as described above. On a semi-annual basis, the Public Responsibility Committee reviews United's environmental programs and policies, initiatives related to climate change, environmental regulations that impact United, and progress in fulfilling United's sustainability objectives and environmental commitments.

**C12.4**

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**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In mainstream reports, in line with the CDSB framework (as amended to incorporate the TCFD recommendations)

**Status**

Complete

**Attach the document**

2020 Annual Report on Form 10-K.pdf

**Page/Section reference**

Whole document

**Content elements**

Governance

Risks & opportunities

Other metrics

**Comment**

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**Publication**

In mainstream reports, in line with the CDSB framework (as amended to incorporate the TCFD recommendations)

**Status**

Complete

**Attach the document**

United Airlines - Proxy Statement.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy

Other metrics

**Comment**

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**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Emissions figures

Emission targets

Other metrics

**Comment**

United Airlines - Corporate Responsibility Report

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy

Emission targets

Other metrics

**Comment**

Press release – December 10, 2020 United Pledges 100% Green by 2050

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy

Emissions figures

Other metrics

**Comment**

Press release – February 10, 2021 United to Work with Archer Aviation to Accelerate Production of Advanced, Short-Haul Electric Aircraft

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

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United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy  
Emissions figures  
Other metrics

**Comment**

Press release – April 13, 2021 United Airlines to Lead Industry Switch to Sustainable Aviation Fuel with Global Corporations, Customers

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy  
Emissions figures  
Other metrics

**Comment**

Press release – June 10, 2021 United Advances Innovation Through Corporate Venture Capital Fund

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy  
Emissions figures  
Other metrics

**Comment**

Press release – July 13, 2021 Electric Aircraft Set to Take Flight by 2026 Under New Agreements with United Airlines Ventures, Breakthrough Energy Ventures, Mesa Airlines, Heart Aerospace

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

United Airlines - 2020 Other Attachments.pdf

**Page/Section reference**

Whole document

**Content elements**

Strategy  
Emissions figures  
Other metrics

**Comment**

United Airlines – Eco-Skies

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## C15. Signoff

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### C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

## C15.1

**(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)

## SC. Supply chain module

### SC0.0

**(SC0.0) If you would like to do so, please provide a separate introduction to this module.**

United's shared purpose is "Connecting People. Uniting the World." We are more focused than ever on our commitment to customers through a series of innovations and improvements designed to help build a great experience: Every customer. Every flight. Every day. In 2019, prior to the novel coronavirus (COVID-19) pandemic, United Airlines and United Express together operated approximately 4,900 flights a day to 361 airports across six continents, and operated more than 1.7 million flights carrying more than 162 million customers. United is proud to have one of the world's most comprehensive route network, including U.S. mainland hubs in Chicago, Denver, Houston, Los Angeles, New York/Newark, San Francisco, and Washington, D.C. As of December 31, 2019, United's operations included 791 mainline aircraft and the airline's United Express carriers operated 581 regional aircraft. Beginning in the first quarter of 2020, United began experiencing a significant decline in passenger demand related to the COVID-19 pandemic. In response to decreased demand, United reduced 57% of its scheduled capacity in 2020 vs. 2019. United is a founding member of Star Alliance, which in 2019 provided service to 195 countries via 28 member airlines. For more information, visit [united.com](http://united.com), follow @United on Twitter and Instagram or connect on Facebook. The common stock of United's parent, United Airlines Holdings, Inc., is traded on the Nasdaq under the symbol "UAL".

United's environmental commitment is core to the mission to connect people and unite the world. Every day, we celebrate the people and communities across our planet—which is why we understand the need for bold action now to combat climate change. At United, we're on a mission to make sustainable flying the new standard, with our path to reducing our "wingprint," extending from in the air, to the ground, and into our communities. United has been recognized for years for its leadership in advancing sustainable aviation, such as in 2016, when it became the first airline to begin using sustainable aviation fuel (SAF) on an ongoing daily basis, marking a significant milestone in the airline industry, by moving beyond demonstrations and test programs to the use of SAF in ongoing operations. In 2018, United Airlines ranked No. 1 among global carriers in Newsweek's Global 500 Green Rankings, one of the most recognized environmental performance assessments of the world's largest publicly traded companies. In 2019, United flew the most eco-friendly commercial flight of its kind in the history of aviation: on the Flight for the Planet, United became the first known airline to demonstrate all of the following key actions on a single commercial flight: utilization of SAF, zero cabin waste efforts, operational efficiencies, and using carbon offsets to address the remaining greenhouse gas (GHG) emissions associated with the flight.

In 2020 we announced our "100% Green" climate commitment: a goal to achieve carbon neutrality by 2050 without the use of traditional carbon offsets. That same year, The Carbon Disclosure Project (CDP) named United as the only airline globally to its 2020 Climate 'A List' for the airline's actions to cut emissions, mitigate climate risks and develop the low-carbon economy, marking the seventh consecutive year that United had the highest CDP score among U.S. airlines. And in June 2021, for the third time since launching its industry-leading Eco-Skies program, United Airlines was named the Eco-Airline of the Year by Air Transport World magazine. The award recognizes an airline globally for its environmental leadership as demonstrated by consistent and impactful environmental action within the company and in the airline industry. Today, we consume more of the global supply of SAF than any other airline through daily flights departing from Los Angeles, demonstrating a commitment to and support for the growing market for lower carbon alternatives.

United's four-pillar commitment to the environment consists of:

- 1) Fuel efficiency and emissions reduction: increasing fuel efficiency and reducing emissions through technology and process innovation
- 2) Sustainable fuel sources: investing in and operating on environmentally responsible and cost-efficient sustainable fuels
- 3) Carbon capture and sequestration: carbon capture and sequestration technology that removes CO2 from the ambient air
- 4) Innovation for the future: investing in innovative technology that can help reduce GHG emissions

### SC0.1

**(SC0.1) What is your company's annual revenue for the stated reporting period?**

	Annual Revenue
Row 1	15355000000

### SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Yes

## SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	US	9100471096

## SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

**Requesting member**

Accenture

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

11117

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Accenture travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Accenture. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 9,662; United is able to provide figures using other methodologies as well if desired. These figures represent gross emissions and do not reflect the impact of United's agreement with Accenture to use sustainable aviation fuel to reduce Accenture's travel emissions. In 2020 Accenture travelers on United flew with an average fuel efficiency of 47.4 miles per gallon and at an average speed of 354 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**Requesting member**

Advance Auto Parts Inc

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

76

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Advance Auto Parts travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft

sources and allocated a portion of these emissions to Advance Auto Parts. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 78; United is able to provide figures using other methodologies as well if desired. In 2020 Advance Auto Parts travelers on United flew with an average fuel efficiency of 42.9 miles per gallon and at an average speed of 294 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

The Allstate Corporation

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

1150

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Allstate travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Allstate. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 1,075; United is able to provide figures using other methodologies as well if desired. In 2020 Allstate travelers on United flew with an average fuel efficiency of 47.6 miles per gallon and at an average speed of 340 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

AstraZeneca

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

1498

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by AstraZeneca travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to AstraZeneca. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 1,090; United is able to provide figures using other methodologies as well if desired. In 2020 AstraZeneca travelers on United flew with an average fuel efficiency of 41.3 miles per gallon and at an average speed of 404 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Autodesk, Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

811

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Autodesk travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Autodesk. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 743; United is able to provide figures using other methodologies as well if desired. These figures represent gross emissions and do not reflect the impact of United's agreement with Autodesk to use sustainable aviation fuel to reduce Autodesk's travel emissions. In 2020 Autodesk travelers on United flew with an average fuel efficiency of 55.1 miles per gallon and at an average speed of 400 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**Requesting member**

Avianca Holdings S.A.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

9557

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Avianca-booked customers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Avianca customers. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 9,879; United is able to provide figures using other methodologies as well if desired. In 2020 Avianca-booked customers on United flew with an average fuel efficiency of 51.6 miles per gallon and at an average speed of 419 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**Requesting member**

Bank of America

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

3534

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Bank of America travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Bank of America. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 2,498; United is able to provide figures using other methodologies as well if desired. In 2020 Bank of America travelers on United flew with an average fuel efficiency of 39.4 miles per gallon and at an average speed of 371 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Cisco Systems, Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

3848

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Cisco travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Cisco. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 3,650; United is able to provide figures using other methodologies as well if desired. In 2020 Cisco travelers on United flew with an average fuel efficiency of 57.4 miles per gallon and at an average speed of 416 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Deloitte Touche Tohmatsu Limited

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

18502

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Deloitte travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Deloitte. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 15,285; United is able to provide figures using other methodologies as well if desired. These figures represent gross emissions and do not reflect the impact of United's agreement with Deloitte to use sustainable aviation fuel to reduce Deloitte's travel emissions. In 2020 Deloitte travelers on United flew with an average fuel efficiency of 45.7 miles per gallon and at an average speed of 358 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Eaton Corporation

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

1077

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Eaton travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Eaton. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 981; United is able to provide figures using other methodologies as well if desired. In 2020 Eaton travelers on United flew with an average fuel efficiency of 45.4 miles per gallon and at an average speed of 353 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Grupo Bimbo, S.A.B. de C.V.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

144

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Grupo Bimbo travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Grupo Bimbo. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 144; United is able to provide figures using other methodologies as well if desired. In 2020 Grupo Bimbo travelers on United flew with an average fuel efficiency of 49.2 miles per gallon and at an average speed of 342 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

HP Inc

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

1907

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by HP Inc. travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to HP Inc. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 1,793; United is able to provide figures using other methodologies as well if desired. These figures represent gross emissions and do not reflect the impact of United's agreement with HP Inc. to use sustainable aviation fuel to reduce HP Inc.'s travel emissions. In 2020 HP Inc. travelers on United flew with an average fuel efficiency of 59.9 miles per gallon and at an average speed of 420 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

L'Oréal

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

860

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by L'Oréal travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to L'Oréal. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 866; United is able to provide figures using other methodologies as well if desired. In 2020 L'Oréal travelers on United flew with an average fuel efficiency of 61.1 miles per gallon and at an average speed of 372 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

MetLife, Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

544

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by MetLife travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to MetLife. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 454; United is able to provide figures using other methodologies as well if desired. In 2020 MetLife travelers on United flew with an average fuel efficiency of 48.8 miles per gallon and at an average speed of 368 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Stanley Black & Decker, Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

208

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Stanley Black & Decker travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Stanley Black & Decker. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 212; United is able to provide figures using other methodologies as well if desired. In 2020 Stanley Black & Decker travelers on United flew with an average fuel efficiency of 56.0 miles per gallon and at an average speed of 361 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**Requesting member**

TD Bank Group

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

252

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by TD Bank travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to TD Bank. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 210; United is able to provide figures using other methodologies as well if desired. In 2020 TD Bank travelers on United flew with an average fuel efficiency of 41.9 miles per gallon and at an average speed of 341 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**Requesting member**

Verizon Communications Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

2391

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Verizon travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Verizon. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 2,435; United is able to provide figures using other methodologies as well if desired. In 2020 Verizon travelers on United flew with an average fuel efficiency of 55.6 miles per gallon and at an average speed of 345 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Wells Fargo & Company

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

1830

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Wells Fargo travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Wells Fargo. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 1,725; United is able to provide figures using other methodologies as well if desired. In 2020 Wells Fargo travelers on United flew with an average fuel efficiency of 51.3 miles per gallon and at an average speed of 349 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

World Bank Group

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO<sub>2</sub>e**

2701

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by World Bank travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to World Bank. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 1,424; United is able to provide figures using other methodologies as well if desired. In 2020 World Bank travelers on United flew with an average fuel efficiency of 31.5 miles per gallon and at an average speed of 479 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

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**Requesting member**

Xylem Inc

**Scope of emissions**

Scope 1

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**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

284

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Xylem travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Xylem. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 242; United is able to provide figures using other methodologies as well if desired. In 2020 Xylem travelers on United flew with an average fuel efficiency of 39.6 miles per gallon and at an average speed of 362 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**Requesting member**

Zimmer Biomet Holdings, Inc.

**Scope of emissions**

Scope 1

**Allocation level**

Company wide

**Allocation level detail**

&lt;Not Applicable&gt;

**Emissions in metric tonnes of CO2e**

694

**Uncertainty (±%)**

1

**Major sources of emissions**

- Scope 1: Fuel consumed by mainline aircraft, ground support equipment, and facilities - Scope 2: Electricity use at facilities - Scope 3: Fuel consumed by regional partner aircraft and ground support equipment, and employee commuting

**Verified**

No

**Allocation method**

Allocation not necessary due to type of primary data available

**Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

United allocated its GHG emissions by examining the actual emissions from fuel consumption for all United flights flown by Zimmer Biomet travelers; actual emissions from fuel consumption for flights comprise approximately 99% of United's emissions inventory. United then scaled up this figure to account for emissions from non-aircraft sources and allocated a portion of these emissions to Zimmer Biomet. The emissions figure shown assumes a higher allocation for travel in premium cabins. If all cabins were allocated emissions equally, this figure would be 642; United is able to provide figures using other methodologies as well if desired. In 2020 Zimmer Biomet travelers on United flew with an average fuel efficiency of 48.6 miles per gallon and at an average speed of 347 miles per hour. The speed figure reflects time from scheduled departure to actual arrival.

**SC1.2**

**(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).**

United Airlines developed and manages calculations related to United's GHG footprint. The vast majority (99%) of United's GHG emissions result from jet fuel combustion, with some GHG emissions from ground support equipment (GSE), natural gas, and emissions associated with purchased electricity and steam. United allocates emissions to its customers by examining individual travelers' actual flights, aircraft used, load factors, and fuel consumption. United's approach mirrors other widely used methodologies, but with more precise data.

**SC1.3**

**(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?**

Allocation challenges	Please explain what would help you overcome these challenges
Other, please specify (Allocation method not universally agreed)	While the methodology in determining emissions of a particular flight and the onboard passengers and cargo are very straightforward, methods of allocating emissions between passengers and cargo, or between individual passengers who may be in different ticketed cabins, do not have universal consensus. Examples of allocation problems include: - Aircraft can fly both passengers and cargo simultaneously, requiring emissions to be allocated between the two different customer types. Some methodologies advise that emissions should be allocated proportionally between the two on a weight basis, while others recommend increasing passengers' allocation to take into account additional weight associated with serving passengers. United has opted to allocate emissions solely on a weight basis. - Many aircraft have different classes of service. Because premium seats take up more space on the aircraft, many methodologies recommend increasing emissions for premium cabins by a factor of two. United has opted to use factors specific to each of its aircraft types and class of service, but is able to provide class-neutral figures to customers as well. - United regularly upgrades select customers, which results in mismatches between booked and flown classes of service. A customer may have chosen to voluntarily offset their emissions, assuming they would be flying in economy, but ultimately travel in a more premium cabin with higher emissions. It is not clear which class of service such customers should be allocated to for emissions footprint purposes. United has opted to allocate emissions based on the actual class of travel. - Passenger travel is generally two-directional, while cargo flows are often dominated in one direction. For example, flights from the U.S. to Asia carry very little cargo, while flights from Asia to the U.S. carry a great deal of cargo. When apportioning CO2, the normal approach is to do so on a per flight basis—which means that a given shipment on a U.S.-Asia has a higher CO2 footprint than Asia-U.S. cargo. However, the aircraft needs to fly the high-footprint flight to be able to complete the low-footprint flight. United has opted to allocate emissions based on the one-way flight leg, and not across the round-trip.

**SC1.4**

**(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?**

Yes

**SC1.4a**

**(SC1.4a) Describe how you plan to develop your capabilities.**

United continues to identify additional relevant and material sources of emissions to incorporate into its emissions inventory. In addition, United participates in airline industry dialogue on best practices in emissions footprint calculations and is a founding member of the Sustainable Air Freight Alliance (SAFA), a collaboration between shippers, freight forwarders, and airlines to track and reduce GHG emissions from air freight and promote responsible freight transport. United is part of working groups at the International Air Transport Association and SAFA that are working to align the numerous methodologies that exist today.

**SC2.1**

**(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.**

**Requesting member**

Accenture

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

11117

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. United is delighted to be working with Accenture in this area, and looks forward to expanding this partnership in the future.

**Requesting member**

Advance Auto Parts Inc

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

76

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

The Allstate Corporation

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

1150

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

AstraZeneca

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

1498

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Autodesk, Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

811

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. United is delighted to be working with Autodesk in this area, and looks forward to expanding this partnership in the future.

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**Requesting member**

Avianca Holdings S.A.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce both our own and our customers' emissions

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

9557

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, corporate travelers could allocate the associated emissions reductions to their travel on United.

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**Requesting member**

Bank of America

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

3534

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Cisco Systems, Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

3848

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Deloitte Touche Tohmatsu Limited

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

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**Estimated lifetime CO2e savings**

18502

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. United is delighted to be working with Deloitte in this area, and looks forward to expanding this partnership in the future.

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**Requesting member**

Eaton Corporation

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

1077

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Grupo Bimbo, S.A.B. de C.V.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

144

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

HP Inc

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

1907

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. United is delighted to be working with HP Inc. in this area, and looks forward to expanding this partnership in the future.

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**Requesting member**

L'Oréal

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

860

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

MetLife, Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

544

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Stanley Black & Decker, Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

208

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

TD Bank Group

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

252

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Verizon Communications Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

2391

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Wells Fargo & Company

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

1830

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

World Bank Group

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

2701

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG

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emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity

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**Requesting member**

Xylem Inc

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

284

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity.

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**Requesting member**

Zimmer Biomet Holdings, Inc.

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions footprint

**Emissions targeted**

Actions that would reduce our own operational emissions (our scope 1 & 2)

**Estimated timeframe for carbon reductions to be realized**

0-1 year

**Estimated lifetime CO2e savings**

694

**Estimated payback**

Other, please specify (none)

**Details of proposal**

The CO2e savings shown represents 2020 travel emissions. United is the largest user of sustainable aviation fuel, which offers significant reductions in lifecycle GHG emissions as compared to traditional jet fuel. Through United's Eco-Skies Alliance program, United could allocate the associated emissions reductions to your travel on United. We would be eager to have further conversations regarding this opportunity. In 2021 United launched its Eco-Skies Alliance program. The program offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for sustainable aviation fuel. This contribution goes beyond traditional carbon offsets and create a demand signal for low-carbon flying.

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SC2.2

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**(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?**

Yes

SC2.2a

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(SC2.2a) Specify the requesting member(s) that have driven organizational-level emissions reduction initiatives, and provide information on the initiatives.

**Requesting member**

Accenture

**Initiative ID**

2020-ID1

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions foot print

**Description of the reduction initiative**

In 2021 United launched its Eco-Skies Alliance program. The program offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for sustainable aviation fuel. This contribution goes beyond traditional carbon offsets and create a demand signal for low-carbon flying.

**Emissions reduction for the reporting year in metric tons of CO2e**

0

**Did you identify this opportunity as part of the CDP supply chain Action Exchange?**

No

**Would you be happy for CDP supply chain members to highlight this work in their external communication?**

Yes

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**Requesting member**

Autodesk, Inc.

**Initiative ID**

2020-ID1

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions foot print

**Description of the reduction initiative**

In 2021 United launched its Eco-Skies Alliance program. The program offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for sustainable aviation fuel. This contribution goes beyond traditional carbon offsets and create a demand signal for low-carbon flying.

**Emissions reduction for the reporting year in metric tons of CO2e**

0

**Did you identify this opportunity as part of the CDP supply chain Action Exchange?**

No

**Would you be happy for CDP supply chain members to highlight this work in their external communication?**

Yes

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**Requesting member**

Deloitte Touche Tohmatsu Limited

**Initiative ID**

2020-ID1

**Group type of project**

New product or service

**Type of project**

New product or service that has a lower upstream emissions foot print

**Description of the reduction initiative**

In 2021 United launched its Eco-Skies Alliance program. The program offers United's corporate customers the opportunity to reduce the environmental impact associated with their travel emissions by paying the additional cost for sustainable aviation fuel. This contribution goes beyond traditional carbon offsets and create a demand signal for low-carbon flying.

**Emissions reduction for the reporting year in metric tons of CO2e**

0

**Did you identify this opportunity as part of the CDP supply chain Action Exchange?**

No

**Would you be happy for CDP supply chain members to highlight this work in their external communication?**

Yes

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SC4.1

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(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

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Submit your response

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**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now

**Please confirm below**

I have read and accept the applicable Terms