

C0. Introduction

C0.1

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

The National Railroad Passenger Corporation (Amtrak) is America's intercity passenger railroad company. Amtrak was created by Congress in 1970 and began service on May 1, 1971. Its preferred stock is entirely held by the U.S. Department of Transportation. As defined by the U.S. Congress through the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), Amtrak's mission is to "provide efficient and effective intercity passenger rail mobility consisting of high-quality service that is trip-time competitive with other intercity travel options." Amtrak operates a network of intercity long-distance, shorter commuting-distance, and U.S. high-speed passenger rail services serving 46 states and more than 500 stations, and reaches 400 additional destinations via connecting bus routes. Amtrak provides a sustainable alternative to air and automobile travel across the United States and into three of the Canadian provinces. The company employs approximately 20,000 people throughout the country with the corporate headquarters offices in Washington, DC, and notable office locations in Wilmington, DE and Philadelphia, PA.

Taking into account Amtrak's Northeast Corridor, State Supported and Long-Distance service lines, shared intermodal stations, and infrastructure access and services provided to 13 state and regional authorities for commuter services from coast to coast, our services were used by more than 348 million travelers a year (pre-COVID). In 2022, customers took 22.9 million trips on Amtrak, including 7 million first trips, a rebound of 89% from pandemic-ridership numbers.

The Northeast Corridor (NEC) is the busiest railroad in North America, with approximately 2,200 Amtrak, commuter and freight trains operating over some portion of the Washington-Boston route each day. Amtrak owns and operates 363 route-miles of the 457-route-mile NEC spine, which is also the only fully electrified high-speed passenger rail service in the United States. Route-miles include all Amtrak trains that traveled over some portion of the NEC spine (Washington-New York-Boston) and connecting corridors to Harrisburg, Pa., Springfield, Mass., Albany, N.Y., and Richmond, Va.

Roughly 70% of the miles traveled by Amtrak trains are on tracks owned by other railroads. Known as "host railroads," they range from large, publicly traded companies based in the U.S. or Canada, to state and local government agencies and small businesses. All train service on these tracks is powered by diesel locomotives.

Amtrak's operations are highly dependent on fossil fuels. Train operations account for 60% of Amtrak's carbon footprint and of that percentage; roughly 80% is attributed to diesel fuel. In FY22, Amtrak reduced emissions by 14% compared to FY19, due to limited train service remaining from the pandemic, passing our annual reduction goal of 5% compared to FY19 and staying on track to reduce 40% by 2030.

Also in FY22, Amtrak set a corporate goal to be a Net-Zero emissions organization by 2045. That work is underway and continues to be led by our annual corporate goals. In addition, we continued our climate resilience work by initiating projects in line with our Climate Resilience Strategic Plan. The company with support from a climate consultant is laying the foundation for a National Climate Vulnerability Assessment and assessing and updating our Engineering Design Standards for greater climate readiness and alignment to our Net-Zero goals.

There are no changes to our reporting period from previous CDP disclosures.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

October 1 2021

End date

September 30 2022

Indicate if you are providing emissions data for past reporting years

No

Select the number of past reporting years you will be providing Scope 1 emissions data for

<Not Applicable>

Select the number of past reporting years you will be providing Scope 2 emissions data for

<Not Applicable>

Select the number of past reporting years you will be providing Scope 3 emissions data for

<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

- Canada
- 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-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?

- Rail

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
No	<Not Applicable>

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 or committee	Responsibilities for climate-related issues
Director on board	<p>The Board Chairman presides over plenary sessions and the Governance Committee. Environmental, sustainability and climate-related updates are discussed annually in the Governance Committee and plenary session. The Governance Committee has responsibility for overseeing and providing direction to the Sustainability & Climate (S&C) group, which is within the Strategy & Planning Department.</p> <p>As part of the Chair's approval and adoption of the company's key strategic pillars, he and all other Directors approved the implementation of Amtrak's Northeast Corridor Climate Resilience Strategic Plan, guided by the 2022 Northeast Corridor Climate Vulnerability Assessment. Annually, the Board of Directors review climate-related goals as part of Amtrak's Annual Operating Plan (AOP).</p> <p>In FY22, the Governance Committee and Board of Directors unanimously approved Amtrak's Climate Commitment – including our most ambitious climate target yet, to achieve net-zero carbon emissions by 2045. The Climate Commitment is composed of 5 key actions: achieve net-zero emissions by 2045, use 100% carbon-free electricity by 2030, reduce diesel fuel usage, integrate climate considerations into business decisions, and establish a company-wide climate resilience program.</p>
Chief Executive Officer (CEO)	<p>The CEO of Amtrak is a non-voting member on the Board, but any climate-related decisions made through the Board become the responsibility of the CEO. The current Chief Executive Officer (CEO) began in January 2022, and supported Amtrak's commitment to reducing greenhouse gas emissions and positioning the company to grow in the face of climate change. The CEO promoted GHG emissions reduction goals and achievements in testimony to Congress, in external interviews, and at internal Town Hall (all-employee) meetings. These meetings were designed to convey and promote the vision of the company to employees, the Board of Directors, State partners, and Congress. Climate resiliency and greenhouse gas reduction goals play a large role in Amtrak's strategy and so the CEO has this responsibility.</p>

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 – some meetings	<p>Reviewing and guiding annual budgets</p> <p>Overseeing major capital expenditures</p> <p>Overseeing and guiding the development of a transition plan</p> <p>Overseeing the setting of corporate targets</p> <p>Monitoring progress towards corporate targets</p> <p>Other, please specify (Setting the corporate strategy)</p>	<Not Applicable>	<p>Due to the nature of Amtrak’s operations and strategic planning, many projects are multi-year in length and will see various updates to spending and advancements on a fiscal year basis.</p> <p>In FY22, the Board set a corporate target to be net-zero emissions by 2045 through an overarching Climate Commitment. The Climate Commitment is a foundational guiding statement designed to galvanize Amtrak’s workforce and partners around key strategies to achieve substantial emissions reduction and invest in innovative solutions. The Climate Commitment includes five key actions, derived from internal discussions, external influences, and strategic positioning to lead the modal shift to Amtrak — the cleanest intercity transportation solution. These key actions are as follows: net-zero emissions by 2045, 100% carbon-free electricity by 2030, reducing diesel fuel usage, integrating climate considerations into business decisions, and establishing a company-wide climate resilience program.</p> <p>In response to large, disruptive events like hurricanes, nor’easters, and chronic flooding, Amtrak began investing in large infrastructure projects to address inundation and storm surge, maintain infrastructure, and to avoid service cancellation and unsafe conditions. These are long-term, multi-year projects, and they require substantial funding and oversight; therefore, the Board has been involved in the approval of funds for project implementation and progress towards achieving project objectives and significant milestones.</p> <p>Also in FY22, Amtrak unveiled the procurement of new intercity trainsets, branded “Airo”, approved by the Board, to replace Amtrak’s existing fleet of 40-year- old passenger cars with standardized cars and dual-mode propulsion. An important criterion for the project was improved energy efficiency and environmental performance. The dual mode solution under consideration is diesel and overhead catenary system (OCS). We will also pilot a diesel and battery solution. Battery power would allow Amtrak to operate with zero emissions in dense urban locations and tunnels which will reduce air pollution and poor air quality in partially enclosed spaces. This major investment positions the company to expand service across the National Network with reduced emissions as a key driver.</p> <p>Additionally, in FY19, the Board approved the advancement of major long term infrastructure projects to improve the resiliency of our operations to withstand future severe storms, including the reconstruction of the B&P tunnel outside Baltimore. In FY22, Amtrak kicked off procurement for the Southern Approach construction package, which is the first of three major construction contracts for the B&P Tunnel Replacement Program. Building on previous corporate sustainability goals, the Board approved the continued work on climate resiliency and GHG emissions reduction target.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1 Yes	One board member is a senior advisor to the Secretary of Transportation. In their role at the Department of Transportation (DOT), they lead an office of 90-plus professionals responsible for the Federal Railroad Administration’s research and development (R&D), planning, policy analysis and rail investment programs. They also direct technical assistance and oversight to advance rail projects through planning, engineering, environmental analysis, financial planning and implementation. This board member oversees Amtrak funding and policy work and serves on the Governance Committee. Their knowledge of climate impacts to rail, Federal net zero goals, and Amtrak’s long-standing sustainability program makes them a competent contributor to the committee and plenary discussions related to climate strategy, risk, and planning.	<Not Applicable>	<Not Applicable>

C1.2

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

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

- Integrating climate-related issues into the strategy
- Monitoring progress against climate-related corporate targets
- Assessing climate-related risks and opportunities
- Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The Chief Executive Officer (CEO), began in April 2020, and supported Amtrak’s commitment to reducing greenhouse gas emissions and positioning the company to grow in the face of climate change. The CEO promoted GHG emissions reduction goals and achievements in testimony to Congress, in external interviews, and at internal Town Hall (all-employee) meetings. These meetings were designed to convey and promote the vision of the company to employees, the Board of Directors, State partners, and Congress. Climate resiliency and greenhouse gas reduction goals play a large role in Amtrak’s strategy and so the CEO has this responsibility.

Position or committee

Other, please specify (President)

Climate-related responsibilities of this position

Managing public policy engagement that may impact the climate
Assessing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The President reported directly to the CEO in FY22. The President was responsible for setting the company's long-term strategy and focused specifically on climate change, network expansion, and the critical role passenger rail transportation plays in reducing global emissions through the modal shift away from planes and cars to intercity passenger trains. Amtrak's current President oversees multiple departments including Marketing & Revenue, Strategy & Planning, and Service Delivery & Operations. He continuously advocates for sustainability goals and targets, speaking openly about his interest in climate mitigation and adaptation.

Position or committee

Other, please specify (EVP Business Transformation and CFO, Chief Safety Officer (CSO))

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

During FY22, the EVP of Strategy and Planning and Chief Safety Officer (CSO) reported respectively to the President and the CEO. These officers were responsible for overseeing critical planning projects and operations across the company as well as leading Safety Management Systems, the Environmental group and Sustainability group, and securing funding and resources for company-wide strategic plans.

Position or committee

Sustainability committee

Climate-related responsibilities of this position

Integrating climate-related issues into the strategy
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

Co-chaired by the EVP Strategy and Planning and the CSO, the Environment and Sustainability Oversight Committee (ESOC) is the governing body which provides direction for the Environment and Sustainability Management System Committee. During quarterly meetings, this group sets annual and long-term GHG emission reduction goals and reviews progress on achieving the company's sustainability goals - including those related to fuel and energy use and GHG emissions. The ESOC also provides oversight of climate-related initiatives, including the development of Amtrak's first NEC Climate Vulnerability Assessment and Resilience Strategic Plan. These committees include departmental representatives from across the company who disseminate information and have direct responsibility for developing and implementing business continuity, risk management, and climate adaptation efforts.

Position or committee

Environment/ Sustainability manager

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Conducting climate-related scenario analysis
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Annually

Please explain

The Director of Sustainability is in charge of ensuring emissions reductions and climate resilience planning is incorporated into Amtrak strategy, and that the group succeeds with projects to meet strategic goals. Each month, the Director assesses the group budget to define how to allocate resources. The Director meets often with direct reports, while managing the Climate Resilience Strategic Plan and planning for the implementation of the National Climate Vulnerability Assessment. The Director also ensures monthly tracking of Amtrak's greenhouse gas emissions and oversees the reporting of corporate targets to the Executive Leadership Team and Board of Directors.

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	We currently provide incentives based on adjusted operating income, which is indirectly impacted by fuel and energy conservation. For example, reductions in fuel usage decrease our operating costs, but are also a prominent aspect of our emissions reduction strategy. We plan to consider more direct and explicit measures to connect incentives to emissions reductions in the next two years.

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

Corporate executive team

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

The reduction of fuel and energy consumption and GHG emissions are specifically incorporated into Amtrak's corporate strategic goals and compensation program. Fuel, energy, and utilities account for 6% of our expenses; after salaries, benefits and train operations. Amtrak sets specific fiscal year goals for reducing GHG emissions and fuel and electricity use and tracks performance against those goals on a monthly basis. In addition to monthly reports, Senior executives receive a report and meet quarterly to discuss issues and opportunities related to achieving these goals. These goals are incorporated into the relevant executive's performance goals and evaluations for relevant utilities, fuel, environmental, and operations executives and impact performance appraisals for relevant executives in the company.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

One of Amtrak's Climate Commitments is a directive to reduce diesel fuel usage across the company. Currently our emissions footprint is dominated by rail operations, of which 80% of those operations rely on diesel fuel - a harmful fossil fuel. Fuel, power, and utilities are also among the company's top expenses each year, since they are directly necessary to power our operations and run our trains. Reducing diesel fuel is the right thing to do and helps Amtrak's meet its emissions reductions goals, while also making us more efficient and responsible with our funding.

Entitled to incentive

Management group

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary

Performance indicator(s)

Reduction in total energy consumption

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

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One of Amtrak's Climate Commitments is a directive to reduce diesel fuel usage across the company. Currently our emissions footprint is dominated by rail operations, of which 80% of those operations rely on diesel fuel - a harmful fossil fuel. Fuel, power, and utilities are also among the company's top expenses each year, since they are directly necessary to power our operations and run our trains. Reducing diesel fuel is the right thing to do and helps Amtrak's meet its emissions reductions goals, while also making us more efficient and responsible with our funding.

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	1	
Medium-term	1	5	
Long-term	5	20	

C2.1b

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

Amtrak defines substantive strategic impact as an incident or condition which prevents or impairs it from safely and reliably conducting its core business: consistent on-time train operations. Indicators used to define substantive financial or strategic impact include # days out of service on a route due to incident or condition, % of on time Initial Train Performance (ITP), % On Time Performance (OTP), # track miles with slow speed orders due to climate-related impacts (e.g. high heat days), and others. If service is lost for a single day, or we incur expenses of at least \$1,000,000 from a weather or climate-related event, Amtrak defines that as a substantive loss. Our teams focus the most on multi-million dollar events, which are events such as wildfires, hurricanes, and winter storms due to their immense impact on our operations and potential harm to our customers and employees and damage to our assets.

Temperature directly impacts rail stability and train operations. As rail temperature increases, downstream impacts follow. We reduce train speeds to avoid derailments should the rail buckle from high heat. When train speed slows, on time performance suffers, fuel consumption increases, and customer satisfaction wanes. Although these singular events may not reach the \$1M threshold, cumulatively, they have a substantive impact on our business, workforce planning, reputation, fuel use, and the condition of our infrastructure.

According to Amtrak's Enterprise Risk Management policy, there are two levels of substantial impact:

1. **A significant/high impact** is one of greater than or equal to \$28M and less than \$56M financial impact, significant impact to market share reputation, or could block achievement of strategic goals while requiring executive management attention.
2. **A severe impact** is one of greater than or equal to \$56M financial impact, sustained severe loss in market share, reputation, and alliances, sustained severe business interruption requiring executive management and Board attention to survive, or severe threat to prevent the achievement of strategic goals while requiring Board attention.

For example, the twin North (Hudson) River Tunnels connecting New Jersey and New York City along the NEC, were both inundated by seawater during Superstorm Sandy in October 2012. While interim repairs were made immediately following the incident to restore service to the NEC, remedial repairs have continued ever since in order to maintain reliable operations. Longer range, complete rehabilitation and replacement of these tunnels is required. The immediate threat of substantive strategic impact remains until the tunnel condition is renewed, guaranteeing long-term reliable operation without continuous maintenance outage/impact. In addition to the condition remediation, these tunnels, and other critical Amtrak-owned infrastructure remain vulnerable to climate threats from sea level rise and storm surge that could prevent safe, reliable continued rail passenger service if not addressed through resiliency actions.

In addition to its own assets, Amtrak is dependent on other railroads' infrastructure to operate its national network of intercity passenger train operations. For example, over 1.5 million passengers rode the Amtrak Pacific Surfliner on the Southern California Coast in FY22. While we do not own the rail infrastructure, our operations were suspended within the last week of FY22, rolling over into the new year, after the shoreline was found to be eroding at a dangerously fast pace – due in part to sea-level rise. Weather-related delays can be extremely expensive; in fact, based on historical weather-related disruptions, Amtrak is estimated to see \$220 million in projected revenue losses in the coming decade. This is just one example of a major financial impact to Amtrak. Prolonged disruptions to operations, such as that from the damage caused to host rail infrastructure along the Gulf Coast following Hurricane Katrina in 2005 resulted in the indefinite suspension of rail passenger service between New Orleans and Jacksonville. While that severe line damage was eventually repaired, passenger service remains suspended.

Investing in route expansion and modernizing our fleet positions Amtrak to deliver a customer experience that is efficient, comfortable and sustainable. This is a strategic investment to drive the modal shift necessary to reduce global transport emissions. The first set of new Acela trainsets, which will be 40% more energy-efficient than the current Acela fleet, is scheduled to begin operation within the next few years.

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

A specific climate-related risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

Over the last decade, Amtrak has engaged in various climate change vulnerability assessments, adaptation, and resiliency studies that serve as a foundation for our most recent Northeast Corridor (NEC) Climate Vulnerability Assessment (VA). The initial Climate Change VA was undertaken by Amtrak in 2014 and included an assessment of Amtrak's data availability and data gaps, identified climate change impacts to rail assets, evaluated climate change vulnerability assessment methodologies, and recommended a vulnerability assessment approach.

Next, a pilot Climate Change Vulnerability Assessment study was completed in September of 2015, which focused on a 10-mile section of track within the Wilmington, DE area. This assessment evaluated the vulnerability of multiple asset types including rail, critical facilities, catenary systems, signals, bridges, and roads to several climate change variables. As part of this pilot study, a climate change framework was developed that utilized various resources including the Federal Highway Administration

(FHWA) Climate Change and Extreme Weather Vulnerability Assessment Framework (FHWA, 2012). The main objective of this pilot study was not only to assess Amtrak's asset vulnerabilities within the designated area, but more importantly, to set up a framework and methodology that can be replicated along other stretches or for the entire NEC. The framework provides a structured approach to identify asset vulnerabilities, prioritize risks, develop an adaptation strategy, and plan for the future.

The 2015 study was followed-up in 2017 by the Amtrak Phase III – Climate Change Adaptation Plan, which analyzed Amtrak's asset vulnerability to sea level rise inundation along the entire NEC. This study resulted in a GIS database that could be used as an initial screening tool to understand asset vulnerability to sea level rise.

In 2018, Amtrak worked with researchers from the University of Pennsylvania's Wharton School on a case study to measure the company's resilience to climate risks along the NEC. An inter-departmental group developed and ranked a list of 21 business processes against how they stand up to short- and long-term resilience. The endeavor helped Amtrak begin to understand the breadth of vulnerabilities across numerous functions of the organization and to identify opportunities for resiliency planning.

In FY20, Amtrak's Board of Directors set a corporate goal to develop and implement a Climate Resilience Strategic Plan. This vulnerability assessment and the Northeast Corridor Climate Resilience Strategic Plan are building off previous work to advance the company's understanding of future impacts and identifying ways to integrate resilience into business planning and operations.

Amtrak staff were engaged throughout the VA development process via Resilience Roundtables and topic specific interviews. This engagement enabled collection of data and informed vulnerability assessment thresholds and assumptions (e.g., temperature at which rail operations are slowed).

The 2021 Assessment, detailed in later pages of our CDP response (C3.2), informed us which assets in specific regions are at risk under four intensifying climate stressors: extreme heat, sea-level rise, precipitation, and wind. The Strategic Plan will be rolled out in FY23 to guide Amtrak into thoughtful change resulting in greater resilience throughout business operations, planning, budgeting, and project execution.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Long-term

Description of process

Amtrak's rail infrastructure and locomotive fleet are two key elements underpinning the company's core business of passenger rail service. Some infrastructure assets are nearly 150 years old and require comprehensive rehabilitation or replacement to ensure resiliency to meet the needs of business growth and more frequent train service. Our risk management process includes assessing assets and budgeting for capital projects that will require upgrades, repairs, and energy efficiency measures. Amtrak advanced \$2.2 billion in capital spending, including major milestones such as the Hudson Tunnel Project property acquisition and new multi-powered trainsets.

In FY22, Amtrak is expected to invest \$1.1B in maintaining and improving our infrastructure network across the NEC and national network. Stabilizing slopes adjacent to our tracks from mudslides and rock fall - caused by heavy precipitation events is one way Amtrak is mitigating climate-related risks to our operations through state of good repair projects. We're monitoring the costs to implement and the effectiveness of various hardening solutions so we can plan for future investments. For example, Amtrak's trains run through rural farmlands in Eastern Pennsylvania. While this provides bucolic views for passengers, the open rock formations require periodic assessment and maintenance to ensure safe and on time train operations. Due to the time and costs associated with restoring and protecting our rail systems, slope stabilization projects like one in Mt. Joy, PA are designed to last 75 years. As climate conditions worsen, it places more assets at risk and introduces a higher likelihood of damage or disrupted service.

Value chain stage(s) covered

Direct operations

Upstream

Risk management process

A specific climate-related risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term

Description of process

Amtrak estimates the ridership and revenue impacts of all major weather events; however, due to the impact of COVID on Amtrak ridership, the annual weather buffer was placed on pause over the last 2 years. The estimated impact of these weather-related service disruptions in FY19 was about -\$10M in ticket revenue. In FY20, prior to the onset of the COVID-19 pandemic, weather-related service disruption impacts were modest at an estimated value (over only four month) of about -\$1.2M. Since the onset of the pandemic, Amtrak has paused estimating revenue and ridership impacts from all major weather events due to unpredictable ridership. We plan to start estimating and projecting the impacts of weather-related service disruptions again soon, and resume estimates by FY24.

Both the FY19 full year and FY20 partial year impacts from weather-related service disruptions were much lower than recent prior years. This highlights the importance of the specific geographic location and timing of severe weather events. Severe weather impacting the NEC (especially Acela) and the Southeast (especially the Auto Train) have the most significant revenue impacts.

Over the past few winter seasons, there have not been any significant cancellations of service in the NEC service between New York and Washington due to winter weather events.

To account for these impacts, Amtrak includes a "weather buffer" in the annual ridership and ticket revenue budgets, based on trends over prior years. Based on FY18 actual experience, the FY19 weather buffer was -\$20M. Although Amtrak did not need this full amount in FY19, the same -\$20M weather buffer was used in FY20 under the assumption that actual FY19 disruptions were an outlier. Although FY20 was similarly trending with relatively low actual weather-related disruptions, the resulting strong performance came to an abrupt end with the onset of the COVID-19 pandemic. Needless to say, COVID-19 impacted Amtrak by orders of magnitude higher than weather disruptions. In FY21, Amtrak paused accounting for a weather buffer in the annual ridership and ticket revenue budgets due to unpredictable ridership. The weather buffer is expected to be re-implemented in FY24.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term

Description of process

Amtrak’s enterprise risk management (ERM) program is still maturing but is focused on providing insight into the enterprise-level risks that are the highest priority for Amtrak. Enterprise risks are assessed based on the strategic objectives established for the company. The risk assessment process used strategic objectives to drive the identification of various risks that could prevent Amtrak from achieving those objectives. The results from the enterprise risk assessment conducted in FY20 by the Risk and Controls team drove the risk management efforts to identify, document, and assess the effectiveness of risk-mitigating controls. Included in the top enterprise risks was Natural Disaster Risk. “Natural Disaster” focuses on how external environmental stressors impact Amtrak, including long-term impacts of the increased frequency and severity of weather events (due to climate change) or natural disasters. Results from the 2021 enterprise risk assessment showed that Natural Disasters are still listed as a risk factor at Amtrak.

ERM has matured and now works with our Executive Leadership Team to develop scenarios of risks that might arise that will be a barrier to our stated objectives. These scenarios are high-level, but include scenarios where network infrastructure is in disrepair and Amtrak is unable to support current or increased demand level. In FY20, risk management started a new approach - they developed an assessment process. They currently use Microsoft Office programs (e.g. Excel) to manage and assess risks. There is a current project in place to manage integrated risks (ERM, internal fraud and risk management). Amtrak is not mandated to follow particular guidance for risk management, and thus far we have followed the COSO model. The scenario was created because climate-related risks are included in our risk environment, as it impacts service.

C2.2a

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

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	<p>Construction codes of bridges and tunnels are dictated by the Army Corps of Engineers and the U.S. Coast Guard present ongoing regulation of near-term and long-term projects. Amtrak requires that these federal construction codes be met in every appropriate project. Compliance with Army Corps and U.S. Coast Guard construction codes, particularly with respect to proximity to floodplains, provides the additional benefit of further protecting Amtrak’s infrastructure. Applicable wetland permitting requirements for above ground storage tanks in floodplains are also taken into account and complied with in our tank design and management, providing further protection from flood-related risks.</p> <p>Amtrak is also subject to the regulatory requirements of the Federal Railroad Administration, who have indicated they will increase greenhouse gas emissions reduction goals and oversight of railroad companies. Additionally, the current Administration has spoken openly about ambitious sustainability goals that might have an impact on Amtrak. For example, the President issued an executive order that requires net zero emissions from federal procurement and net zero emissions from overall federal operations by 2050, with the goal to achieve climate resilient infrastructure and operations.</p> <p>There are also statewide regulations to be aware of. For example, at the end of FY22, California proposed In-Use Locomotive Regulations to mandate Tier 4 emissions requirements on locomotives, ensure a transition to Zero-Emissions locomotives within a certain timeframe, and reduce engine idling across the state.</p> <p>All of these current regulations and possible changes in regulations will have a substantive impact on our operations, so Amtrak is continuously monitoring changes in regulations.</p>
Emerging regulation	Relevant, always included	<p>State laws may have implications for Amtrak assets operating in the state. Some of our strictest climate legislation, in fact, comes from states with progressive environmental legislation, such as California. For the past few years, the California Air Resource Board (CARB) has been preparing to enact locomotive regulations such as mandating that locomotives run on biodiesel or renewable diesel or mandating that all locomotives operate as zero-emissions within a certain time frame.</p> <p>For example, the state of Washington aims to reduce GHG emissions 95% by 2050 and aims to establish a Net Zero economy by 2050 and Oregon has statutory requirements to reduce GHG 75% below 1990 levels by 2050. Amtrak receives state funding, as well as federal funding, therefore state regulations would have a direct impact on operational decisions.</p> <p>Amtrak’s Government Affairs group closely monitors emerging regulation and identifies any that could potentially impact Amtrak’s infrastructure or operations. For example, any regulation that required hardening of our infrastructure would be incorporated into our capital planning and prioritization process for infrastructure improvement projects. In addition, any new policy or regulation that promoted modal shift to passenger rail would present a climate-related opportunity for Amtrak to potentially increase ridership and/or service.</p>
Technology	Relevant, always included	<p>Amtrak deploys several technologies to assess risks. Sensors are in place to monitor rail temperature, humidity, wind speeds, and ambient temperature. Accurate and location-based weather conditions are essential to assessing operational risks from excessive heat, wind, and flooding as well as safe train service. We also contract with vendors like IBM, that provide weather data, which feed into our daily operations planning.</p> <p>We inspect the condition of our rail with specialized equipment that detects fatigue in the steel rail, which can be accelerated by extreme temperatures. Buckled rail and pull-aparts are examples of a potential risk because they cause service disruption and require crews to make emergency repairs, thus costing the company money through labor and materials. We use this technology as a preventative measure to assess potential failure in our infrastructure and to avoid delays in service.</p> <p>Another technological risk to Amtrak is our ability to meet carbon reduction goals using advanced technology that is not widely scaled yet. For example, we are currently exploring the integration of renewable diesel fuel to run our locomotives, but we have not yet created a plan to deploy that on a national level. Beyond renewable diesel, Amtrak is also exploring alternative propulsion technology and battery power, ammonia, and hydrogen, though they aren’t commercially viable solutions currently. Without a national network of unified fueling stations or charging solutions, we can only operate on traditional diesel.</p>
Legal	Relevant, always included	<p>Amtrak is subject to EPA regulations of emissions and rules regarding idling locomotives. A regulation signed in 2008 introduced more stringent emission requirements with Tier 4, the highest standard, becoming effective in 2015. If regulatory requirements for greenhouse gas or air emissions are not met, Amtrak would be subject to fines and possible funding losses.</p> <p>Additionally, Amtrak’s marketing department works to ensure all marketing materials and campaigns do not mislead customers or pose a risk of greenwashing. Our customers value that passenger rail is one of the most sustainable modes of transport, so it’s important to maintain that trust. We work closely with our Law Department to ensure we publish accurate, data-backed statements in alignment with the Federal Trade Commission’s green guides.</p> <p>In 2021, the EPA finalized federal greenhouse gas emissions standards for passenger cars and light trucks, and they are currently implementing carbon emission standards for airplanes used in commercial aviation and for large business jets. President Biden recently signed an executive order to cut carbon emissions, which included a commitment to be net-zero emissions from overall federal operations by 2050, including a 65 percent emissions reduction target by 2030. Federal regulations have implications for Amtrak and could result in more stringent requirements for fuel and emissions reductions. Any of these regulations pose a risk to Amtrak for their implications for funding and more stringent regulations.</p> <p>In 2022, California introduced stringent legislation to reduce emissions from locomotives The proposed regulation would prohibit locomotive with engine build dates 23 years and older from operating in California starting in 2030. The Proposed Regulation, starting in 2030, also requires that switch, industrial and passenger locomotives with original engine build dates of 2030 or later operate in a zero emission (ZE) configuration in California. Additionally, in 2035, line haul locomotives with original engine build dates of 2035 or later will need to operate in a ZE configuration in California.</p>

	Relevance & inclusion	Please explain
Market	Relevant, sometimes included	<p>Passengers expect timely performance from our trains and any possible disruptions to service, that often arise from changing weather patterns and increased storm activity, will have an impact on consumer sentiment and possibly reduce service demand. Any type of climate-related disruption poses a risk to our business, as poor on-time performance can lead to decreased customer demand.</p> <p>In a recently published Corridor Strategy Plan, emissions reduction was a main benefit to implement a greater modal shift across the United States. In 2022, ridership rebounded from pandemic-era numbers by 89%, bringing in 7 million new riders on Amtrak. While we do not have recent surveys on customers riding Amtrak for its sustainability benefits, we encourage customers looking for sustainable modes of transportation to consider Amtrak and as climate literacy becomes widespread - we hope a higher demand for passenger rail will follow.</p> <p>This type of information could help make the case to federal or state officials that new or expanded train service would have beneficial health and environmental impacts by taking "X" number of cars off the road (based on ridership projections), thereby leading to a greenhouse gas reduction of "Y" percent. Providing specific and targeted modal shift data for each new or expanded service considered can help persuade decision-makers (and the traveling public) that investing in Amtrak makes sense and can help reduce the impacts of climate change. One specific goal that Amtrak has is to double ridership by 2040 - a goal set for business purposes, as well as environmental reasons.</p> <p>Identifying increases in Amtrak's market share from other travel modes and facilitating those increases through effective communication and marketing is a constant consideration, which is why Amtrak has increased communicating the environmental benefits of traveling by train. Upon request, corporate clients - whose employees travel on Amtrak - can request their particular Scope 3 emissions. We compare emissions between modes so they can see the difference they're making by choosing rail over higher emitting options.</p>
Reputation	Relevant, sometimes included	<p>Amtrak's reputation is impacted by poor on-time-performance (OTP) and safety. The largest impact related to on time performance on the National Network results from the interference of freight trains on host rail lines. Federal law requires that passenger trains are given preference over the slower freight traffic; this does not always occur. Poor OTP may be a result of mudslides, wildfires, track work, or reduced speeds during heat waves and high winds. While these impacts are relevant, the potential link to climate-related risk assessment is not consistently made.</p> <p>We understand there are certain conditions that will cause delays and service disruptions - such as severe weather events. To mitigate impact to Amtrak's reputation, we've focused on improving our immediate communication with customers to keep them informed of the reason for delay or the slower speeds. We're working with internal teams to more accurately track and monitor costs and delays caused by severe weather events and poor OTP. This data will help quantify the financial impact as well as help stakeholders implement solutions to mitigate these service impacts as conditions become more severe.</p> <p>In addition, Amtrak takes pride in operating an inherently sustainable mode of transportation. Riding Amtrak emits up to 83% fewer greenhouse gas emissions than driving alone and up to 73% fewer than flying. 79% of customers surveyed in 2021 agree that Amtrak is a sustainable mode of transportation and 30% of customers surveyed in 2021 said they would consider taking an Amtrak train for a long domestic trip because it's sustainable. As customers' priorities change and as Amtrak develops new corridors and expanded service across the National Network, we will continue highlighting the benefit of passenger rail.</p> <p>Several public transportation companies announced ambitious sustainability goals. Metrolink trains run on 100% renewable diesel in southern California and Union Pacific published a Climate Action Plan to achieve its science-based target and achieve net-zero emissions by 2050. These two railroads are working toward a lower-carbon economy, and their leadership could influence our customers' perceptions of Amtrak's environmental impact - if we don't follow suit.</p>
Acute physical	Relevant, sometimes included	<p>We conduct catastrophe risk assessments focused on the potential impact of a catastrophic event to critical infrastructure. For example, we evaluate the cost of service disruption and costs to repair or replace track, tunnels, bridges, electric power transmission systems, and other route structures impacted by flooding or storm surge from a named storm as a way to value insurance coverage.</p> <p>Catastrophe risk models utilized to estimate potential losses from a catastrophic event are updated following actual events; e.g., the damages sustained following the major hurricane events of 2011 and 2017. These model updates are incorporated into formal risk modeling undertaken by the company. The flooding of the Hudson River tunnels and chronic flooding issues at Amtrak sites in Wilmington were assessed as part of the Climate Change Risk Assessment.</p>
Chronic physical	Relevant, sometimes included	<p>While acute risks are a concern in terms of service disruption and potential safety, chronic risks present a long-term, yet accelerated degradation of Amtrak infrastructure. Such degradation results in more frequent than typical maintenance needs with associated costs, as well as a capital investment in long-term resilience.</p> <p>A specific example is the Baltimore & Potomac (B&P) Tunnel. While the complete replacement of the tunnel is under design for the next several years, the current 150-year-old tunnel requires ongoing preventive maintenance to keep Amtrak intercity, MARC commuter, and Norfolk Southern Railway freight service running reliably until a new tunnel (to be named the Frederick Douglass Tunnel) is built. In 2020, Amtrak replaced approximately 5,500 linear feet of track slab and block ties to renew tracks inside the tunnel that deteriorated due to age and water infiltration. Pumps were replaced and drains repaired to mitigate chronic water infiltration. To date, this work has cost \$72M.</p> <p>In addition, the Gateway Development Commission (GDC) - a partnership among Amtrak, the State of New York and the State of New Jersey - assumed the role of "Project Sponsor" for the Hudson Tunnel Project and submitted an updated financial plan for the \$16 billion project. Amtrak continued its North River Tunnel Interim Reliability program to make temporary repairs, where possible, in the existing tunnel including leak mitigation, drain cleaning and benchwall repairs, until a new tunnel can be built.</p> <p>As climate change is projected to increase the frequency and magnitude of severe weather events, Amtrak is developing resilience strategies to cope with the growing risks. The purpose of the Climate Resilience Strategic Plan is to create a multi-year, action-oriented approach for identifying and prioritizing climate change vulnerabilities, managing and mitigating the impacts to Amtrak's infrastructure and operations, as well as communicating with customers and other external stakeholders. We conducted roundtable discussions with Amtrak engineers, planners, emergency, security and risk managers throughout the Northeast Corridor; reviewed engineering design standards; and evaluated ways to incorporate climate impacts as part of asset condition profiles within Amtrak's enterprise asset management system. Work continues and it will expand to a National Network Climate Vulnerability Assessment in FY23.</p>

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

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)
----------------	--

Primary potential financial impact

Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Pre-COVID, approximately 200,000 daily passenger trips took place in the existing North River Tunnel, which was built by the Pennsylvania Railroad and completed in 1910. The tunnel consists of two, single-track, electrified tubes, which serve as the only passenger rail connections between Manhattan and New Jersey and the rest of the Northeast Corridor. In October 2012 the tunnel was inundated with millions of gallons of salt water during Super Storm Sandy, leaving behind corrosive chemicals which continue to degrade the concrete tunnel liner, benchwalls and other systems that support Amtrak and NJ TRANSIT train operations.

Because the damage from Sandy cannot be fully repaired without closing down each of the two tubes in the tunnel, the only way to avoid several years of sharply reduced service is to build a second set of tunnels (Hudson River Tunnels) that could keep full service running while the existing North River Tunnels are repaired. But it will take several years to construct a new tunnel, and full construction cannot start until funding is secured. Amtrak, Gateway Development Commission (GDC), NY and NJ have a Project Development Agreement (PDA) for the HTP.

New York City is a notable hotspot for projected increases in precipitation. Along the NEC, this precipitation increase has occurred due to increases in both the frequency and intensity of rainfall events. For example, the number of 5-year return period events (i.e., a high frequency event with a 20% chance of occurrence each year) increased by 92% along the NEC between 1958 and 2016. In the same time period, the amount of rainfall in the most intense events increased by 55%. It is expected that climate change will increase the frequency and intensity of precipitation events at a similar rate by the mid-21st century.

Episodic flooding from extreme precipitation threatens Amtrak’s assets. Similarly, increases in the frequency of high rainfall events and/or the intensity of those events can cause assets to flood more frequently and result in expensive damage or the need for adaptation measures to protect the traditional use of those assets.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

16000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

A recent study looked at the economic and social impacts of a partial shutdown of the Hudson River rail tunnel assessed 5 major costs over four years. <https://rpa.org/work/reports/a-preventable-crisis>:

- Health: \$160,000,000
- Safety: \$400,000,000
- Air travel: 1,700,000,000
- Surface travel (freight): 1,200,000,000
- Surface travel (passengers): 12,500,000,000

Cost of response to risk

16100000000

Description of response and explanation of cost calculation

The high level of traffic in the existing North River Tunnel — approximately 450 trains per weekday — means that without this project, taking one of the North River Tunnel tubes out of service for necessary repairs would severely reduce rail service because the remaining tube would have to accommodate two-way traffic. This very significant reduction in capacity would have a devastating effect on New York and New Jersey commuters who cross the Hudson on a daily basis, Amtrak passengers, and the regional and national economies.

Amtrak and our partners are advancing the Hudson Tunnel Project to permit the rehab and modernization of the 113-year old North River Tunnel. The Hudson Tunnel Project has Three Major Components:

1. New, Two-Track Hudson River Tunnel: A new, two-track Hudson River rail tunnel will be constructed between the Bergen Palisades in New Jersey to Manhattan.
2. Hudson Yards Concrete Casing, Section 3: A third and final rail right-of-way preservation section will be built underneath Hudson Yards in New York. This will eventually allow trains to travel between the new Hudson River Tunnel and the existing Penn Station New York.
3. North River Tunnel Rehabilitation: The existing tunnel beneath the Hudson River, which has suboptimal service reliability its and antiquated design, and was severely damaged during Superstorm Sandy, will be rehabilitated.

These three components will improve reliability, resiliency, and redundancy for hundreds of thousands of daily passengers who travel across the Hudson River, and allow for much-needed repairs on an essential stretch of the Northeast Corridor. Upon completion of the Hudson Tunnel Project, four tracks (two in the new Hudson River Tunnel and two in the North River Tunnel) will be available between New Jersey and New York under the Hudson River, which allow for operational flexibility and redundancy for Amtrak and NJ TRANSIT rail operations to maintain current capacity levels.

Additionally, if a climate event was to impact the North River Tunnel prior to completion of a new Hudson River Tunnel, additional costs associated with immediate restoration of Northeast Corridor service would be incurred.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Technology	Transitioning to lower emissions technology
------------	---

Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

In FY22, California DOT, which operates and manages the tracks that Amtrak runs multiple services on received approval from manufacturers Siemens and Cummins to convert conventional diesel-locomotives to renewable diesel. Renewable diesel is cost-comparable to conventional fossil-fuel diesel, but reduces emissions by roughly 60% over the product lifecycle and is a drop-in fuel, making the transition seamless. In FY23, Amtrak trains in California will begin operating on renewable diesel. While this risk is regionally specific, we see renewable diesel as an interim solution to reduce emissions in the short-term while we explore zero-emissions propulsion technology.

While we currently purchase renewable diesel at the same price as conventional diesel, our current assessment shows that Amtrak might end up consuming more gallons of renewable diesel due to the way it's burned for energy. Therefore, there is a risk that while our emissions will decrease in California, our direct costs could increase due to needing a higher volume of product. We estimate that Amtrak could see increased fuel consumption of 5% per year because of the renewable diesel.

Time horizon

Medium-term

Likelihood

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)

7903950

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Over the last 5 years, the average cost of fuel in California was roughly \$3.70 per gallon, according to the U.S Department of Energy. If we consumed 5% additional gallons for just one year, we would pay roughly \$7.9 million more per year (2.1 million additional gallons x \$3.70).

Cost of response to risk

0

Description of response and explanation of cost calculation

As Amtrak's third-highest operating expense, we are continuously working to identify and implement fuel saving measures to reduce diesel fuel usage. While renewable diesel might require more consumption in California, we hope to have offsets from fuel reductions in other parts of the country. One example is targeting reduction in engine idling that occurs when the locomotive is stationary in the yard to further our diesel usage reduction goal. One case study in Chicago found that they avoided burning approximately 90,000 gallons of diesel fuel by reducing idling by 4% over the previous year. We have also made adjustments to engine testing that reduces fuel use.

Comment

Identifier

Risk 3

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
---------------------	--

Primary potential financial impact

Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

As a transportation company with operations across the United States, we are committed not only to our own emissions reduction goals, but state-specific emissions reduction regulations. Many states have taken specific interest in regulating transportation vehicles, due to the emissions from greenhouse gas and air pollutants. The focus on diesel fuel regulation is sensible; 60% of Amtrak's GHG emissions are from rail operations and, when broken down even further, diesel locomotives dominate our rail operations footprint – over 80% - of emissions from running trains.

So, when the Environmental Protection Agency mandates all new locomotives must be up to Tier 4 emissions standards, like they did in 2015, or when California asked Amtrak to phase out diesel fuel and introduce renewable diesel, like they did in 2022, Amtrak is undoubtedly impacted. Tier 4 locomotives allow for diesel fuel usage but have modern engines that result in fewer air pollutants from the locomotive and are also more fuel efficient, so consume less fuel while taking the locomotive the same distance. In 2022, the California Air Resources Board proposed standards for In-Use Locomotive Regulation. The purpose of the regulation is to achieve emission reductions from diesel-powered locomotives operating in California. According to the proposal, in 2020, California's locomotive sector was responsible for ten percent of statewide nitrogen oxide (NOx) emissions from mobile sources and are projected to grow to over 15 percent in 2035 without regulation. While most other mobile sectors are expected to significantly reduce emissions by 2035 as cleaner technologies are added, the locomotive sector's relative contribution is expected to increase without the Proposed Regulation.

The regulation will impact Amtrak by mandating the following timeline:

- o by January 1, 2030, 50% of rail fleet must be Tier 4 or higher.
- o by January 1, 2035, 100% of rail fleet must be Tier 4 or higher.

Time horizon

Long-term

Likelihood

More likely than 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)

2000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of capital expenditures is the cost that Amtrak will spend to purchase locomotives that are in line with CARB regulations. Our ALC-42 locomotives are Tier-4 compliant and significantly more sustainable and fuel-efficient than their predecessors. They reduce emissions of nitrogen oxide by more than 89 percent and particulate matter by 95 percent, while consuming less fuel than the locomotives being retired and reaching a greater top speed, 125 mph. Based on our procurement contract, Amtrak is spending up to \$2 billion for these locomotives.

We also expect additional costs to comply with an additional regulation of reporting each time, date, location, and duration of each instance a locomotive idled longer than 30 minutes and reason why it did so.

Cost of response to risk

2000000000

Description of response and explanation of cost calculation

The cost of Amtrak's response to this risk is to comply with the proposed regulation by continuing with our already-planned procurement of 125 Tier 4 ALC-42's. Amtrak aligns with CARB's regulations both because it's better for our business expenses - but also because reducing emissions from diesel fuel is the right thing to do and better for the communities we serve. CARB regulation offers an alternative fleet milestone option (AFMO), which we would be pursuing. The AFMO lays out the below milestone requirements:

- o by January 1, 2030, 50% of rail fleet usage must be Tier 4 or higher.
- o by January 1, 2035, 100% of rail fleet usage must be Tier 4 or higher.

The arrival of ALC-42 locomotives, which are Tier 4, will allow for the retirement of at least 75 P-40/P-42 units by the end of FY 2025. Over the next decade, Amtrak plans for the entire P-40/P-42 fleet to be replaced, along with P32ACDM dual-mode power locomotives, following the arrival of additional ALC-42 options units and dual-power intercity trainsets (ICTs). The nearest upcoming milestone is by July 1, 2025, operator shall submit milestone dates for lease or purchase of compliant equipment to meet 50% Tier 4 milestone.

Comment**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

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

In 2021, Amtrak set a goal to achieve 100% carbon-free electricity to power our operations across the National Network and Northeast Corridor. The policy was driven by a strategic decision to reduce Scope 2 emissions, which compose roughly 15% of our total emissions footprint. In 2022, we achieved 56% carbon-free electricity – which was used to power train stations, buildings and offices, traction for electric locomotives, and more.

Amtrak owns and operates the largest portion of electrified tracks, which extends from Boston to Washington, D.C., extending to Harrisburg, PA and New Haven, CT. Trains running on the catenary system emit zero emissions at the source, but as an organization intent on reducing both greenhouse gas and air emissions, sourcing carbon-free electricity will help us reach our goals faster.

Utilities management sits in our Procurement department, which has a strategic interest in procuring affordable, clean energy. With clean energy becoming increasingly cheaper and cost-competitive than fossil fuels, we hope to align this opportunity with a goal to keep costs down.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

19140000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Natural Gas: The average retail price of electricity generated from natural gas was approximately 9.70 cents per kilowatt-hour (c/kWh) in the United States in 2020.

(Source: U.S. Energy Information Administration - EIA)

Coal: The average retail price of electricity generated from coal was around 10.96 c/kWh in the United States in 2020. (Source: EIA)

Nuclear: The average retail price of electricity generated from nuclear power was approximately 8.40 c/kWh in the United States in 2020. (Source: EIA)

Renewable Energy (Wind, Solar, Hydro, Biomass): The average retail price of electricity generated from renewable energy sources was about 9.27 c/kWh in the United States in 2020. (Source: EIA)

Cost of carbon-free electricity (average of nuclear + renewable) = 8.8 c/kWh

Cost of non-carbon free (average of natural gas + coal) = 10.33 c/kWh

In FY22, Amtrak consumed roughly 957000 MWh or 957000000 kWh of electricity. Based on the average price of electricity according to the Energy Information Agency, Amtrak could benefit from sourcing clean energy.

FY22 total electricity use (kWh): 957000000

Normalized electricity rates by dividing 8.8 c/kWh by 1000 and 10.33 c/kWh by 1000

carbon-free electricity: \$76,560,000

non carbon-free electricity: \$95,700,000

savings = \$19,140,000

Cost to realize opportunity

230000

Strategy to realize opportunity and explanation of cost calculation

FY22 costs were \$160,000 for 540,000 MWh of carbon-free electricity at approx. a price of \$0.30/MWh. Since that covered about 56% of our renewable energy credit in FY22, multiplying 160,000 x 1.44 = \$230,000.

As we procure energy, Renewable Energy Credits (REC) attributes are a component of our active contracts. We aim to increase our percentage of carbon-free electricity on a gradual basis, averaging an increase of 7 percentage points each year starting with a FY22 base year of 44%, until we reach 100% carbon-free in 2030. In FY22, we surpassed our goal of 44% and achieved 56%.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient modes of transport

Primary potential financial impact

Reduced direct costs

Company-specific description

Since 2018, Amtrak has been preparing to roll out more fuel-efficient locomotives and 2022 was the year of unveiling. A team from Amtrak and Siemens Mobility developed this locomotive series for heavier and longer trains traveling thousands of miles in a single trip, spanning the U.S. from Seattle to Miami, Los Angeles to Boston. These locomotives began service in early 2022, pulling the famous Amtrak Empire Builder train westbound from Chicago to Seattle. They were among the first of 125 locomotives being delivered through 2024.

These ALC-42 locomotives are an important part of Amtrak's sustainability initiative and are considerably more environmentally-friendly than their 1990's predecessors. They reduce emissions of nitrogen oxide by more than 89 percent and particulate matter by 95 percent, while consuming less fuel than the locomotives being retired and reaching a greater top speed, 125 mph. Fuel, power, and utilities consumption are Amtrak's third-highest operating expense, costing us \$302.3 million in FY22. The manufacturer estimated that the new ALC-42s are 10% more fuel-efficient than previous locomotives.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

1699734

Potential financial impact figure – maximum (currency)

16997342

Explanation of financial impact figure

ALC-42s, also known as Charger locomotives, are 10% more fuel efficient; therefore, the financial impact (max) would be the cost of fuel minus 10%. The minimum financial impact would be the future state when all Charger locomotives are converted to alternative non-carbon propulsion.

According to the Energy Information Agency (EIA), the 3-year average diesel fuel price was \$3.6/ gallon in 2022. Amtrak's annual diesel fuel use over the last 3 years was 47.06 million gallons on average, which would total an annual spend of roughly \$170 million. Saving 10% over the medium term would be \$16.9 million in one year, but if fuel savings were only 1%, we would save roughly \$1.69 million a year. These calculations are assuming that the fuel savings are successful and according to calculation.

source: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMD_EPD2D_PTE_NUS_DPG&f=M

Cost to realize opportunity

2000000000

Strategy to realize opportunity and explanation of cost calculation

The new locomotives are designated as ALC-42 for "Amtrak Long-distance Charger, 4,200-horsepower." They will primarily replace Amtrak P40 and P42 diesel-electric locomotives, which have a lower top speed and began service under different emissions standards 30 years ago.

The ALC-42 locomotives are Buy America compliant and built at the Siemens Mobility's rail manufacturing hub in Sacramento, Calif.

Amtrak is paying a total of up to \$2 billion for the new locomotives and supplemental multiyear maintenance support in our National Network, including about \$850 million in funding set aside when the initial order was announced in 2018.

Comment**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

Each year, Amtrak sets an electricity consumption reduction goal to reduce our operating costs and associated GHG emissions. Our goal in FY22 was to reduce electricity usage by 1.5%, which we surpassed to reach 2% reduction. These goals are in conjunction with our efforts to purchase more carbon-free electricity sources. While we use electricity on our trains, Amtrak also owns and manages many stations and facilities across the country – all of which require electricity to operate. We can reduce our consumption with various energy saving measures, such as switching out old lightbulbs for LED lights or turning off lights when they are not being used.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

374066

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

This number encompasses site savings per year from over 4000 new light fixtures in various stations across Amtrak's portfolio, including Washington, D.C., New York City, and Beech Grove, Indiana. The number of light fixtures varies by location, but we know that we'll avoid 1.86 million kWh of electricity a year, equaling about \$370,000 in electricity costs.

Cost to realize opportunity

1700000

Strategy to realize opportunity and explanation of cost calculation

The cost of the opportunity is hiring contractors to replace the light fixtures. The \$1.7 million is the sum of hiring contractors in our 9 project locations.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a climate transition plan within two years

Publicly available climate transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your climate transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your climate transition plan (optional)

<Not Applicable>

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Amtrak understands the need to integrate climate change considerations into the current and future planning, design, and construction of our infrastructure and operations. In FY21 Amtrak hired consultants to create a Climate Resilience Strategic Plan based on findings from a Vulnerability Assessment that found that changes in the climate exacerbate existing threats and create new risks in communities across the country that are expected to increasingly disrupt critical services and damage infrastructure - including those at Amtrak.

With direction from the Amtrak Board of Directors, the Climate Resilience Strategic Plan has been developed to set a strategy for reducing climate impacts along the Northeast Corridor. In FY21, we also started procuring services for a consultant to examine Amtrak and put forth a Net Zero plan that will bring Amtrak to Net Zero emissions. We’re evaluating this decarbonization strategy through the requirements set forth by SBTi.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

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

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

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

Climate-related scenario		Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios	RCP 4.5	Country/area	<Not Applicable>	<p>For this Vulnerability Assessment (VA), future climate scenarios were chosen to align with the IPCC Fifth Assessment Report (AR5) to consider plausible climate conditions that Amtrak’s assets and operations will likely face at the middle and end of the 21st century. To represent this, the two RCPs selected represent a moderate greenhouse gas emissions scenario and a high emissions scenario.</p> <p>Moderate emissions scenario (RCP 4.5) – GHGs peak around 2040 and then decline.</p> <p>Regardless of the differences in the GHG emissions pathways, global temperature increase will continue throughout the 21st century under each of the RCP scenarios. Even under the moderate emissions scenario, RCP4.5, the atmosphere will continue to warm through the 21st century, peaking at nearly 3.5°F of global temperature change, and the NEC regional change is projected to be higher than the global average projection.</p> <p>The VA considered two future planning horizons. Projected changes for the chosen climate stressors are assessed relative to recent historical climate conditions, using the 1991- 2020 time horizon as a reference.</p> <p>The two future planning horizons are:</p> <ul style="list-style-type: none"> • 2050 (represented by average conditions across the 2041–2070 period), and • 2100 (represented by average conditions across the 2071–2100 period), <p>Thus, the VA considers a total of two scenarios for each climate stressor for RCP4.5:</p> <ul style="list-style-type: none"> • RCP4.5, year 2050 (moderate emissions) • RCP4.5, year 2100 (moderate emissions)
Physical climate scenarios	RCP 8.5	Country/area	<Not Applicable>	<p>High emissions scenario (RCP 8.5) – GHGs rise throughout the 21st century with no decline.</p> <p>Regardless of the differences in the GHG emissions pathways, global temperature increase will continue throughout the 21st century under each of the RCP scenarios. Even under the moderate emissions scenario, RCP4.5, the atmosphere will continue to warm through the 21st century, peaking at nearly 3.5°F of global temperature change, and the NEC regional change is projected to be higher than the global average projection.</p> <p>The VA considered two future planning horizons. Projected changes for the chosen climate stressors are assessed relative to recent historical climate conditions, using the 1991- 2020 time horizon as a reference.</p> <p>The two future planning horizons are:</p> <ul style="list-style-type: none"> • 2050 (represented by average conditions across the 2041–2070 period), and • 2100 (represented by average conditions across the 2071–2100 period), <p>Thus, the VA considers a total of two scenarios for each climate stressor for RCP8.5:</p> <ul style="list-style-type: none"> • RCP8.5, year 2050 (high emissions) • RCP8.5, year 2100 (high emissions)

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

In 2020, Amtrak's Board of Directors set a corporate goal to develop and implement a Climate Resilience Strategic Plan to determine how Amtrak can best absorb climatic disruptions through identification of prioritized actions. The 2022 Climate Vulnerability Assessment (VA) for the Northeast Corridor (NEC) has been drafted in response to this initiative. This VA focuses on four key climate stressors:

1. impacts of heat
2. precipitation
3. wind; and,
4. and sea level rise

for two future planning scenarios centered on the years 2050 and 2100. An analysis of Northeast Corridor (NEC) climatic trends points to each of these climate stressors becoming more severe along the corridor. For example, the mid-21st century projection for temperature and precipitation indicate an increase of temperature of 4 to 5°F and an increase of precipitation of 5-15 percent, compared to the previous half century. The VA resulted in a score for the assets analyzed for each stressor. Vulnerability was determined by analyzing an asset's known exposure, sensitivity and adaptive capacity, which are defined generally below, and varied by climate stressor:

- Exposure – The degree to which the asset is exposed to the climate stressor (e.g., flooding; depth of water);
- Sensitivity – The degree to which the asset is affected by the climate stressor (e.g., level of damage); and,
- Adaptive Capacity – The ability to adjust to the climate stressor (e.g., move the asset, alternative routes, recovery time, redundancy).

Results of the climate-related scenario analysis with respect to the focal questions

Heat data provided a measure for number days at or above 100°F (from present) by location. For reference, temperatures above 95°F result in an alert, temperatures above 98°F result in a speed reduction to 100 MPH, and temperatures above 102°F slow service to 80 MPH. Additionally, air temperature of 100°F equates to a track surface temperature of approximately 130°F.

Catenary shows the highest vulnerability scores for extreme heat across all scenarios when compared to the other asset categories. Vulnerability is highest in areas south of New York where there is not a tension system in place to prevent sagging or tightening of lines during temperature changes. Other assets with elevated vulnerability are signal, instrument houses, particularly under the high emissions scenario, as well as track where there is limited tree cover (assumed to be areas outside of the New England Division and Lancaster, PA to Harrisburg, PA). New York City is a notable vulnerability "hot spot" for projected increases in temperature.

Precipitation data projected the increase in number of days that receive at least two inches of rain (from present in a given location). For reference, two inches or more of water on the track can impact operations causing slowdowns and inspections. This data does not account for site-specific topography or drainage enhancements.

Track and interlockings showed the highest vulnerability scores for precipitation events of days with at least two inches of rain across all scenarios when compared to the other asset categories. Buildings had low vulnerability across all scenarios. This may be a result of limited building characteristic data and a higher adaptive capacity such as outfitting the building with temporary and permanent protection measures. New York City is a notable "hot spot" for projected increases in precipitation.

Wind data was leveraged by applying bulk increases to wind gusts during a 100-year storm event. For reference, with 72.8 MPH gusts, operations are limited, and with 96.2 MPH gusts, operations are halted. Vulnerability was consistent across asset types, though known asset data limitations (e.g., age, condition) could skew these results. Boston, MA to Philadelphia, PA are notable "hot spots" for projected increases in wind when compared with the more southern portions of the corridor.

Sea level rise data was leveraged from a 2017 Amtrak study which indicated the level of sea level rise with storm surge inundation (in inches). For reference, four or more inches of sea level rise was assumed to stop 2022 Amtrak Climate Vulnerability Assessment Summary Report operations and result in constant operational impacts. Increments of 0.1 inches were used to assess exposure at a given location. Track showed the highest vulnerability, particularly in "hot spot" locations. Wilmington, DE; New York, NY; New Haven, CT; New London, CT; Portland, RI; and Boston, MA are notable "hot spots" for projected increases in sea level rise.

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	Evaluation in progress	<p>Our products, the trains we run are inherently sustainable and energy-efficient; in fact, riding Amtrak can avoid up to 83% emissions compared to driving and up to 72% compared to flying; However, with our Net-Zero strategy in place, increasing climate risks, and competition from other transportation sectors setting GHG reduction goals, we have continued advancing our Sustainability and Climate Resilience strategy in relation to our overall business.</p> <p>Amtrak's service is disrupted during extreme temperatures and severe weather events such as high winds, heavy rainfall, flooding, wildfires, mudslides, and ice. Speed restrictions and/or cancellation of service is a result of these climate-related impacts, leading to revenue losses, damaged assets, and poor customer experience.</p> <p>For example, some of this lost revenue can be mitigated by limiting or canceling service ahead of a severe weather event. The most substantial strategic decision to date was planning for service disruption and cancelling service prior to foreseen weather events.</p> <p>If the extent of necessary service disruption can be anticipated, with cancellations made early and customers notified sufficiently in advance, some revenue can be recaptured by trips re-scheduled before service is impacted.</p> <p>We often see a surge in demand before major weather events. Additionally, after service is restored following a weather event, there may also be a surge in demand associated with trips re-scheduled later. However, this demand can only be accommodated if sufficient capacity is provided. We have automated self-services such as re-booking and cancellations- to make it easier for customers to change their travel arrangements. Amtrak has also lengthened trains by adding cars to serve this additional demand.</p> <p>In addition, we are working to increase the efficiency and resiliency of our trains. We have placed an order for 125 Siemens Charger locomotives that will reduce air pollutants by roughly 90%, while operating with 10% more fuel efficiency. We are also continuously increasing our carbon-free electricity purchases to power our electrified trains, until we reach 100% carbon-free electricity (as disclosed in C2.4a Opp. 1).</p>
Supply chain and/or value chain	Evaluation in progress	<p>Our Scope 3 emissions from our supply chain make up about 42% of our overall emissions footprint.</p> <p>We have worked hard to establish a more collaborative approach with our supplier partners. As a passenger rail company, the largest carbon footprint on our supply chain comes from the fuel, electricity and natural gas that we purchase to power locomotives, buildings and facilities. The most substantial strategic decision we made to date was revising our Green Power Purchasing Policy to set a clear goal of purchasing 100% carbon-free electricity by 2030, as part of our greenhouse gas reduction strategy.</p> <p>In the coming years, Amtrak will focus on exploring opportunities with vendors positioned to reduce emissions in Amtrak's supply chain and deliver resilient solutions. For example, we're actively identifying where Amtrak can include consistent language in contract terms and conditions, design standards, and other procurement mechanisms to ensure vendors are 1) aware of Amtrak's Net Zero and climate resilience goals, and 2) provide solutions to help meet our corporate targets and mitigate climate risk in our capital projects.</p> <p>In 2022, Amtrak advanced 10 major capital projects that will use Bipartisan Infrastructure Law funding to modernize Amtrak's fleet and railroad infrastructure. Total capital spend summed to \$2.3 billion, including advancing new fleets of trains to operate in the Northeast and other areas of the U.S., and major infrastructure programs like the Portal North Bridge in Kearny, N.J. Our construction and procurement decisions are part of a scope 3 assessment and strategy to support Amtrak's Net Zero Plan.</p>
Investment in R&D	Evaluation in progress	<p>To achieve our Net-Zero goal, R&D is crucial to ensure projects are feasible and scalable. Fuel is Amtrak's second largest operating expense, and it accounts for approximately 65% of the company's carbon footprint. The Mechanical team has historically and continues to partner with vendors and State agencies to conduct operational research on alternative diesel fuel sources, such as biodiesel and renewable fuels – which can reduce emissions of fuel by 63% over the course of the fuel lifecycle. Following a pilot program conducted by Caltrans in FY20 and FY21, with support from Amtrak, on the 170-mile long Capitol Corridor route, Cummins and Siemens approved the use of renewable diesel in the Charger locomotives in FY22. This will allow us to operate Caltrans locomotives on renewable diesel and facilitate the use of renewable fuel by our Amtrak Long-Distance Charger (ALC-42) locomotives, resulting in fewer lifecycle emissions. Planning for the transition to renewable diesel began in FY22 and will continue into FY23, when it is implemented.</p> <p>We currently have 3 additional projects related to R&D that saw development in FY22.</p> <ol style="list-style-type: none"> 1. An RFP to transition a diesel-run Switcher locomotive to battery-run 2. Began planning for a National Renewable Energy Feasibility Study, to see which states and Amtrak properties have high potential for on-site RE generation 3. Hybrid intercity trainset configuration: Amtrak will be first US passenger railroad to prototype and test this combination of technologies at this scale, beginning with the rollout of Amtrak Airo. <p>Beyond renewable diesel testing, Amtrak is exploring alternative propulsion technologies such as hydrogen, fuel-cell, and battery. We are closely monitoring technological developments and market availability for solutions to support decarbonization.</p>
Operations	Yes	<p>Amtrak's operations are the core of our business – to ensure passengers reach their destinations safely and on time. When we experience severe weather, such as hurricanes or extreme high-heat days, our operations are disrupted – so these disruptions are built into our strategy. The risks posed to Amtrak's operations of weather-related events range from service disruptions due to flooding and high winds, to slow orders caused by high heat days. From 2006-2019, Amtrak experienced more than 450 weather disruptions from floods, wildfires, and landslides, among other climatic occurrences. These events resulted in lost ridership of 1.3 million customers and tallied up more than \$127 million in lost revenue for Amtrak.</p> <p>Our most substantial strategic decision to date was beginning the implementation of our Climate Resilience Strategic Plan to adapt and mitigate to the changing climate that will inevitably impact our operations. Heavy precipitation events are becoming increasingly frequent and proper drainage is essential to ensure the resiliency of Amtrak's infrastructure. Slope stabilization (which are designed to last 75 years), culvert cleaning, and ballast replacement are three types of infrastructure strategies designed to maintain and harden operations against more severe climate impacts.</p> <p>When major weather events are forecast to affect specific Amtrak routes or sections of our routes, our Operations team evaluates the need to cancel or amend schedules to maintain safe train service. In fact, Amtrak reached an agreement with the City of New Orleans to provide emergency relocation services to residents when an impending hurricane is tracking toward the city. Amtrak would leverage the train fleet to move residents to safety outside the path of the storm.</p> <p>The majority of Amtrak's labor force works outside, therefore, their health and safety is paramount to safe business operations. As heat waves become more frequent on both coasts, we will engage our Occupational Health & Safety (OSH) group to leverage climate data in preparation for new training and employee protections. We also closely track employee injuries and illnesses related to weather extremes on an ongoing basis to ensure we are effectively managing weather-related risks.</p>

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 Capital expenditures Access to capital Assets	<p>Financial planning is determined by funding from Congress, requested yearly through our annual General and Legislative Annual Report & Grant Request. This funding goes to support our capital projects, but also funds our top three largest expenses:</p> <ol style="list-style-type: none"> 1. Salaries, Wages, and Benefits 2. Train Operations 3. Fuel, Power, and Utilities <p>As an entity that has an obligation to taxpayers, we are aware that climate risks might increase our expenses, as we prepare for changing conditions under climate change. Severe weather – hurricanes, flooding, winter storms, and wildfires – impacts Amtrak operations and ridership. Service cancellations are required due to safety and, in certain cases, infrastructure damage. Furthermore, passenger demand itself may be further impacted by the reduced volume travel in general during weather events.</p> <p>Annually, Amtrak estimates the ridership and revenue impacts of all major weather events. To account for these impacts, Amtrak includes a “weather buffer” in the annual ridership and ticket revenue budgets, based on trends over prior years. Based on FY18 actual experience, the FY19 weather buffer was -\$20M. Although Amtrak did not need this full amount in FY19, the same -\$20M weather buffer was used in FY20 under the assumption that actual FY19 disruptions were an outlier. Since the onset of the pandemic, Amtrak has paused estimating revenue and ridership impacts from all major weather events due to unpredictable ridership. We plan to start estimating and projecting the impacts of weather-related service disruptions again soon and resume estimates in FY24.</p> <p>Beyond the Northeast Corridor (NEC), Amtrak is at risk of a multitude of impacts from wildfires and mudslides. The near-term financial plan is to set an annual budget for storm response and infrastructure hardening. Everything beyond the NEC is on non-Amtrak property, therefore the company encourages the rail owner to maintain their infrastructure to withstand climate-related pressures so both businesses can operate as planned. Further collaboration with these rail owners is part of our expanded work to conduct a National Climate Vulnerability Assessment and strategic plan.</p> <p>Last year, Amtrak developed a prototype Climate Business Case Calculator. This is intended to be a high-level planning level tool to support designers and planners in accounting for climate change impacts (e.g., riverine flood, heat) in early-stage capital project planning decisions. The calculator is not meant to be a financial performance / forecasting model but it can help users consider how risk increases over time from increased flooding and high heat hazards. In its current form, the calculator presents options for a single project location ; it can consider multiple climate adaptation strategies and easily toggle key project inputs to determine resultant risk reduction impacts. Future developments include connecting to Amtrak’s asset management database and GIS layers.</p> <p>Amtrak continues to progress the State of Good Repair backlog of major bridge and tunnel projects through environmental review and design as funds have become available while working with federal and state partners to identify the additional funds needed for the projects’ completion. In FY22, we asked Congress for \$2.2 billion to fund future capital expenditures, such as the Hudson River Tunnel (mentioned in C2.3a Risk 1) and our more fuel efficient and sustainable intercity trainsets. Over the next 5 years, the company has budgeted \$32.9B for capital projects; roughly \$9.3B is allocated for infrastructure projects and nearly \$6B is allocated for Gateway.</p> <p>Gateway is a comprehensive program of strategic mid and long-term rail infrastructure improvements designed to improve current services and create new capacity that will allow the doubling of passenger trains running under the Hudson River. The program will increase track, tunnel, bridge, and station capacity, eventually creating four mainline tracks between Newark, NJ, and Penn Station, New York, including a new, two-track Hudson River tunnel.</p> <p>U.S. Department of Transportation grants were made available for immediate infrastructure repairs required due to Super Storm Sandy. In addition, the Federal Transit Administration (FTA) has awarded special grants to states for projects addressing resiliency in the New York/New Jersey region, for which Amtrak is an active partner.</p> <p>Examples include a:</p> <ul style="list-style-type: none"> • \$700+M grant awarded to New Jersey Transit (NJT) to develop a microgrid capable of providing highly reliable power and back-up support to NJT, Amtrak, and PATH for their critical energy needs; and • a \$300+M grant for the “River to River Resiliency Project” awarded to the Metropolitan Transportation Authority (MTA) for post-Sandy flood prevention and signal improvements in and around Amtrak’s East River Tunnels. <p>Flooding potential for specific coastal or river stations is being analyzed for business continuity and physical security infrastructure protection purposes. In addition to annual appropriations from Congress, funds for infrastructure State of Good Repair and improvement projects that help Amtrak maintain a resilient rail network are available through new Federal grant programs. The Federal-State Partnership for State of Good Repair Program provides capital to repair, replace, or rehabilitate publicly owned railroad assets, and to improve intercity passenger rail performance.</p> <p>Projects that provide joint benefits (e.g. between Amtrak and commuter railroad) are given preference. Amtrak actively pursues funding from programs such as the Consolidated Rail Infrastructure and Safety Improvements (CRISI) initiative which provides funds to help repair and upgrade rail infrastructure. A portion of this program is set aside for projects that contribute to the restoration or initiation of intercity passenger rail services.</p> <p>In addition to planning for climate resilience, we are also looking for ways to reduce electricity usage and fuel usage, as a more sustainable and financially responsible strategy. We have annual electricity reduction goals, meeting or surpassing our 1% reduction goal in recent years. In 2022, Amtrak the first batch of 125 new Charger locomotives that are the first diesel-electric, high-speed locomotives to meet the EPA’s Tier 4 compliance standard. Chargers are 10% more fuel-efficient and produce 95% fewer criteria air pollutants than the Amtrak Tier 0 locomotives they will replace. The specifications of these assets include broader ranges of operating conditions than current equipment. As we see more extreme conditions becoming more frequent, we need equipment that will be able to operate in hotter and colder temperatures. The procurement process for assets, like rolling stock – train cars and locomotives -- incorporates evaluation for higher fuel efficiency and improved safety. Those factors are specifically included in RFPs and are assessed in the contract award process.</p>

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

	Identification of spending/revenue that is aligned with your organization’s climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, but we plan to in the next two years	<Not Applicable>

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 1

Is this a science-based target?

No, but we anticipate setting one in the next two years

Target ambition

<Not Applicable>

Year target was set

2019

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Base year

2010

Base year Scope 1 emissions covered by target (metric tons CO2e)

758575.5

Base year Scope 2 emissions covered by target (metric tons CO2e)

412694

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

1171265

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

40

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

702759

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

591169

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

123763

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

714931

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

97.4019542972769

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

In FY19 we set a near-term target to reduce emissions 40% by 2030 against a 2010 baseline. We set annual targets that align with this goal to ensure progress towards achieving it. The target includes emissions from our Scope 1 and Scope 2. The target includes sources in all categories of our Scope 1 and 2 emissions including all locomotive diesel fuel, traction power for Amtrak's electric trains, electricity, natural gas and steam used in Amtrak facilities, fuels for maintenance equipment, refrigerants, and highway vehicle fuel.

In FY22, we set a long-term target of net-zero by 2045 across scope 1, 2, and 3.

Plan for achieving target, and progress made to the end of the reporting year

We will rely on new equipment and building upgrades with improved energy efficiency, sourcing carbon-free electricity and renewable diesel.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

Target reference number

Abs 2

Is this a science-based target?

No, but we anticipate setting one in the next two years

Target ambition

<Not Applicable>

Year target was set

2022

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 3

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Category 13: Downstream leased assets

Base year

2022

Base year Scope 1 emissions covered by target (metric tons CO2e)

591169

Base year Scope 2 emissions covered by target (metric tons CO2e)

123763

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)

126935

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)

242603

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)

189600

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)

1259

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)

12064

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)

5105

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)

28217

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)

855

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)

38433

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)

<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)	645898
Total base year emissions covered by target in all selected Scopes (metric tons CO2e)	1432595
Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1	90
Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2	90
Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)	90
Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)	90
Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)	90
Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)	90
Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)	90
Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)	90
Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)	90
Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)	90
Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)	90
Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)	<Not Applicable>
Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)	<Not Applicable>
Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)	90
Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes	96
Target year	2045
Targeted reduction from base year (%)	100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

591169

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

123763

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)

126935

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)

242603

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)

189600

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

1259

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)

12064

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)

5105

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)

28217

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)

855

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)

38433

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)

645898

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

1360829

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

5.00951071307662

Target status in reporting year

Underway

Please explain target coverage and identify any exclusions

In FY22 we committed to achieving net-zero target emissions by 2045.

Plan for achieving target, and progress made to the end of the reporting year

As America's railroad, we are committed to aligning with the federal executive order to achieve net-zero and we're targeting to achieve this by 2045. Net-zero will require collaboration, innovation and transformation. Ultimately, we'll work to transition diesel equipment to zero-emissions technology, we'll source carbon-free electricity, and we'll work with our supply chain to reduce scope 3 emissions. In Scope 1, Amtrak currently operates over 200 diesel passenger locomotives across the United States. We will transition these operations to alternative propulsion solutions that are zero emissions. In order to do so we will collaborate on transitioning our equipment. The most suitable energy carriers options to replace diesel operations are hydrogen, battery, or overhead contact system (OCS). While OCS is an existing, proven ZE technology, capital costs inhibit this as a viable solution for the entire network. We will pursue electrification where feasible; However, hydrogen, battery, or dual mode options will likely be used for long range. Hydrogen and battery technologies have already been demonstrated in rail application – the biggest challenge is scalability to compare to the energy density of diesel and meet our operational needs of range and speed.

Over this next decade while the technology replacement for intercity diesel locomotives is developed, we will source biofuels, like renewable diesel, where feasible to reduce lifecycle emissions from use of diesel.

For our scope 2 emissions we will source 100% carbon-free electricity for our electric train service, electrified equipment, and facilities.

Scope 3 will require collaboration with our supply chain starting with increased visibility into the emissions from our purchased goods and services and capital goods. Together, we will work through the challenges today for a better tomorrow.

In FY22, we continued making progress on sourcing carbon-free electricity, and bringing on new tier 4 locomotives meeting EPA's highest emission standards. We established Amtrak's first climate commitment and are integrating sustainability into all aspects of the business.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2

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

Target(s) to increase low-carbon energy consumption or production

Net-zero target(s)

Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2021

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Low-carbon energy source(s)

Base year

2020

Consumption or production of selected energy carrier in base year (MWh)

899926

% share of low-carbon or renewable energy in base year

34

Target year

2030

% share of low-carbon or renewable energy in target year

100

% share of low-carbon or renewable energy in reporting year

56

% of target achieved relative to base year [auto-calculated]

33.33333333333333

Target status in reporting year

Underway

Is this target part of an emissions target?

This goal is part of a longer target to reduce our greenhouse gas emissions by 40% by 2030, baseline year 2010, as stated in C4.1a. and our net-zero by 2045 target.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

This target covers all electricity under Amtrak's responsibility to purchase; Therefore, it includes electricity purchased for the portions of the Northeast corridor owned by Amtrak. This target aligns with our net-zero target as commuter partners using our northeast corridor is included in our scope 3 emissions. The target does not include electricity in leases where we do not directly purchase the power, about 5% compared to the electricity we purchase.

Plan for achieving target, and progress made to the end of the reporting year

We set an annual target of increasing carbon-free electricity by 7% through 2030. As we learn more about our energy use and choices we are planning to bring online solar where feasible and evaluate off-site PPA options. We are implementing carbon-free source requirements in our power purchasing agreements certified through energy attributes certificates (EACs).

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 1

Year target was set
2021

Target coverage
Business activity

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency	MWh
----------------------------------	-----

Target denominator (intensity targets only)
<Not Applicable>

Base year
2021

Figure or percentage in base year
191000

Target year
2022

Figure or percentage in target year
188135

Figure or percentage in reporting year
187100

% of target achieved relative to base year [auto-calculated]
136.125654450262

Target status in reporting year
Achieved

Is this target part of an emissions target?

Yes, facility electricity is one of our top sources of greenhouse gas emissions. The purpose of our year-over-year electricity reduction goal is to set specific targets to achieve measurable emissions reductions.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

Our electricity goal focuses on our top 40 sites which use over 80% of Amtrak's non-traction electricity.

Plan for achieving target, and progress made to the end of the reporting year

<Not Applicable>

List the actions which contributed most to achieving this target

Our operations and utilities management group work closely to monitor usage on a monthly basis. Our top 20 sites, which account for approximately three quarters of our electricity use, develop annual energy plans to focus on reductions across their facilities. Utilities management group also conducts several capital improvements during the year focused on energy efficiency in our buildings.

Target reference number
Oth 2

Year target was set
2020

Target coverage
Business activity

Target type: absolute or intensity
Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Fossil fuel reduction target	Other, please specify (million gallons of train fuel)
------------------------------	---

Target denominator (intensity targets only)
<Not Applicable>

Base year
2019

Figure or percentage in base year

59292

Target year

2022

Figure or percentage in target year

56327

Figure or percentage in reporting year

50400

% of target achieved relative to base year [auto-calculated]

299.898819561551

Target status in reporting year

Achieved

Is this target part of an emissions target?

Yes, train fuel is our largest source of greenhouse gas emissions. The purpose of our year-over-year fuel reduction goal is to set a specific target to drive and achieve our overarching emissions reduction goal.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions**Plan for achieving target, and progress made to the end of the reporting year**

<Not Applicable>

List the actions which contributed most to achieving this target

There is an annual focus on idle reduction to reduce fuel at our terminal yards and turn operations. In FY22 we began returning to pre-covid level of operations. Most of our reduction was due to the decreased service compared to FY19.

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

Abs2

Target year for achieving net zero

2045

Is this a science-based target?

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

Please explain target coverage and identify any exclusions

Our target is based on our GHG boundary of operational control. FY22 was the first year we conducted a full calculation of our scope 3, as we mature our target to align to SBTi we will further define which categories of scope 3 are excluded (up to 10% allowed under SBTi); however as required by sector specific guidance Well-to-wheel emissions are included. All of scope 1 and scope 2 are included in our target.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Unsure

Planned milestones and/or near-term investments for neutralization at target year

<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)

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	0	0
To be implemented*	1	2126
Implementation commenced*	1	2551
Implemented*	2	124855
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in buildings	Lighting
--------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

1045

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

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

Payback period

1-3 years

Estimated lifetime of the initiative

1-2 years

Comment

Initiative category & Initiative type

Low-carbon energy consumption	Low-carbon electricity mix
-------------------------------	----------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

123810

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

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

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

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	Capital funding is allocated for lighting upgrades and energy reduction projects. Additionally, Amtrak has a Utilities Management group and a Fuel Management group with staff focused on energy reduction initiatives.
Employee engagement	Messaging on energy efficiency initiatives and sustainability information is conveyed through company-wide emails, in Earth Day project announcements, through internal digital messaging, and during training. Engineers are trained on fuel-efficient equipment handling techniques including idling limits and plugging in to electric power after shutting down the diesel locomotive. Facility managers receive monthly Top 40 energy consumption and fuel idling reports to continuously drive down resource use.
Internal incentives/recognition programs	Fuel and energy reduction targets are part of performance reviews for management employees.
Internal incentives/recognition programs	Utilities management reports monthly for energy usage and savings at the top 40 electricity usage facilities and stations in the company. Achievement of sustainability goals has a direct relationship to the bonus structure for top managers and executives.
Partnering with governments on technology development	Amtrak identifies grant funding opportunities to upgrade and buy higher fuel efficiency, lower emissions equipment. In FY20, Amtrak overhauled one switcher, which are used in urban rail yards in the Washington DC Metro Area. 4 genset locomotives under this project had previously been completed, and 5 units remain for overhaul for a total of 10 units. The reduced pollutants help mitigate poor air quality in densely populated neighborhoods adjacent to Amtrak's operations. In FY21, we initiated RFP process to continue overhauling of additional switchers
Compliance with regulatory requirements/standards	Our procurement of new locomotives for Long-Distance fleet that comply with the EPA's Tier-4 emissions standards. These locomotives are 10% more fuel efficient and reduce emissions of nitrogen oxide by more than 89 percent and particulate matter by 95 percent.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify (EPA's published Emission Factors for Corporate GHG Inventories, Table 10 Business Travel.)

Type of product(s) or service(s)

Rail	Other, please specify (Our diesel and electric propelled services provide avoided emissions benefit when compared to both passenger car and air travel)
------	---

Description of product(s) or service(s)

The Intergovernmental Panel on Climate Change report stated that a shift in transportation choices, (primarily switching from less- to more-efficient travel modes, e.g., cars, trucks, and airplanes to trains,) are important changes that can be made to reduce emissions and energy consumption in the transportation sector.

A 2018 UN report identifies rail transportation as a primary way to reduce emissions now and continuously into the future. In addition to being a more energy efficient mode of travel than air travel or automobile, shifting people to trains from other modes reduces traffic congestion and delays as well as the resulting pollution.

Using an Attributional estimation approach in the CDP guidance, Amtrak train service is a low-carbon product. According EPA's Emission Factors for Greenhouse Gas inventories (March 2021 publication), passengers choosing to ride Amtrak emit up to 83% less greenhouse gases than driving alone and up to 72% less than flying; therefore, passengers who choose to travel on Amtrak are avoiding emissions. The factors published are representative of a normal operating year (FY19).

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify (EPA's published Emission Factors for Corporate GHG Inventories, Table 10 Business Travel. Amtrak total passenger miles was used and assumed single occupied vehicle for car comparison and avg. travel distance of 200 miles for air travel comparison.)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

passenger mile

Reference product/service or baseline scenario used

Amtrak's electric train service in FY22 compared to passenger vehicle travel

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

0.000311

Explain your calculation of avoided emissions, including any assumptions

For the purpose of this comparison, we are using an individual choosing to drive a passenger vehicle alone (0.334 kg of CO2e per vehicle mile) instead of riding Amtrak's electric service (0.032 kg of CO2e per passenger mile)

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

59

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

758576

Comment

Amtrak began tracking greenhouse gas emissions in 2010.

Scope 2 (location-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

412694

Comment

Amtrak began tracking greenhouse gas emissions in 2010.

Scope 2 (market-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

412694

Comment

Historic location-based emissions was used as the proxy for the market-based emissions for our base year.

Scope 3 category 1: Purchased goods and services

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

141039

Comment

Note at this time scope 3 calculations are currently undergoing third-party verification and are subject to change

Scope 3 category 2: Capital goods

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

269559

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

210667

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

1399

Comment

Scope 3 category 5: Waste generated in operations

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

13404

Comment

This value has been updated since publication of the FY22 sustainability report.

Scope 3 category 6: Business travel

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

5672

Comment

Scope 3 category 7: Employee commuting

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

31352

Comment

Scope 3 category 8: Upstream leased assets

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

950

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3 category 13: Downstream leased assets

Base year start

October 1 2021

Base year end

September 30 2022

Base year emissions (metric tons CO2e)

43622

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Not applicable.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

C6. Emissions data

C6.1

(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)

591169

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

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

Amtrak's greenhouse gas reduction goal relies on sourcing carbon-free electricity which is best accounted for in market-based methodology. Scope 2 market-based figure was calculated using the hierarchy approach set by Greenhouse Gas Protocol Scope 2 Guidance. Supplier-specific emissions and power purchase agreements with energy attribute certificates were used where available. EPA's eGrid regional factors were applied for the remaining energy consumption where contractual instruments or supplier-specific emission factors were unavailable.

C6.3

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

Reporting year

Scope 2, location-based

214178

Scope 2, market-based (if applicable)

123763

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(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

Emissions in reporting year (metric tons CO2e)

141039

Emissions calculation methodology

Spend-based method

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

0

Please explain

Spend-based methodology was used to estimate emissions from this category using EPA's Environmentally-Extending Input-Output model to calculate the life cycle emissions.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

269559

Emissions calculation methodology

Spend-based method

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

0

Please explain

Spend-based methodology was used to estimate emissions from this category using EPA's Environmentally-Extending Input-Output model to calculate the life cycle emissions.

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

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

210667

Emissions calculation methodology

Hybrid method

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

95

Please explain

Fuel and energy related activities is calculated using activity data from supplier invoices. Emission factors are derived from the GREET model for Well-to-tank. Electricity emissions for line-loss and Well-to-generation is derived from the 2021 DEFRA factors for the US.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1399

Emissions calculation methodology

Spend-based method

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

0

Please explain

Spend-based methodology was used to estimate emissions from this category using EPA's Environmentally-Extending Input-Output model to calculate the life cycle emissions.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

13404

Emissions calculation methodology

Waste-type-specific method

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

100

Please explain

Emissions for waste category were calculated using total waste by material type and the material's emission factor from the EPA's Emission Factors for Greenhouse Gas inventories on Scope 3 emissions. Please note that the waste value has been recalculated and differs from what is published in the FY22 Sustainability Report.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

5672

Emissions calculation methodology

Hybrid method

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

39

Please explain

Spend based methodology was used to calculate the emissions from bussing and shuttles services Fuel based methodology was used to estimated emissions from business travel in rental cars. Business travel in personal vehicles is reimbursed by distances so distanced based method was used for the portion of business travel conducted in a personal vehicle.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

31352

Emissions calculation methodology

Distance-based method

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

100

Please explain

In FY19 we conducted a company-wide survey on employee commuting habits. 1,134 responses were collected with various responses on mode (car, subway, regional rail, Amtrak, ferry, and walk/bike) and the average distance for each mode they traveled. The total employee emissions from commuting was calculated for the dataset then extrapolated out for the entire company. Employee commuting on Amtrak trains was not included in scope 3 as it is a part of our scope 1 and 2. Emission factors from EPA's Emission Factors for Greenhouse Gas Inventories were used for each mode as well as global warming potentials from IPCC's Fifth assessment. The employee commuting survey is conducted every 3-5 years and verified as a part of our GHG verification process. Given Amtrak's New Ways of Working policy for management employees includes options to work hybrid and remote for management employees emissions are likely slightly lower for this category. The New Ways of Working policy was not in effect at the time of the survey.

Upstream leased assets

Evaluation status

Not relevant, calculated

Emissions in reporting year (metric tons CO2e)

950

Emissions calculation methodology

Average product method

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

100

Please explain

This category included estimates from Amtrak leased on-road vehicles from the GSA. Fuel consumption is included in our scope 1 as it is within our operational control boundary. Maintenance on the vehicle is conducted by the vehicle owner. Refrigerant estimates are therefore included in our scope 3.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

As the National Railroad Passenger Corporation, Amtrak provides transportation to our customers nationwide and serves over 500 destinations. Transportation is included in Scope 1 and 2.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

Amtrak does not sell intermediate products.

Use of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

Amtrak does not sell products that generate direct-use emissions. Products sold are negligible in terms of emissions. This is not relevant to our business.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

Amtrak is a passenger railroad corporation providing transportation services to our customers. Our provided service is accounted for in our Scope 1 and Scope 2 emissions. End of life treatment is not relevant to our business.

Downstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

43622

Emissions calculation methodology

Supplier-specific method

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

0

Please explain

This estimate includes emissions from our downstream leased assets. The major source of these emissions is the electricity consumed by the commuter agencies on the southend of the Northeast Corridor.

Market-based methodology was used to calculate the emissions in this category. Supplier-specific factors and energy attribute certificates were used where available, EPA's eGrid regional emission factors were used where supplier information was not. IPCC's fifth assessment global warming potentials were used to calculate the emissions.

Franchises

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

Amtrak does not operate franchises.

Investments

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

This category does not apply to Amtrak as we are not an investor or financial institution.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

There are no other relevant upstream scope 3 emissions.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons 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

There are no other relevant upstream scope 3 emissions.

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	14	A small portion of highway vehicles and off-road equipment currently utilize bio-diesel blends and E85. In the near-term, we will be transitioning use of fossil diesel to renewable diesel in operations where feasible so we anticipate emissions from biogenic carbon to increase.

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

0.00023851

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

714931

Metric denominator

unit total revenue

Metric denominator: Unit total

2997494000

Scope 2 figure used

Market-based

% change from previous year

15

Direction of change

Decreased

Reason(s) for change

Change in output

Please explain

Overall our scope 1 and 2 emissions increased 23% (714,931 vs. 582,235 MT CO2e) from the previous year due to increased train service returning from the impacts of COVID-19. Revenue increased 45% (\$2,997M vs. \$2,064M) resulting from increased ridership. The larger increase in revenue resulted in a lower emissions per revenue than the previous year

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?

Rail

Scopes used for calculation of intensities

Report Scope 1 + 2

Intensity figure

0.00011555

Metric numerator: emissions in metric tons CO2e

564621

Metric denominator: unit

p.mile

Metric denominator: unit total

4886220195

% change from previous year

-27

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

The intensity figure includes scope 1 and 2 emissions from all rail transport activities which includes locomotive diesel fuel and electricity for northeast corridor providing power to our electric trains. This also includes the auto train which transports passengers and their vehicles. Total scope 1 and 2 emissions increased by 25% due to the increase in service provided, while we increased passenger-miles by 71% resulting in an overall decrease in emissions per passenger mile. Operations measured by available seat miles (which incorporates distance and available capacity) increased 28% year-over-year, while passenger-miles increased 71%.

ALL

Scopes used for calculation of intensities

Report Scope 1 + 2

Intensity figure

0.000146

Metric numerator: emissions in metric tons CO2e

714931

Metric denominator: unit

p.mile

Metric denominator: unit total

4886220195

% change from previous year

-28

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

The intensity figure includes all scope 1 and 2 emissions. Total scope 1 and 2 emissions increased by 23% due to the increase in passenger service provided and a 71% increase in passenger-miles resulted in a 28% decreased total company emissions per passenger mile. Operations measured by available seat miles (which incorporates distance and available capacity) increased 28% year-over-year, while passenger-miles increased 71%.

C7. Emissions breakdowns

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	577937	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	1178	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	3774	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	8279	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

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

Country/area/region	Scope 1 emissions (metric tons CO2e)
United States of America	590298.53
Canada	870.06

C7.3

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

By activity

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Rolling stock	522364
Highway vehicles	32699
Single stationary facilities	30087
All other small sources	6018

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	501787	<Not Applicable>	Metric tons of CO2e from diesel passenger/line haul locomotives. Diesel locomotives are used along our national network where electrified lines are not present

C7.5

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

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United States of America	214178	123763

C7.6

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

By activity

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)
Rolling stock	126361	74317
Single stationary facilities	71364	45551
All other small sources	16452	3895

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Not relevant as we do not have any subsidiaries

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	107407	62834	

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?

Increased

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 in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	2151	Decreased	0.37	In FY22, of the electricity accounted for in our scope 2, we increased the total MWh of carbon-free electricity purchased from about 321 GWh to 338 GWh [an increase of 6% (338-21)/321x100%]. Due to varying emissions based on regions of the country this does not directly correlate to a 6% reduction in emissions. Overall we estimate an increase in reduced emissions of 2% (2,151MT of Co2e) compared to last year's reduced emissions. Compared to last year's total emissions, this resulted in a reduction of 0.37% (2,151 MTCO2e/582,235MTCO2e).
Other emissions reduction activities	927	Decreased	0.16	The Amtrak Chicago Environmental team generated fuel savings with the Idle Reduction Initiative, a results-driven tracking and reporting system for mechanical and transportation teams. The team identified opportunities to reduce fuel use through idling reduction, saving 90,000 gallons of fuel, which is roughly 927 MT CO2e. 927 MT compared to the total market-based emissions of 582,235MT makes up 0.16%.
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	113008	Increased	25	There are many variables that impact energy use on trains - consist, load factor, operator handling, temperature, grade, etc. It is difficult to measure the direct impacts of each variable on energy use. We increased passenger service by 28% measured by available seat miles or 31% measured by train miles. As a result direct emissions from our fuel and electricity for revenue train service increased 25% (the year-over-year difference in transport emissions divided by FY21 transport emissions - 113,008 MTCO2e divided by 451,613 MTCO2e)
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	19689	Increased	15	Other emissions are attributed to business operations that are not related to revenue transportation operations.

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 5% but less than or equal to 10%

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	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

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)	55	2314313	2314368
Consumption of purchased or acquired electricity	<Not Applicable>	338433	337119	675552
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	0	3343	3343
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	338488	2655437	2993263

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	Yes
Consumption of fuel for the generation of steam	No
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.

Sustainable biomass

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other biomass

Heating value

HHV

Total fuel MWh consumed by the organization

55

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Coal

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Oil

Heating value

HHV

Total fuel MWh consumed by the organization

2191340

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Gas

Heating value

HHV

Total fuel MWh consumed by the organization

122973

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

HHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Total fuel

Heating value

HHV

Total fuel MWh consumed by the organization

2315030

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

C8.2e

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

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Nuclear

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

304412

Tracking instrument used

Other, please specify (Emissions Free Energy Certificate bundled with power purchase agreement)

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

8033

Tracking instrument used

US-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

Country/area of low-carbon energy consumption

United States of America

Sourcing method

Unbundled procurement of energy attribute certificates (EACs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify (Supplier provides Renewable Energy Credit for wind or solar)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

25988

Tracking instrument used

US-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute

United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?

No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

<Not Applicable>

Comment

C-TS8.2f

(C-TS8.2f) Provide details on the average emission factor used for all transport movements per mode that directly source energy from the grid.

Category	Emission factor unit	Average emission factor: unit value	Comment
Rail	gCO2e/kWh	175	The factor was calculated using market based method to quantify total CO2e of our electrified routes divided by the total kWh. 74,317 MT of CO2e divided by 423,928 mwh times 1000 to convert to grams

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

United States of America

Consumption of purchased electricity (MWh)

675552

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)

3343

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

678895

C-TS8.5

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

Activity

Rail

Metric figure

0.22

Metric numerator

Other, please specify (kwh)

Metric denominator

Other, please specify (Passenger miles on Amtrak Electric trains)

Metric numerator: Unit total

423927589

Metric denominator: Unit total

1957384071

% change from last year

-46

Please explain

In FY22, Amtrak consumed approximately 0.22 kwh per passenger mile, 46% less than FY21. This is attributed to a 14% increase in electricity consumption in conjunction with a 113% increase in passenger miles. The intensity metric is calculated using kwh of electricity used for our revenue trains divided by the number of passenger miles on electrified routes. The significant decrease in the value per passenger mile from last year is attributed to the recovery in ridership from the impacts of covid-19.

Activity

Rail

Metric figure

0.017

Metric numerator

Other, please specify (Gallons of diesel fuel)

Metric denominator

p.mile

Metric numerator: Unit total

48711031

Metric denominator: Unit total

2928836124

% change from last year

-19

Please explain

Compared to last year's metric of 0.020 we reduced gallons per passenger mile by 19%. This is attributed to a 34% increase in fuel consumption in conjunction with a 65% increase in passenger miles. The intensity metric is calculated using gallons of diesel used for our revenue trains divided by the number of passenger miles on diesel routes. The significant decrease in the value per passenger mile from last year is attributed to the recovery in ridership from the impacts of covid-19.

C9. Additional metrics

C9.1

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

Description

Waste

Metric value

3570

Metric numerator

Tons of municipal waste diverted from landfill

Metric denominator (intensity metric only)

NA

% change from previous year

16

Direction of change

Increased

Please explain

We look for opportunities to reduce waste and increase recycling across our operations. We divert large volumes of industrial materials, such as rail, pallets, windows, wire, wheel shavings, copper, scrap metal, equipment and more, to secondhand vendors and scrap buyers to be recycled and repurposed. Though recycling efforts in our warehouses and shop yards are high, onboard customer recycling has remained a challenge. Our municipal recycling rate has remained stable at roughly 17% for the past three years. To improve our performance, our new Acela® trains will have co-located waste and recycling containers. We also plan to enhance employee training on waste separation.

C-T09.3/C-TS9.3

(C-T09.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity

Rail

Metric

Other, please specify (RFP for Ivy City Switchers)

Technology

Other, please specify (Locomotive switchers)

Metric figure

5

Metric unit

Other, please specify (Number of overhauled switchers)

Explanation

The Genset locomotive is an engine that, by using multiple smaller diesel engines and generators instead of one large single engine, can achieve a better emissions profile than a conventional locomotive. Genset locomotives are now used by railroads around the world. Compared to conventional diesel locomotives, Gensets reduce greenhouse gas emissions by as much as 37 percent, emissions of oxides of nitrogen by up to 80 percent, and emissions of particulate matter by 90 percent. Gensets use only as many engines as necessary. Some rail yard work might demand the power of all engines, but many other tasks may require less power. Running fewer engines translates to burning less fuel and generating fewer emissions.

Amtrak has an opportunity to complete a fuel efficiency and emissions reduction project including the repower of five switcher locomotives with new, fuel efficient engines in partnership with COG using EPA DERA funds. In 2015, Amtrak completed a similar project through the same grant vehicle and partnership arrangement to repower two switchers at Ivy City. The newly repowered switchers use approximately 50% less fuel and generate approximately 80% less emissions than the older models and require less maintenance.

Amtrak completed 3 out of 5 overhauls before 2022. In 2022, we put out an RFP to overhaul the final 2 switchers with an expected project completion in upcoming years.

Activity

Rail

Metric

Other, please specify (Passengers Emission Reduction Opportunity - Single occupancy vehicle (SOV))

Technology

Other, please specify (Amtrak versus driving a SOV)

Metric figure

Metric unit

Other, please specify (kg CO2e / PM)

Explanation

Amtrak's total emissions attributed to passenger travel was 564,621 MT CO2e. If Amtrak passengers drove a single-occupancy vehicle the equivalent distance they traveled on Amtrak, Amtrak passengers would have emitted a total of 1,631,988 MT CO2e based on EPA Emission Factors for Greenhouse Gas Inventories.* By choosing to travel on Amtrak, our passengers avoided a total of 1,067,377 CO2e in FY22. Advancing a modal shift from passenger vehicles to passenger rail has quantifiable benefits as a low carbon travel option.

*EPA's emission factor for cars is 0.334 kg of CO2e per vehicle mile

(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	

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

Rail

Technology area

Other, please specify (Drivetrain)

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 (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

20

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

To meet its net-zero by 2045 commitment, Amtrak must transition its diesel-powered fleet to zero-emission technologies. Amtrak will pursue multiple pilot demonstrations of zero-emission powertrains, including battery-electric and hydrogen fuel cell, for revenue and non-revenue service over the next 5 years. The knowledge gained and infrastructure built will facilitate the future transition.

C10. Verification

C10.1

(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

APEX - RY2022 CDP Verification Statement Limited Amtrak 05312023.pdf

Page/ section reference

page 1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

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

APEX - RY2022 CDP Verification Statement Limited Amtrak 05312023.pdf

Page/ section reference

page 1

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

(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: Purchased goods and services
- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: Upstream leased assets
- Scope 3: Downstream transportation and distribution
- Scope 3: Downstream leased assets

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

APEX - RY2022 CDP Verification Statement Limited Amtrak S3 07262023.pdf

Page/section reference

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.2

(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

(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
C9. Additional metrics	Allocation of emissions to customers	Amtrak uses a third-party verifier to assure Amtrak's emissions per passenger-mile. The third party ensures methodology is accurate and complete.	Amtrak uses overall fuel and electricity used for passenger locomotives divided by reporting year ridership data to calculate CO2e per passenger mile. APEX - 2022 Passenger EF Verification Statement Limited Amtrak 06272023.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)?
No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our customers/clients
Yes, other partners in the value chain

C12.1b

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

Type of engagement & Details of engagement

Education/information sharing	Run an engagement campaign to education customers about your climate change performance and strategy
-------------------------------	--

% of customers by number

100

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

0

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

In a recent Amtrak survey, 54% of customers would change their mode of transportation if they knew it helped the environment. We're seeing customers' priorities changing, and to remain a relevant and sustainable business, we must continue to reduce our emissions while offering a low-carbon travel option for customers. We leverage our broad-reaching social media platforms to connect with customers and build awareness of the environmental benefits of riding Amtrak. We also promote the environmental and sustainability benefits of riding Amtrak in funding requests and testimonies before Congress. We rely on their continued investment and support for emissions reduction and climate resilience strategies.

Impact of engagement, including measures of success

Impact of engagement: The 21- sustainability posts on social media in FY22 generated 574,828 impressions with an average of 26K impressions per post. Data privacy laws prohibit Amtrak from tracking which social media accounts are also Amtrak customers; therefore, we cannot confirm the % of social media impressions are also customers. We started collecting performance in FY19 and will use this as the baseline. Although Amtrak's sustainability posts remain one of the top three strongest performing topics on our social channels, we're not yet able to quantify the conversion to purchased tickets or new customers.

Our general measures of success for engagement on social media are as follows:

- Facebook: More than 1,000 impressions is considered successful
- Instagram: More than 2,000 impressions is considered successful
- Twitter: More than 500 impressions is considered successful

Type of engagement & Details of engagement

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts
----------------------------	---

% of customers by number

0.43

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

0

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

In our commitment to support Amtrak's Sustainability goals, Amtrak Guest Rewards created a Carbonfund.org email banner. The new banner encouraged members to offset their carbon emissions by redeeming Amtrak Guest Rewards Points. We chose to target all customers possible, because all Amtrak Guest Rewards members have the opportunity to offset their emissions using points they earned from riding our trains

Impact of engagement, including measures of success

This email generated a 43% open rate (205,587 unique opens) and was delivered to around 475,000 AGR members. It also received 1,286 unique clicks, amounting to a .63% click-to-open rate.

C12.1d

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

Amtrak was created by U.S. Congress to take over the majority of the intercity passenger rail services previously operated by private railroad companies in the United States. Because of our funding and regulatory structures, we maintain close contact with the Federal Railroad Administration and with the U.S Congress, including the House Transportation & Infrastructure Committee, and the House Appropriations Committee, the House Appropriations Committee, the Senate Commerce Committee, the Senate Environment and Public Works Committee, and the Senate Appropriations Committee. . Through our Government Affairs group, we frequently provide updates on Amtrak's sustainability progress, emissions reductions and targets, and climate resilience work. Updates can take place in conversations with Congressional staffers, providing Congressional testimonies, sharing Amtrak's annual sustainability report, and leveraging cyclical funding requests to address climate risks and harden infrastructure.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Attach commitment or position statement(s)

<Not Applicable>

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Part of Amtrak's core business strategy is to be a sustainable mobility provider, as stated in multiple internal and external documents. In FY22, we started the process of updating our Sustainability Policy to align with our Climate Commitment that states we will be a net-zero emissions organization by 2045. We strive to build this strategy into our external engagement activities as much as possible through speaking opportunities, volunteer activities, and external communications.

Amtrak is frequently asked to participate in conferences, where we present on our sustainability and climate resilience strategy. In FY22, Amtrak stood up an Office of Community Engagement to strengthen relationships with communities we operate in and facilitate volunteer opportunities including clean-ups and tree plantings in urban areas. Our external communications on social media and press releases frequently promote our Net-Zero and carbon-free electricity goal, and our recent procurement of more fuel-efficient, modern locomotives. These are just a few examples of how we work across departments to align our external engagement activities with our Climate Commitment.

As regards our communications with Congress, the presidential administration, and other levels of government, the goal is always to advance Amtrak's interests and business priorities, as articulated by the Board and senior leaders. In practice, that means that those communications are always intended to support both Amtrak's Board-approved climate commitment and interim sustainability goals.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Amtrak engages with federal, state, and local policymakers with respect to a wide variety of current, proposed, and potential laws and regulations that directly bear on the company's ability to complete its statutory mission, which is "to provide efficient and effective intercity passenger rail mobility consisting of high quality service that is trip-time competitive with other intercity travel options."

By way of example: much of Amtrak's engagement relates specifically to the annual federal appropriations process. Each year, Amtrak is required to submit to the President and Congress a complete report of its operations and accomplishments, and include recommendations for the amount of financial assistance needed for operations and capital improvements; the resultant funding helps support both operations and necessary capital investments, and enables Amtrak to offer increasingly energy-efficient, climate-friendly travel options across a rail network serving more than 500 communities across two countries, including stops in forty-six states, three Canadian provinces, and the District of Columbia.

Amtrak is poised to play a leading role in the modal shift to rail to reduce GHG emissions in the United States. Funding from Congress is crucial to our success as a leader in sustainable transportation.

Category of policy, law, or regulation that may impact the climate

Climate change adaptation

Focus area of policy, law, or regulation that may impact the climate

Planning
Transport infrastructure

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

United States of America

Your organization's position on the policy, law, or regulation

Neutral

Description of engagement with policy makers

Among other forms of engagement, Amtrak prepares budget requests and other legally-required deliverables for Congress and federal agencies; provides requested feedback and technical assistance on pending legislation; comments upon rulemakings and other regulatory actions; and briefs, hosts, and otherwise works to educate officeholders and decisionmakers, often at those decisionmakers' request.

During FY22, we wrote sustainability into our budget request, seeking funds to support the conversion of a GP38 switching locomotive to electric battery power as a way of piloting that technology for wider use in the future. Additionally, many of the other projects for which Amtrak sought funding would advance our sustainability goals in a less direct, but equally important, way, supporting core business functions that help to maintain our status as a sustainable mobility provider and that will enable us to provide better service to our customers.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

<Not Applicable>

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify (Association of American Railroads)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

No, we did not attempt to influence their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The AAR's overarching position on climate change legislation is as follows: As Congress considers legislation to limit emissions of carbon dioxide and other greenhouse gases, it should take into account that greater use of energy-efficient rail transportation offers a simple, cost-effective, and immediate way to meaningfully reduce greenhouse gas emissions without potentially harming the economy. Note that Amtrak's AAR membership does not imply endorsement of specific actions or positions taken by other individual AAR members, or even necessarily by AAR as a whole. Amtrak, the association's sole intercity passenger member, may see any given facet of AAR's policy stance as a floor rather than a ceiling for Amtrak's own approach—the spirit of which is reflected in our most recent sustainability report.

In 2020, Amtrak participated in AAR's Environmental Affairs Committee, whose scope covers sustainability issues, including climate change, that affects the rail industry. Amtrak was one of the organizers of the annual Railroad Sustainability Symposium and agenda, which focused on GHG reductions and global emission issues.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify (International Union of Railways)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

UIC reports on their website that they believe rail plays an important role in the climate change discussion because of its relative energy efficiency in the transportation industry. Research efforts explore energy efficiency and emissions reduction activities, and information sharing facilitates industry best practice for climate change mitigation.

In FY22, Amtrak was asked to play a role on the UIC Sustainability Plenary and Taskforce. Amtrak's Director, Sustainability was invited to a two-year voluntary position as Vice-Chair, Sustainability Plenary and Chair of the Sustainability Taskforce. The Sustainability Plenary is a group of sustainability professionals within rail operators and infrastructure managers around the world. This group advances core topic areas related to improving energy efficiency, biodiversity and the circular economy within their organizations and collectively in across the rail sector. The Sustainability Taskforce is an even smaller group charged with implementing the UIC Sustainability Vision 2030. The current focus area of research and advocacy is climate finance. Ahead of COP28, in Dubai, this group, with support from academic researchers, will produce a white paper outlining the gaps between climate finance and funding rail infrastructure projects. Like Amtrak, UIC's Sustainability Plenary and Taskforce are committed to elevating the importance of a modal shift away from carbon-intensive transportation to intercity rail.

In 2015, Amtrak joined with other members of the international rail sector in signing the UIC Climate Responsibility Pledge to reduce energy consumption and carbon dioxide emissions, stimulate modal shift to rail in national and international markets, actively communicate climate-friendly initiatives and publicly report data on energy consumption and carbon dioxide emissions. Amtrak actively participates in supporting UIC's Pledge, publicly reporting GHG emission data and reported on progress towards achieving emission reduction goals.

Early in 2020, Amtrak's Chief Operating and Commercial Officer signed a letter of commitment to support the 2019 UIC Railway Climate Responsibility Pledge and to use the pledge as a guiding principle in Amtrak's strategic planning. Amtrak committed to work with its Board and stakeholders toward an attainable plan to achieve a commitment to carbon neutrality by 2050. In FY22, we aligned with the Pledge and set a net-zero by 2045 target.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

23000

Describe the aim of your organization's funding

As an Associate Member, Amtrak is granted full access to all UIC documents and Working Groups and can be part of Executive Bodies subject to the approval of the participating Members. The membership fee and the corresponding voting rights in the General and Regional Assemblies are fixed.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

Trade association

Other, please specify (American Public Transportation Association)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

The preamble to the APTA Sustainability Commitment states: Sustainability, preserving the environment, being socially responsible and maintaining economic vitality, with an overall contribution to quality of life, is integral to what we do and what we provide as the public transportation industry. Many APTA members have already made sustainability a strategic objective and have made great strides to increase the sustainability of their own organizations, in great part as a way to become more resource efficient, engage more with employees and customers and grow ridership, market share and funding support. As the drive towards sustainability is increasing, issues such as climate change resilience and mitigation, energy independence, preservation of resources and quality of life have risen to the forefront in the public and political arenas. The APTA Sustainability Commitment aims to put APTA members on a pathway of continual improvement in sustainability.

Amtrak is among the leaders in supporting the American Public Transportation Association (APTA) Sustainability Commitment; we were a founding signatory (2009) and achieved Gold Level recognition in May 2017 by achieving reductions in greenhouse gas emissions and other sustainability goals. Amtrak representatives participate in the APTA Sustainability Committee, which addresses a broad range of sustainability issues, including climate change resilience and mitigation.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

No, we have not evaluated

C12.4

(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 voluntary sustainability report

Status

Complete

Attach the document

Amtrak-Sustainability-Report-FY22.pdf

Page/Section reference

Pgs. 3-21, Sections About Amtrak and Path to Net Zero

Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

Amtrak Releases Annual Sustainability Report - Amtrak Media.pdf

Page/Section reference

all pages

Content elements

- Strategy
- Emissions figures
- Emission targets
- Other metrics

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

2021 Amtrak Climate Resilience Strategic Plan 112922 (1).pdf

Page/Section reference

all pages

Content elements

- Strategy
- Risks & opportunities

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Other, please specify (American Public Transportation Association (APTA Sustainability Commitment))	<p>The APTA Sustainability Commitment recognized members who commit to becoming more sustainable in their operations and practices. Through a series of core sustainability practices, Commitment provides both agency and business members with a common framework that helps define, initiate, and advance sustainability in the public transportation industry.</p> <p>Amtrak signed onto the APTA Sustainability Commitment in 2009 as one of the founding signatories and advanced to Gold Level recognition status in May 2017. Amtrak achieved this goal by realizing energy efficiency gains through lighting projects and facility-based energy plans, adopting green building codes and standards such as the International Green Construction Code (IgCC), and obtaining Leadership in Energy Efficient Design (LEED) certifications for stations.</p>

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, and we do not plan to have both within the next two years	<Not Applicable>	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, and we do not plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No and we don't plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No and we don't plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

Not assessed

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	No, and we do not plan to undertake any biodiversity-related actions	<Not Applicable>

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No	Please select

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
No publications	<Not Applicable>	<Not Applicable>

C16. Signoff

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.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Executive Vice President, Strategy & Planning	Other C-Suite Officer

SC. Supply chain module

SC0.0

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

The National Railroad Passenger Corporation (Amtrak) is America's intercity passenger railroad company. Amtrak was created by Congress in 1970 and began service on May 1, 1971. Its preferred stock is entirely held by the U.S. Department of Transportation. As defined by the U.S. Congress through the Passenger Rail Investment and Improvement Act of 2008 (PRIIA), Amtrak's mission is to "provide efficient and effective intercity passenger rail mobility consisting of high-quality service that is trip-time competitive with other intercity travel options." Amtrak operates a network of intercity long-distance, shorter commuting-distance, and U.S. high-speed passenger rail services serving 46 states and more than 500 stations, and reaches 400 additional destinations via connecting bus routes. Amtrak provides a sustainable alternative to air and automobile travel across the United States and into three of the Canadian provinces. The company employs approximately 20,000 people throughout the country with the corporate headquarters offices in Washington, DC, and notable office locations in Wilmington, DE and Philadelphia, PA.

Taking into account Amtrak's Northeast Corridor, State Supported and Long-Distance service lines, shared intermodal stations, and infrastructure access and services provided to 13 state and regional authorities for commuter services from coast to coast, our services were used by more than 348 million travelers a year (pre-COVID). During FY 2022, as Amtrak advanced its COVID-19 recovery efforts, customers took nearly 22.9 million trips. This was an 88% increase over ridership in FY21.

The Northeast Corridor (NEC) is the busiest railroad in North America, with approximately 2,200 Amtrak, commuter and freight trains operating over some portion of the Washington-Boston route each day. Amtrak owns and operates 363 route-miles of the 457-route-mile NEC spine, which is also the only fully electrified high-speed passenger rail service in the United States. This included all Amtrak trains that traveled over some portion of the NEC spine (Washington-New York-Boston) and connecting corridors to Harrisburg, PA, Springfield, MA, Albany, NY, and Richmond, VA.

Beyond the NEC, seventy percent of the miles traveled by Amtrak trains are on tracks owned by other railroads. Known as "host railroads," they range from large, publicly traded companies based in the U.S. or Canada, to state and local government agencies and small businesses. All train service on these tracks is powered by diesel locomotives.

Amtrak's operations are highly dependent on fossil fuels. Train operations account for 79% of Amtrak's Scope 1 and Scope 2 emissions, and of that percentage; 89% is attributed to diesel fuel. The remaining segments of Amtrak's Scope 1 and Scope 2 emissions are stations and facilities at 16%, and the GSA highway fleet vehicles and miscellaneous sources at 5%. In FY22, Amtrak continued to make progress on our most ambitious target to reduce 40% emissions by 2030, over our 2010 baseline.

Also in FY22, the company published a Climate Commitment as a foundational guiding statement designed to galvanize Amtrak's workforce and partners around key strategies to achieve substantial emissions reduction and invest in innovative solutions. This document is available through Amtrak's FY22 Sustainability Report.

SC0.1

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

	Annual Revenue
Row 1	2997494000

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

Bank of America

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Commodity

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

31.362

Uncertainty (±%)

Major sources of emissions

Bank of America traveled approximately 781,961 miles on Amtrak services in Amtrak's reporting year. Of these 781,961 miles, 715,380 were traveled on electrified routes and 66,581 miles on diesel operated routes. Please note this response includes Amtrak's scope 1 and Scope 2 emissions. Scope 2 was chosen since a majority of emissions came from electrified/scope 2 sources. Scope 2 was calculated using a market-based approach.

Verified

No

Allocation method

Allocation based on another physical factor

Market value or quantity of goods/services supplied to the requesting member

781961

Unit for market value or quantity of goods/services supplied

Other, please specify (passenger-miles)

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

Bank of America is a corporate client of Amtrak's which allows our internal systems to track the travel booked through the corporate account. City pair data was pulled for the reporting year and separated by the locomotive's propulsion type to calculate emissions (electric vs. diesel). At this time Amtrak does not track route specific emissions. The total diesel fuel consumed across the national network is averaged across the total number of passenger miles pulled. The same methodology with electricity is used to calculate the emission factor for electric routes.

Requesting member

L'Oréal

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Commodity

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

4.288

Uncertainty (±%)**Major sources of emissions**

L'Oréal traveled approximately 122,741 miles on Amtrak services in Amtrak's reporting year. Of these miles 120,132 were traveled on electrified routes and 2,609 miles on diesel operated routes. Scope 2 was chosen since a majority of emissions came from electrified/scope 2 sources. Scope 2 was calculated using a market-based approach.

Verified

No

Allocation method

Allocation based on another physical factor

Market value or quantity of goods/services supplied to the requesting member

122741

Unit for market value or quantity of goods/services supplied

Other, please specify (passenger-miles)

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

L'Oréal is a corporate client of Amtrak's which allows our internal systems to track the travel booked through the corporate account. City pair data was pulled for the reporting year and separated by the locomotive's propulsion type to calculate emissions (electric vs. diesel). At this time Amtrak does not track route specific emissions. The total diesel fuel consumed across the national network is averaged across the total number of passenger miles pulled. The same methodology with electricity is used to calculate the emission factor for electric routes.

Requesting member

McKinsey & Company, Inc.

Scope of emissions

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

<Not Applicable>

Allocation level

Commodity

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO₂e

56.431

Uncertainty (±%)**Major sources of emissions**

McKinsey & Company traveled approximately 1,543,514 miles on Amtrak services in Amtrak's reporting year. Of these miles 1,489,724 were traveled on electrified routes and 53,790 miles on diesel and mixed fuel operated routes. Scope 2 was chosen since a majority of emissions came from electrified/scope 2 sources. Scope 2 was calculated using a market-based approach.

Verified

No

Allocation method

Allocation based on another physical factor

Market value or quantity of goods/services supplied to the requesting member

1543514

Unit for market value or quantity of goods/services supplied

Other, please specify (passenger-miles)

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

McKinsey & Company is a corporate client of Amtrak's which allows our internal systems to track the travel booked through the corporate account. City pair data was pulled for the reporting year and separated by the locomotive's propulsion type to calculate emissions (electric vs. diesel). At this time Amtrak does not track route specific emissions. The total diesel fuel consumed across the national network is averaged across the total number of passenger miles pulled. The same methodology with electricity is used to calculate the emission factor for electric routes.

Requesting member

PayPal Holdings Inc

Scope of emissions

Scope 2

Scope 2 accounting method

Please select

Scope 3 category(ies)

<Not Applicable>

Allocation level

Commodity

Allocation level detail

<Not Applicable>

Emissions in metric tonnes of CO2e

Uncertainty (±%)

Major sources of emissions

Verified

No

Allocation method

Please select

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied

Please select

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

Amtrak is able to track travel data for our corporate clients. Paypal is currently not a corporate client therefore we do not have the ability to pull data specific to Paypal in order to complete an emissions calculation for business travel conducted on Amtrak. However, Amtrak coordinates with EPA to disclose emission factors in the EPA's Emission Factor Hub if Paypal would like to make its own travel estimates and calculations.

SC1.2

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

Amtrak provides emission factors from train service in GHGs (CO2, N2O, CH4) per passenger mile for publishing in EPA's GHG Hub. The hub was published prior to Amtrak's third party verification therefore previous values are currently listed on EPA's publication. Electric service in FY22 was 0.03 kgs of CO2e per passenger-mile (lower than previous years due to increased sourcing of carbon-free electricity) and for Diesel service 0.17 kg of CO2e per passenger-mile.

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 (Route specific emissions factors would increase accuracy)	In the last couple of years, Amtrak has refined its method for allocating emissions. Amtrak specific emission factors were made available to passengers and corporate clients through the US EPA's Center for Corporate Climate Leadership. Amtrak specific emission factors went through a rigorous assurance process to ensure sound calculation methods were used and accurate data was applied. Amtrak calculated four company specific emission factors (kg CO2e per passenger mile) for electric powered passenger travel (on the Northeast Corridor), diesel-powered passenger travel, auto-train vehicle travel, and a national average. These factors are based on FY22 operations. Factors were based on total emissions by locomotive propulsion type. At this time we are not able to allocate emissions to a specific route. Doing so, would improve accuracy. We are currently working on a methodology to resolve this.

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.

Amtrak emission factors are specific to the service we offer and allows allocation of emissions at the passenger-mile level. Amtrak is working on a methodology to allocate emissions based on estimated fuel use at the route level.

SC2.1

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

Requesting member

L'Oréal

Group type of project

Reduce Logistics Emissions

Type of project

Changing transportation mode (switch from air to rail)

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

Estimated payback

0-1 year

Details of proposal

Riding Amtrak versus other modes of travel can significantly reduce GHG emissions for L'Oréal's scope 3. By increasing Amtrak ridership, Amtrak significantly increases its operational efficiency by reducing GHG per passenger mile, making us an even more sustainable mode of transportation.

Requesting member

Bank of America

Group type of project

Reduce Logistics Emissions

Type of project

Changing transportation mode (switch from air to rail)

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

Estimated payback

0-1 year

Details of proposal

Riding Amtrak versus other modes of travel can significantly reduce GHG emissions for Bank of America scope 3. By increasing Amtrak ridership, Amtrak significantly increases its operational efficiency reducing GHG per passenger mile, making us an even more sustainable mode of transportation.

SC2.2

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

No

SC4.1

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

Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.

48

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service

Amtrak's service along the Northeast Corridor (electrified)

Description of good/ service

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

0.03

±% change from previous figure supplied

-37

Date of previous figure supplied

July 24 2023

Explanation of change

Amtrak's FY21 operations resulted in 0.051 kgCO2e per passenger mile. In FY22 we estimated 0.03 kgCO2e for electrified service.

Methods used to estimate lifecycle emissions

Other, please specify (Electricity used to power our electric trains and supporting signals and equipment was used to estimate the total emissions from electric service, normalized over the total passenger miles)

Name of good/ service

Amtrak Passenger Train Service operated by Diesel locomotive

Description of good/ service

Amtrak Passenger Train Service operated by Diesel locomotive

Type of product

Final

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

0.17

±% change from previous figure supplied

-19

Date of previous figure supplied

Explanation of change

Amtrak's FY21 operations resulted in approximately 0.21 kgCO2e per passenger mile on routes pulled by a diesel locomotive. In FY22 we estimate this decreased 19% to 0.17 kgCO2e. Ridership accounts for this significant impact to our emission factor, due to the impacts of COVID. Note this factor should only be used for travel in FY22 as it is not representative of the lower emission factor when ridership is back to pre-covid levels.

Methods used to estimate lifecycle emissions

Other, please specify (Train fuel dispensed into Amtrak line-haul locomotives was used to estimate the total emissions for train service, normalized over passenger-miles on diesel-operated routes.)

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
Carbon-free Electricity	Initiative 1	Amtrak has an ongoing initiative to reduce Scope 2 emissions by 58% by 2024. Part of this strategy includes contracts for Carbon-Free Electricity.	Ongoing	
Energy-efficient Diesel Service	Initiative 2	Amtrak is replacing legacy train models with new Tier 4 models, which are more energy efficient.	Ongoing	
Renewable Diesel	Initiative 3	Amtrak is switching to renewable diesel wherever feasible.	Ongoing	

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms