

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 18,000 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 travellers a year (pre-COVID). At the start of FY20, Amtrak was on track to have another record year of ridership and growth; however, the impact from COVID-19 reduced our ridership by 98% of where we were in FY19 in the first months of the pandemic. As an essential service, we continued operating trains but at much less frequency. This directly affected our GHG emissions through reduced energy use.

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 traffic included 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.

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 82% of Amtrak's carbon footprint and of that percentage; 65% is attributed to diesel fuel. The remaining segments of Amtrak's carbon footprint are stations and facilities at 14%, and the GSA highway fleet vehicles and miscellaneous sources at 4%.

Last fiscal year, Amtrak reduced emissions by 28% compared to FY19, due to limited train service during the height of the pandemic, passing our annual reduction goal of 5% compared to FY19 and staying on track to reduce 40% by 2030.

Also in FY21, Amtrak set a corporate goal to develop and implement a climate resilience strategic plan. That work is underway and continues to be an annual corporate goal. The company with support from a climate consultant is conducting climate roundtable discussions, developing a climate vulnerability assessment for critical NEC assets, and drafting an action-oriented strategic plan.

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.**

|                | Start date     | End date          | Indicate if you are providing emissions data for past reporting years | Select the number of past reporting years you will be providing emissions data for |
|----------------|----------------|-------------------|---|--|
| Reporting year | October 1 2020 | September 30 2021 | No  | <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-T00.7/C-TS0.7**

**(C-T00.7/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(s) | Please explain   |
|---------------------------|--|
| Director on board         | Environmental, sustainability and climate-related updates are discussed annually in the plenary session of the Board of Directors meeting. The Board Chair presides over plenary sessions. In FY21, regular updates on climate-related issues were provided to the Safety and Security Committee, chaired by a Board Director. The Safety & Security Committee had responsibility for overseeing and providing direction to the Environment & Sustainability (E&S) group, which was under the Safety & Security Department. The E&S group leads Amtrak's climate resilience work; therefore, climate resilience updates from E&S were provided to the Board Safety and Security Committee, where Board Directors are informed of progress and limitations. As part of the Chair's approval and adoption of the company's key strategic pillars, he along with all other Directors approved the goal to develop a Climate Resiliency Strategic Plan in FY20 and continue that work as a corporate goal in FY21. Both the Board Chair and the Board Director of the Safety and Security Committee reviewed climate-related issues as part of Amtrak's Annual Operating Plan (AOP). |

**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   | Reviewing and guiding strategy<br>Reviewing and guiding major plans of action<br>Reviewing and guiding risk management policies<br>Setting performance objectives<br>Monitoring implementation and performance of objectives<br>Overseeing major capital expenditures, acquisitions and divestitures<br>Monitoring and overseeing progress against goals and targets for addressing climate-related issues | <Not Applicable>               | 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. In FY18, Amtrak's Board of Directors approved our most significant capital investment ever in diesel locomotives with the purchase of a new locomotive fleet, with delivery to begin in 2021. An important selection criterion for these 75 new locomotives was sustainability. They are designed to be 10% more fuel efficient than the locomotives they replace, which will help Amtrak reduce both our operating costs and greenhouse gas emissions. They're also designed to meet EPA's stringent Tier 4 standards. The new locomotives reduce emissions of nitrogen oxide by more than 89 percent and particulate matter by 95 percent, while consuming less fuel and reaching a greater top speed at 125 mph. 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. Building on FY20 corporate sustainability goals, the Board approved the continued work and GHG emissions reduction target. New in FY19, the Risk Management process included identifying man-made natural disaster risks and controls to mitigate the impacts from severe weather events and climate related risks. Those risks have remained integral in the revised risk management framework In FY20, the Board awarded a contract for new intercity trainsets, 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. |

**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 sustainable 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.**

| Name of the position(s) and/or committee(s)                      | Reporting line   | Responsibility  | Coverage of responsibility | Frequency of reporting to the board on climate-related issues |
|--|------------------|---|----------------------------|---|
| Chief Executive Officer (CEO)                                    | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable>           | Quarterly   |
| Chief Operating Officer (COO)                                    | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable>           | Quarterly   |
| Chief Financial Officer (CFO)                                    | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable>           | Quarterly   |
| Other C-Suite Officer, please specify (EVP Chief Safety Officer) | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable>           | Quarterly   |
| Environment/ Sustainability manager                              | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable>           | Annually  |
| President  | <Not Applicable> | Both assessing and managing climate-related risks and opportunities | <Not Applicable>           | Quarterly   |

C1.2a

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

- 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.
- The President reported directly to the CEO in FY20. 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.
- During FY20, the Chief Operations Officers (COO) 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 Environment and Sustainability group, and securing funding and resources for company-wide strategic plans.
- The COO and CSO led the Environment and Sustainability Oversight Committee (ESOC), which provided direction for the Environment and Sustainability Management System Committee. The ESOC met quarterly, set annual and long-term GHG emission reduction goals and reviewed progress on achieving the company's sustainability goals - including those related to fuel and energy use and GHG emissions. The ESOC also provided 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.
- The Assistant Vice President of Public Health, Environment & Sustainability reported directly to the CSO and was responsible for the development and implementation of the company-wide sustainability program, including climate change-related policy and initiatives.
- Individual contributors from Safety, Sustainability, and Operations departments, including utilities and fuel teams, were members of the committees listed above and directly contributed to tracking and reporting key metrics.

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   |         |

C1.3a

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

| Entitled to incentive    | Type of incentive | Activity incentivized                                 | Comment   |
|--------------------------|-------------------|---|---|
| Corporate executive team | Monetary reward   | Emissions reduction target<br>Energy reduction target | 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 manager's performance goals and evaluations for relevant utilities, fuel, environmental, and operations managers and impact performance appraisals for relevant managers in the company. |
| Management group         | Monetary reward   | Emissions reduction target<br>Energy reduction target | 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 manager's performance goals and evaluations for relevant utilities, fuel, environmental, and operations managers and and impact performance appraisals for relevant managers in the company.       |

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 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.

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. 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. Similar disruption is foreseeable along the southern California coastline, where Amtrak trains operate along a coastal zone that has been destabilized by climate impact.

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 in 2023. The procurement process of new intercity trainsets began in FY19 and was awarded in FY21; environmental benefits and reduced emissions were key considerations in the selection.

## 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

In 2015, Amtrak conducted a multi-phase project to identify climate risks to its Northeast Corridor (NEC) assets due to shifts in relevant climate change variables. The multi-phase project included a pilot study assessing climate change risks; the second study evaluated short and long-term mitigation and adaptation strategies to help provide protection against increased risk to expected climate impacts; and the third phase was the development of a geospatial information system map indicating the extent of flooding and storm surge along the entire NEC – in multiple scenarios (e.g. 2020, 2050, 2100). The final study was used as a tool to socialize short, medium and long-term climate-related risks across various departments and discuss projected impacts to our infrastructure. In the fall of 2017, Amtrak participated in a research project with The Wharton Risk Center as part of a case study, funded by the Department of Homeland Security. The objectives of this exercise were: 1) to develop user-friendly metrics and assessment criteria for infrastructure resilience from a financial/insurance perspective that will complement physical resilience metrics, and 2) to develop new insights into how behavioral biases affect risk management decision-making for transportation systems. With the support of the Risk Center, Amtrak identified and assessed climate-related risks through the structure of infrastructure resilience metrics. Amtrak developed draft metrics and assessment criteria, scored metrics, and collected data to score against an Amtrak event. By completing the scorecard development and scoring exercises, the group was able to identify areas of improvement in business planning, capital budgeting, mitigation and readiness strategies, and improving risk communication to Amtrak leadership. Throughout this process, the Climate Change Subcommittee members engaged senior leadership and began to create a shortlist of near-term projects to address these gaps. The work in creating this list of activities uncovered valuable practices and processes already underway across various functions and teams. Another important project for identifying climate-related risks was the development of geospatial flood maps of Amtrak's NEC, which graphically demonstrated the potential effects of climate change and helped to communicate the issue to others within the organization. Horizon years of 2020, 2050 and 2100 were evaluated for the risk of flooding due to sea level rise and storm surge along the 460 miles of track stretching from Washington, D.C. to Boston, Massachusetts. The datasets for the maps were based on publicly available information from the United States Geological Survey (USGS) and the Federal Emergency Management Agency (FEMA). In 2018, Amtrak's Climate Change Sub-Committee presented these maps to various

groups within Amtrak, including senior leadership. Much like the Wharton study described above, this work is another component of Amtrak's ongoing work for identifying and assessing climate-related risks. A future initiative will integrate the flood maps within Amtrak's enterprise GIS system to help identify flood and storm surge risks as part of the capital infrastructure project prioritization process. Building on the results of the previous assessments discussed above, Amtrak's annual operating plan for FY20 included the goal to develop and implement a company-wide Climate Resilience Strategic Plan. The Plan will serve as 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 proceeded with a more comprehensive effort in FY21. After conducting climate roundtable conversations across departments, we compiled comments and recommended solutions into 35 strategic actions, including 9 priority actions. 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 FY23/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. In FY21, Tropical Storm Ida in August cost Amtrak -\$3.2M in expenses, the largest weather-related service disruption that year. Northeastern Kenan cost -\$2.7M, followed by Winter Storm Garrett, with an estimated impact of -\$970K in expenses. 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.

---

**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 FY21 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    | 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. 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. 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.  |
| Emerging regulation | Relevant, always included    | State laws may have implications for Amtrak assets operating in the state. 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. 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.  |
| Technology          | Relevant, always included    | 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. 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. 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 aren't commercially viable solutions at this time. Without a national network of unified fueling stations or charging solutions, we can only operate on traditional diesel.  |
| Legal               | Relevant, always included    | 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. 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.   |
| Market              | Relevant, sometimes included | Passengers expect timely performance from our trains and any possible disruptions due 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 disruptions poses a risk to our business, as on time performance can lead to decreased customer demand. In a recently published Corridor Strategy Plan, emissions reduction was a main benefit to implement a greater modal shift across the United States. 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. 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.   |
| Reputation          | Relevant, sometimes included | 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. 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. 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. 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.   |
| Acute physical      | Relevant, sometimes included | 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. 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.  |
| Chronic physical    | Relevant, sometimes included | 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. 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 is built. Engineering teams completed a phased maintenance program in FY20. This was a critical planning process due to the confines of the tunnel and the need to maintain operations with limited track outages. 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 with an anticipated \$15M budgeted per year until completion. The entire rehabilitation program could take 7-10 years depending on the availability of funding and resources. 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. Building on the results of previous assessments, Amtrak developed a Climate Resilience Strategic Plan in FY21. The purpose of the 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 the strategies to protect our service and bolster our position as a proactive transportation company. 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. |

## 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**

|                  |                |
|------------------|----------------|
| Chronic physical | Sea level rise |
|------------------|----------------|

**Primary potential financial impact**

Increased capital expenditures

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

<Not Applicable>

**Company-specific description**

Portions of Amtrak rail, communications and signal, and substations are located in low lying areas and in close proximity to bodies of water with the potential to flood. Amtrak has identified the most vulnerable substation that was engulfed under 8 feet of water during Hurricane Sandy. The Kearny Substation in Kearny, NJ was out of service for nearly a month. Pre-COVID, 104 Amtrak trains and 363 New Jersey Transit trains operated off of power from the Kearny substation. Passenger rail transportation would be crippled along the Northeast Corridor if this substation were damaged again from inundation or lost power for an extended time. If this portion of the NEC were inoperable, daily revenue losses, solely for Amtrak trains, would be \$2.14M. 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 was assumed to stop operations and result in constant 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 City, New Haven, CT, New London, CT, Providence, RI, and Boston, MA are notable vulnerability "hot spots" for increased sea level rise.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

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)**

2140000

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

781100000

**Explanation of financial impact figure**

Assessments indicated that if this portion (New York Penn Station to Newark, NJ) were to lose power or operability, Amtrak could lose up to \$2.14M in revenue, daily. We multiplied 2.14M \* 365 to calculate the sum total of losing operability for an entire fiscal year. Ridership and revenue figures reflect FY19 estimates and train service since FY20-FY21 were historic low ridership years due to impacts from the pandemic.

**Cost of response to risk**

73000000

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

In response to this risk, Amtrak plans to implement resilient solutions to the Kearny Substation with completion by FY25. The new substation will be installed adjacent to the existing one and elevated to 15 feet above its current location. All equipment such as control houses, power transformers, and circuit breakers will be constructed at an elevation above the 100 year floodplain to eliminate the risk of inundation. Costs to design and build the Kearny substation are approximately \$73,000,000, which combines the total costs of a new substation, labor, materials, outages, and real estate. The project is currently in preliminary design engineering phase, with Amtrak working alongside a design consultant and the FRA to begin the design. Based on consideration of the best available flood hazard data, federal regulations, and local codes and standards, the Design Flood Elevation (DFE) criteria is based upon FEMA's latest 1% annual chance Base Flood Elevation (BFE) at the project elements' specific location.

**Comment**

**Identifier**

Risk 2

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

Upstream

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

|                  |  |
|------------------|--|
| Chronic physical | Changing precipitation patterns and types (rain, hail, snow/ice) |
|------------------|--|



**Primary potential financial impact**

Decreased revenues due to reduced production capacity

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

&lt;Not Applicable&gt;

**Company-specific description**

The Amtrak right of way is subject to both frequent, nuisance flooding and occasional, serious flooding that forces Amtrak to shut down train operations in the vicinity of Cheverly, MD. We conducted a study to assess and analyze the hydraulic conditions that contribute to this flooding to determine the causes and identify potential solutions to alleviate this flooding. This flooding occasionally extends upstream and floods the US 50 highway and Maryland Department of Transportation State Highway Administration (MDOT SHA) right of way forcing closures of the highway. A culvert in this location has failed, reached the end of its design life, and is being replaced by Amtrak. When nearby Beaverdam Creek floods, the floodplain extends up to Amtrak's right of way, crossing the tracks and flooding US 50. The water surface elevation (WSEL) of Beaverdam Creek is controlled by the downstream WSEL of the Anacostia River. This downstream condition blocks and slows the flow of runoff flowing south across the Amtrak right of way which results in localized, nuisance flooding of that area but does not cause flooding of the Amtrak tracks or US 50; however, large storm events can cover Amtrak tracks under several feet of water. Flood waters cause scour around catenary poles and significant erosion under the MD 295/201 Bridge, which requires frequent repair and maintenance. Amtrak is looking at local, short-term repair options to protect the tracks and associated infrastructure, and to reduce the frequency of nuisance flooding. Options include more frequent upstream dredging; installation of local drainage conveyance systems around Amtrak tracks and under the bridge; and redirection of upstream runoff. It was determined that these localized improvements could help with minor flooding from frequent storms but will not mitigate major flooding of the Amtrak and MDOT SHA right of ways as climate change stresses our infrastructure. This report focuses on the major flooding events and global solutions to maintain Amtrak service in large rainfall events similar to the NOAA 10-yr, 24-hour storm. The alternatives identified and analyzed include raising the tracks for several miles to get above flood elevations and constructing floodwalls to block the floodwaters and pump systems to pass runoff away from Amtrak property.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

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

Yes, an estimated range

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

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

3250000

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

432000000

**Explanation of financial impact figure**

Based on a report by the Northeast Corridor Commission, (<http://nec-commission.com/app/uploads/2018/04/NEC-American-Economy-Final.pdf>), the estimated economic cost associated with the loss of Amtrak Northeast Corridor service would be in the range of \$9 million to \$13 million, daily. In the scenario where inundation or track outage occurs at Cheverly, MD, Amtrak would be able to maintain service between Baltimore Washington International (BWI) Airport station, MD north to Boston, MA. However, taking tracks out of service due to flooding or raising the tracks between BWI station to Washington, DC would cripple NEC service. Washington, DC is an essential station that connects off-corridor trains north to New York and long distance trains that originate in New York City and travel southbound through Washington, DC to other off-corridor routes. The following assumptions were made: - Due to the age of the study (2014) and inflation, we applied the high end of the range (\$13M/day) - Train service between BWI to Boston is roughly 75% of the NEC; therefore, when a disruption occurs in Cheverly, MD 25% of the NEC is inaccessible (25% of \$13M = \$3.25M per day) Cost description: Estimated economic loss between BWI and Washington, DC = \$3.25M/ day Estimated duration to build flood walls in Cheverly, MD = 9 months Single track outage for reduced train service around hardening project = 50% of daily loss = \$3.25M -50% = \$1.6M/day Economic loss for the duration of the project = \$1.6M/day x 9 months (270 days)= \$432M

**Cost of response to risk**

142500000

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

Cost to respond: A feasibility study is necessary to understand the impacts to train operations and adjacent highway infrastructure if any of the hardening or adaptation solutions are employed. Feasibility and capacity study: \$500,000 Constructing a flood wall and pumps: \$142,000,000 (estimation). \$500,000 + \$142,000,000 = \$142,500,000 Elevating tracks (alternate not priced yet)

**Comment****Identifier**

Risk 3

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

Direct operations

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

|                  |                |
|------------------|----------------|
| Chronic physical | Sea level rise |
|------------------|----------------|

**Primary potential financial impact**

Increased capital expenditures

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

&lt;Not Applicable&gt;

**Company-specific description**

Many of Amtrak's major bridges and tunnels along the Northeast Corridor (NEC) are over 100 years old and need to be either replaced or substantially rehabilitated. These assets are crucial to Amtrak's operations and create major bottlenecks when taken out of service for frequent repairs and maintenance. The age and condition of said assets make them particularly vulnerable to the impacts of the increasing number and intensity of storms in the northeast. With the growing demand for train travel along the NEC, both intercity and commuter, these assets are the linchpins to establishing a truly resilient and sustainable rail network. A 2021 Climate Vulnerability Assessment

showed that two inches or more of water on the track can impact operations causing slowdowns and inspections. Track and interlockings showed the highest vulnerability for precipitation events of days with at least two inches of rain across all scenarios when compared to the other asset categories. New York City is a notable vulnerability "hot spot" for increased precipitation. 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. However, buildings also had a higher adaptive capacity to increased rain events given the ability to implement dry floodproofing measures such as elevating mechanical equipment, which resulted in lower overall vulnerability when compared to other assets. The New York City area is a notable vulnerability hot spot for an increase in days with at least two inches of rain.

**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)**

220000000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

A 2014 study conducted by the Northeast Corridor Commission concluded that an unexpected loss of the NEC for one day alone could cost the nation nearly \$100M in transportation-related impacts and productivity losses. The same study further noted that the impact of a single day interruption of NEC service into Manhattan generates an economic loss of more than of \$66M to the New York area alone. To assess the financial impact of sea level rise to Amtrak, the company projected revenue losses in certain regions of our operations if we do not harden our assets. Between 2006 and 2019, Amtrak lost more than \$127 million from 450+ weather disruptions, resulting in an estimated \$220 million in projected revenue losses in the coming decade. This \$220 million single figure estimate is the cost of not hardening our assets to withstand sea level rise in and around Manhattan.

**Cost of response to risk**

12300000000

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

The largest of these projects being implemented to protect from sea level rise is the Hudson Tunnel Project, with an estimated cost of \$12.3 billion. Cost to design and build the Hudson Tunnel is approximately \$12.3 billion, which combines the total costs of a new substation, labor, materials, outages, and real estate. The project involves design and construction of a new rail tunnel under the Hudson River as well as the rehabilitation and modernization of the existing North River Tunnel. This will preserve the current functionality of Amtrak intercity service and NJ TRANSIT's commuter service between New Jersey and New York Penn Station and strengthen the NEC's resiliency and ability to support reliable service by providing redundant capacity. For security reasons, we cannot disclose in more detail the cost to respond to this risk. Amtrak continues to progress its major backlog of 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 November, 2021, the federal Infrastructure Investment and Jobs Act (IIJA) was signed into law. It provides Amtrak with a \$22B level of investment to advance state of good repair capital projects and fleet acquisitions, with potential for additional funding from Federal-State grant funding. Amtrak's long-term strategic plans, which are submitted to the Federal Railroad Administration and Congress, include specific elements to improve the resiliency of our infrastructure.

**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**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient modes of transport

**Primary potential financial impact**

Reduced indirect (operating) costs

**Company-specific description**

Throughout FY18 and into FY19, Amtrak awarded an \$875M contract for a base order of 75 new locomotives and long-term technical services. These engines will be manufactured to meet the EPA's highest emissions rating of Tier 4. They are estimated to be at least 10% more fuel-efficient, and they will emit significantly less harmful gases and particulate matter than the locomotives they will replace. In FY20, Amtrak released an RFI to investigate alternative fuel and propulsion technologies; however, until engine technologies using alternative fuel sources, such as hydrogen fuel cells, natural gas, and lithium batteries are proven to satisfy the operational demands and

longevity of passenger rail service, Amtrak will continue to upgrade the current fleet with industry-proven technologies and participate in R&D to explore further opportunities to operate more sustainably and reduce emissions (i.e. renewable diesel). Later this year, Amtrak will take two locomotives out of service to repower the units with new low-carbon technologies. Results from that pilot will inform Amtrak's future fleet strategy to transition to low and no-carbon technologies. These multi-year efforts require continuous focus and dedicated staff to monitor emerging technologies, track the performance within each pilot, and assess the feasibility to begin converting our equipment. To overhaul a combustion engine with a battery-powered engine costs roughly \$4M each. If Amtrak takes a phased approach to re-power all 75 Charger locomotives, the cost would be \$300M. This is one aspect of Amtrak's fleet. Other non-revenue fleets must be studied. Lastly, Amtrak has a continued partnership to repower non-revenue locomotives that perform train movements and work in Amtrak's rail yards and maintenance facilities. The repowered locomotives use less fuel and oil and generate approximately 80% fewer emissions than earlier models. In FY20, Amtrak overhauled one of 10 units in a partnership to improve equipment efficiency.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**Magnitude of impact**

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)**

55245652

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

141238167

**Explanation of financial impact figure**

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. We took the national average projected price per gallon for renewable diesel, as well as low-carbon fuel which are \$3.1/gallon and \$0.78/gallon respectively. We then multiplied these prices by a -10% reduction in our fuel usage (~41,000,000 gallons of fuel) and found that we could potentially see a reduction in fuel costs of above \$55 million and below \$141 million. The range of cost reduction would depend on how much we can scale up using renewable diesel compared to low-carbon fuel options, and the regions in which we implement these solutions.

**Cost to realize opportunity**

120000000

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

Option A: \$4M Battery-powered overhaul x 75 Charger locomotives = \$300M. Option B: 75 Charger locomotives = \$875M + 1 locomotive repower = \$750K; combined investment = \$875,750,000 The awarded contract for 75 locomotives and a related maintenance agreement was \$875M. The cost to repower 1 locomotive was \$750,000. \$875M (Charger locomotives) + \$750K loco overhaul (for yards) + \$300M Charger repowering = \$1.2B Amtrak continues to reduce fuel and energy consumption and greenhouse gas emissions. To drive down emissions across our business functions, our strategy includes setting corporate goals, and investing in energy efficient projects and more energy efficient fleets. Our current corporate goal is a 40% GHG reduction by 2030; however, we're seeking Board approval to set and implement a net zero emissions target by 2045 this year. We show our commitment to continuing these efforts by signing voluntary agreements. An example is the International Union of Railways Climate Responsibility Pledge and the APTA Sustainability Commitment. To ensure that we are meeting our commitments, Amtrak has a multi-departmental Environment and Sustainability Oversight Committee (ESOC) that meets quarterly to track and implement fuel, energy, and emissions goals and initiatives. An example of the work led by ESMS committee members includes providing monthly energy performance reports to Operations and senior management for the Top 40 energy-consuming facilities, idling reports for maintenance and railyard facility supervisors, and implementing lighting upgrades for annual savings of dollars and emissions.

**Comment**

---

**Identifier**

Opp2

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

Upstream

**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**

More travelers are aware of the emissions generated by various modes of transportation as GHG reduction becomes an ever-present topic surrounding climate change. The IPCC stated in a report published in October 2018, "Deep emissions reductions in the transport sector would be achieved by several means." Such examples include: "technology-focused measures such as energy efficiency and fuel-switching, structural changes that avoid or shift transport activity, and switching of passengers and freight from less to more-efficient travel modes." A shift to rail would present a direct impact to Amtrak's operations in all 46 states along the Northeast Corridor and the National Network, as ridership increases and funding becomes available for additional routes in underserved areas. We anticipate an increasing number of travelers will choose rail travel over flying or driving for this reason. Their desire to avoid or reduce their travel emissions is expected to increase the demand for Amtrak's services. In one recent Amtrak survey, 54% of customers would switch modes of transportation if they knew it helped the environment. 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. Capitalizing on Amtrak's sustainability story and superior efficiency to attract more riders through targeted marketing provides further opportunity to reduce global emissions.

**Time horizon**

Unknown

**Likelihood**

Likely

**Magnitude of impact**

Medium-high

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

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact figure**

Our policy states that aggregate costs for renewable energy and carbon-free premiums on all electricity purchase contracts for Amtrak shall not exceed \$3,000,000 in any one (1) year period. We do not have a potential financial impact figure, because we do not know future cost of carbon-free electricity or how much electricity we will need in the long-term. Therefore, it's hard to give an estimate of how much money we will be saving, because we don't know how much we will be spending.

**Cost to realize opportunity**

400000

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

Cost of calculation reflects staff salaries from Utilities Management and Procurement (estimated labor to implement this work). Their combined salaries, which are confidential, equate to about \$400,000. Utilities Management is responsible for the procurement of both traction and non-traction power throughout the Amtrak system and will evaluate options for the voluntary purchase of both bundled and unbundled energy attribute certificates. Since the technology exists to implement carbon-free electricity, we are not looking at other costs of the project. In FY21, Amtrak achieved a 51.1% share of carbon-free energy in our energy procurement portfolio. We plan to keep expanding our carbon-free energy sources and procure 100% carbon-free electricity by 2030.

**Comment**

---

**Identifier**

Opp3

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

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Shift in consumer preferences

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Our customer's and other stakeholders' perceptions about Amtrak's role in the transition to a lower-carbon economy can be an important motivator to choose to travel on Amtrak. Driving a modal shift toward passenger rail and away from cars, planes, and buses will be key to reducing global transportation emissions. Customer sentiment has a direct operational impact on our operations in 46 states throughout all regions of the United States, particularly as ridership bounces back from COVID-19. Amtrak is investing in higher efficiency locomotives, new energy-efficient train sets, and increasing total renewable energy procurement to power our operations. Pre-pandemic, over 32 million customers boarded Amtrak trains at over 500 locations. According to the 2021 Transportation Energy Data Book, Amtrak is 46% more efficient than traveling by car and 34% more efficient than domestic airline travel on a per-passenger-mile basis - across our national network. Traveling on our electrified system in the northeast corridor emits up to 83% fewer greenhouse gas than driving and up to 72% less 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. Another survey showed that 42% of customers do think about how their mode (air, rail, driving) choice might affect the environment when deciding the mode of travel. Communications about Amtrak's superior efficiency performance is an important mechanism to influence travellers' modal choice and their decision to ride Amtrak. It is critical for Amtrak to increase customer and legislator awareness of the benefits of switching from passenger vehicle, air, and bus to rail - especially electrified rail. Through marketing, messaging on social media channels, and educating state and federal partners, Amtrak targets various audiences about the benefits of passenger rail travel. Our customers and other stakeholders expect Amtrak to be a more sustainable form of transportation than other modes. Therefore, we must continue to find effective ways to communicate with our customers and constantly build our reputation as the more environmentally-responsible way to travel.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**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)**

50000000

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

100000000

**Explanation of financial impact figure**

In a recent survey of Amtrak customers and travelers (general population of customers in Amtrak markets), 79% of customers and 83% of travelers identified Amtrak as being a "sustainable journey." About 1 in 3 Amtrak customers said they would consider taking an Amtrak train for a domestic trip of 75 miles or over because it's sustainable. The majority of both customers and travelers also identified train travel as the most environmentally friendly mode (versus car, plane and bus). Based on these results and the increased concern of the general population about the carbon footprint of travel choices within the U.S., we estimate the potential increase in Amtrak

demand caused by a switch from other modes to train travel over the next 10 to 20 years to be 2% to 4% of our current demand, or incremental trips of 0.7 million to 1.4 million and \$50M to \$100M in ticket revenue.

**Cost to realize opportunity**

700000

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

Cost of calculation reflects staff salaries from Marketing, Corporate Communications, Government Affairs, and Sustainability (estimated labor to implement this work). Their combined salaries, which are confidential, equate to about \$700,000. Since the technology exists to implement these solutions, we are not looking at other costs of the project. Operating a safe, efficient, environmentally conscientious, and sustainability-focused passenger rail service is at the foundation of Amtrak's strong reputation and customer goodwill. Corporate Communications, Government Affairs, and Marketing, for example, manage our reputational risks through multimedia messaging to customers and state and legislative partners. Consistent communication to our various audiences is key to building awareness and changing travel preferences. We continue to share sustainability messages across several platforms. The 110 sustainability posts in FY21 generated 2.56M impressions with an average of 23K per post. Social media content reaches thousands of our customers, enhancing Amtrak's reputation of sustainability issues and climate resilience efforts. In FY21, Amtrak launched emissions comparison on Northeast Corridor tickets to provide insight on how traveling by passenger rail reduces an individual's carbon footprint. NEC tickets now shows a customer's specific avoided emissions by riding Amtrak and how many emissions would have been emitted had they driven or flown. The new addition to tickets serves as a method of empowering riders to take a sustainable mode of transportation, particularly on the NEC which has net zero emissions at the source. The next phase is to expand emissions comparisons on tickets across the national network. Since 2010, Amtrak has produced an annual Sustainability Report. The report includes information on our GHG emissions, fuel conservation, energy efficiency targets and specific efforts to reduce energy consumption. This year-in-review document is used to inform legislators, customers, employees, and other stakeholders.

**Comment**

**C3. Business Strategy**

**C3.1**

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

**Row 1**

**Transition plan**

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

**Publicly available transition plan**

<Not Applicable>

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

<Not Applicable>

**Description of feedback mechanism**

<Not Applicable>

**Frequency of feedback collection**

<Not Applicable>

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

<Not Applicable>

**Explain why your organization does not have a 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 | No, but we anticipate using qualitative and/or quantitative analysis in the next two years | Lack of internal resources   | In FY21, we started procuring services to assess Amtrak and examine scenarios based on RCPs. The work is set to begin in FY22, but we did not have the funds to outsource the analysis or internal expertise to conduct the analysis prior to FY22. |

**C3.3**

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

|                                 | Have climate-related risks and opportunities influenced your strategy in this area? | Description of influence   |
|---------------------------------|---|--|
| Products and services           | Yes   | 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. However, some of this lost revenue has been mitigated by limiting or canceling service ahead of a severe weather event. The most substantial strategic decision to date was planning ahead for service disruption. Amtrak used to operate in many severe weather events but the damage to equipment and reduced ridership ended up being a greater financial burden than a gain. 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. 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.  |
| Supply chain and/or value chain | Evaluation in progress  | 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 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. In the coming year, Amtrak will focus on exploring hot spots and key vendors positioned to reduce emissions in Amtrak's supply chain and deliver resilient solutions. This is part of a scope 3 assessment and strategy to support Amtrak's Net Zero Plan.   |
| Investment in R&D               | Evaluation in progress  | Fuel is Amtrak's second largest operating expense, and it accounts for 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. Beginning in FY18, Amtrak partnered with external transportation entities on a renewable diesel implementation program. Phase 1 of the program, which tested the fuel in a locomotive, was successfully completed in 2018. Phase 2 began in FY19 with performance testing on a Charger locomotive utilizing only renewable diesel with test results in the Fall of 2020. Beyond renewable diesel testing, Amtrak's 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. Research in this area will continue through FY22.   |
| Operations                      | Yes   | The risks posed to Amtrak's operations of weather-related events run from service disruptions due to flooding and high winds to slow orders due to high heat days. A 2014 study conducted by the Northeast Corridor Commission concluded that an unexpected loss of the NEC for one day alone could cost the nation nearly \$100M in transportation-related impacts and productivity losses. The same study further noted that the impact of a single day interruption of NEC service into Manhattan generates an economic loss in excess of \$66M to the New York area alone. Our most substantial strategic decision to date was beginning the implementation of our Climate Resilience Strategic Plan throughout the Northeast Corridor. The Plan will help us 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, culvert cleaning, and ballast replacement are three types of infrastructure strategies designed to maintain and harden operations against more severe climate impacts. Due to the time and costs associated with restoring and protecting Amtrak's rail systems, slope stabilization projects are designed to last 75 years. 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 recently came to 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. This is the first agreement of its kind for Amtrak. 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'll 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. |

**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<br>Direct costs<br>Capital expenditures<br>Access to capital<br>Assets | 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, demand itself may be further impacted by the reduced volume travel in general during weather events. Since service was disrupted due to covid, we made a decision to not value service disruptions - disruptions have not gone down, people are just traveling less. Annually, Amtrak estimates the ridership and revenue impacts of all major weather events. 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 months) 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 FY23/FY24. To account for these impacts, Amtrak includes a "weather buffer" in the annual ridership and ticket revenue budgets, based on trends over prior years. In previous year, the weather buffer has changed annually, but Amtrak has paused accounting for a weather buffer to pandemic-related disruptions. However, Amtrak did experience climate-related disruptions in FY21. Tropical Storm Ida in August cost Amtrak -\$3.2M in expenses, the largest weather-related service disruption that year. Nor-eastern Kenan cost -\$2.7M followed by Winter Storm Garret, with an estimated impact of -\$970K in expenses. 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 from FY20 through FY21 and it continues today. Beyond the Northeast Corridor (NEC), Amtrak is at risk 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 FY23 expanded work to conduct a National Climate Vulnerability Assessment. 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. Over the next 5 years, the company has budgeted \$32.9B for capital projects; nearly \$5.5B is allocated for bridge and tunnel projects. 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. The Gateway project budget is \$12.3B, and planned improvements to improve the State of Good Repair status of Amtrak's infrastructure are large scale capital investments. Gateway encompasses the Hudson Tunnel and Portal Bridge - both critical assets for accessibility to New York City. 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. Examples include a - \$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. Flooding potential for specific coastal or river stations is being analyzed for business continuity and physical security infrastructure protection purposes. Detailed analysis of assets at risk of impact due to potential meteorological or geophysical events is not feasible given current resource constraints but will be analyzed during the BIA process of our business continuity program. 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. 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. In 2018, Amtrak finalized a contract with Siemens for 75 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% lower 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. |

## 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

**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 emissions covered by target (metric tons CO2e)**

<Not Applicable>

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

1171269.5

**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 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]**

702761.7

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

480940

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

101294

**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)**

582235

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

125.72565494107

**Target status in reporting year**

Underway



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

No, but we anticipate setting one in the next 2 years

**Target ambition**

<Not Applicable>

**Please explain target coverage and identify any exclusions**

In FY19 we set a long-term target to reduce emissions 40% by 2030. We set annual targets that align with our long term goal to ensure progress towards achieving it. The target includes emissions from 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 fleet fuel. This target is part of our Climate Resilience Strategic Plan.

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

From 2010 to 2019, prior to the pandemic, Amtrak reduced greenhouse gas emissions by 20% or a little over 237,000 MT of CO2e using location-based methodology and a little over 247,000 MT of CO2e or 21% using market based methodology . In FY21, we reduced emissions by approximately 589,000 MT of CO2e using market-based methodology. Using location-based methodology we reduced approximately 500,000 MT of CO2e. The difference between market-based and location-based methodology demonstrates the increased focus on sourcing carbon-free electricity to reduce scope 2 emissions. A significant portion of our GHG reduction compared to 2010 was decreased train service as a result of the COVID pandemic. As service recovers, we anticipate fuel and energy use to return and in turn increase our GHG emissions. We continue to set annual goals in fuel and electricity use, idle reduction and increased sourcing of carbon-free electricity in order to achieve our long-term goal of 40% reduction by 2030. Over the next decade, we will also be onboarding new electric and diesel locomotives which will increase energy efficiency making strides towards our goal. These annual goals align with the long-term target to continue We also set interim targets to monitor our goals: -5% reduction in emissions and fuel usage, as well as -1.5% in electricity consumption. Through several key initiatives like energy efficiency upgrades, using as little fuel as possible and running more efficient locomotives, Amtrak continues to reduce fuel and energy use year-over-year. Emissions were significantly reduced in FY20 and FY21 due to a reduction in train service during the height of the pandemic. Therefore, as service resumes and emissions rise, we anticipate the observed progress curve of our goal to be variable depending on the year, but become linear as service becomes more predictable and our sustainability goals become more ambitious.

**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

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)**

638605

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

32

**Target year**

2030

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

100

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

51

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

27.9411764705882

**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.

**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 applies to the electricity we are responsible for sourcing. It does not include electricity for operations not under our control, for example, the electricity in spaces we lease.

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

At the moment we include carbon-free electricity requirements in power purchase agreements. We are reviewing on-site renewable energy generation opportunities and other contractual instruments like VPPAs to diversify our sources and strategy to achieve this goal. Amtrak is investing in higher efficiency locomotives, new energy-efficient train sets, and increasing total carbon-free electricity sourcing to power our operations. This reporting year, Amtrak was successful in reaching all electricity reduction goals and procuring clean energy for just over half, or 51%, of our electricity consumption.

**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**

2020

**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**

2020

**Figure or percentage in base year**

196964

**Target year**

2021

**Figure or percentage in target year**

194010

**Figure or percentage in reporting year**

192095

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

164.827352742045

**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**

The target to reduce electricity by 1.5% year-over-year is specifically for our 40 largest electricity-consuming facilities over Amtrak's fiscal year 2021 (FY21). The top 40 facilities consume nearly 80% of all facility-related energy. In FY21, we decreased energy use by 4.9M Kwh at these facilities compared to FY20. This was a reduction of approximately 1800 metric tons of CO2e.

**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**

Annually, Amtrak's Utilities Management group invests in high yield energy efficiency projects to drive down consumption at our stations, offices, and facilities. Our Top 20 facilities also develop and implement energy plans to reduce energy demand at their sites.

**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**

2021

**Figure or percentage in target year**

56327

**Figure or percentage in reporting year**

40199

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

643.946037099494

**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**

In FY21, Amtrak reduced diesel fuel use by 19 million gallons, a 32% reduction compared to FY19. This resulted in a reduction of approximately 200,000 Metric Tons of

CO2e which was 21% of Amtrak's total GHG in 2019. This target included diesel fuel for passenger locomotives and switchers used to run Amtrak's passenger service. It did not account for fuel used in highway vehicles, maintenance equipment or stationary sources.

**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**

Due to COVID-19, Amtrak saw a reduction in demand which led us to cut service on various routes across the United States. Since fuel is the largest contributor to our carbon footprint, a reduction in service had a large impact on our carbon footprint. In FY21, our annual ridership was 12.17 million riders compared to 32.52 annual riders in FY19. It was mainly because of this that our fuel usage dropped so much.

**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       | 2                     | 335  |
| To be implemented*        | 10                    | 932  |
| Implementation commenced* | 3                     | 148  |
| Implemented*              | 2                     | 111016   |
| 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)**

1977

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

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

**Voluntary/Mandatory**

Voluntary

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

728000

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

2240000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

lighting projects saved 5300Mwh. Using EPA Egrid's average of 822.5 lbs of CO2e per mwh this results in an estimated savings of 1977 MT of CO2e annually.

**Initiative category & Initiative type**

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

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

109039

**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)**

0

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

92000

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**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 |
| Please select   |  |

## 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 are representative of a normal operating year.

#### 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 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 CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario

0.000276

#### 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 CO<sub>2</sub>e per vehicle mile) instead of riding Amtrak's electric service (0.058 kg of CO<sub>2</sub>e per passenger mile)

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

40

---

## 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

Base year end

Base year emissions (metric tons CO2e)

Comment

### Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment



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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

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

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

**Scope 3 category 13: Downstream leased assets**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3 category 15: Investments**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

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

**Comment**

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

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

**Comment**

**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

**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)**

480940

**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 long-term 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**

191793

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

101294

**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 and Scope 2 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)**

136915

**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. This category is relevant and we will plan to further refine our data in Scope 3.

**Capital goods**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

192609

**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. This category is relevant and we will plan to further refine our data in Scope 3.

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

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

108430

### Emissions calculation methodology

Hybrid method

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

0

### Please explain

Several methods were used to estimate this category. For upstream emissions from our diesel fuel, wheel to tank analysis was conducted using the greet model resulting in 78,890 MT CO2e. Scope 3 emissions from transmission and distribution (T&D) losses for the amount of electricity and natural gas consumed was based on EIA factors. consumed . Source of emission factors for T&D loss: In the case of electricity, we used the USEIA average line loss of 5% and applied this to our total electricity consumption. Location-based regional eGrid emission factors were then used to calculate the CO2e of electricity lost by location. In the case of natural gas, a 5% T&D loss was sourced from the "Energy Star--Performance Ratings Methodology for Incorporating Source Energy Use" which provides technical details on the methodology developed by the EPA to calculate "source energy" for energy performance ratings, which incorporates all transmission, delivery, and production losses. Natural gas line loss is directly emitted without combustion, therefore, the CH4 (natural gas figure) was multiplied by the Global Warming Potential (fifth assessment) to get CO2e attributed to natural gas line loss. This results in approximately 26,886 MT of CO2e An additional 1800 MT of CO2e is estimated from our downstream leased locations for natural gas and electricity consumption. This category is relevant and we will plan to further refine our data in Scope 3.

## Upstream transportation and distribution

### Evaluation status

Not relevant, calculated

### Emissions in reporting year (metric tons CO2e)

590

### 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

Not relevant, calculated

### Emissions in reporting year (metric tons CO2e)

8180

### Emissions calculation methodology

Waste-type-specific method

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

0

### Please explain

In FY21 we disposed of 15,200 tons of mixed MSW, recycled 280 tons of Mixed Recyclables and composted 10 tons of organics. Using EPA's Emission Factors for Greenhouse Gas inventories on Scope 3 emissions, this resulted in 8180 MT of CO2e. This calculation did not include recycled scrap metal, hazardous or special waste.

## Business travel

### Evaluation status

Not relevant, calculated

### Emissions in reporting year (metric tons CO2e)

14153

### Emissions calculation methodology

Spend-based method  
Fuel-based method  
Distance-based method

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

0

### Please explain

Spend based methodology was used to calculate the emissions from bussing and shuttles services as well as hotels and lodging. 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 proton of business travel conducted in a personal vehicle.

## Employee commuting

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

30086

### 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 three years and verified as a part of our GHG verification process. This year's estimate is likely higher than actual since our remote work policy changed due to COVID for management employees in FY21 vs. FY19.

## Upstream leased assets

### Evaluation status

Not relevant, calculated

### Emissions in reporting year (metric tons CO2e)

903

### 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)

38710

### Emissions calculation methodology

Supplier-specific method

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

75

### 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 our electrified tracks along the Northeast corridor. Using supplier-specific data in terms of emission factors this resulted in 37,6962 MT of CO2e. Emission factors were only available for suppliers that accounted for 78% of total electricity consumed by the commuters. Other electricity suppliers do not yet provide emission factors. A smaller portion (748 MT of CO2e) is estimated from our leased assets from retail tenants in Philadelphia and Chicago. We will continue to expand our data collection for this category. Only emissions from available and billed energy is used in this calculation. 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 | 6479   | CO2 emissions from biogenic sources include use of biofuels such as B20 and B5 in highway vehicles and Renewable diesel pilots in locomotives |

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**

0.00032315

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

672734

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

2081804000

**Scope 2 figure used**

Location-based

**% change from previous year**

2

**Direction of change**

Decreased

**Reason for change**

Reduced service and ridership were results from COVID-19. These impacts directly affected Amtrak's emissions and revenue as described below. Although there was a 16% reduction in emissions from FY20's 803,008 metric tons of CO2e, Amtrak had 14% less revenue in FY21 than FY20's \$2.43B million in revenue. This significant decrease in revenue resulted in an increase of the metric tons of carbon emissions per revenue dollar.

---

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**

0.158

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

451613

**Metric denominator: unit**

p.mile

**Metric denominator: unit total**

2860291048

**% change from previous year**

-13

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

This intensity figure is calculated using emissions from passenger rail service only and excludes any emissions from other sources such as buildings. This figure also includes Amtrak's auto-train service which transports passengers and their vehicles between Lorton, Virginia and Sanford, Florida. The 13% decrease is attributed to a few factors. First a decrease in total CO2e to run rail service. 28% reduction in CO2e from rail compared to last years reported number. A part of this is due to decreased electric and diesel fuel used for passenger service due to decrease in train service. Also this years metrics includes supplier specific data for the emissions from electric service accounting for carbon-free electricity sources. There was also a 17% decrease in passenger miles compared to last years 3.4 million passenger miles.

**ALL**

**Scopes used for calculation of intensities**

Report Scope 1 + 2

**Intensity figure**

0.000235337

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

672734

**Metric denominator: unit**

p.mile

**Metric denominator: unit total**

2858600000

**% change from previous year**

-1

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

While there was a 16% change in emissions compared to last year in terms of location-based values there was also a 17% reduction in passenger miles resulting in an overall 1% reduction in our emissions per passenger mile. Location based methodology was used to compare to last year's reported figure.

**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            | 468159                                  | IPCC Fifth Assessment Report (AR5 – 100 year) |
| CH4            | 960                                     | IPCC Fifth Assessment Report (AR5 – 100 year) |
| N2O            | 3036                                    | IPCC Fifth Assessment Report (AR5 – 100 year) |
| HFCs           | 8785                                    | IPCC Fifth Assessment Report (AR5 – 100 year) |

**C7.2**

---

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

| Country/Region           | Scope 1 emissions (metric tons CO2e) |
|--------------------------|--------------------------------------|
| United States of America | 480940                               |
| Canada                   | 0                                    |

**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                | 417156                               |
| Highway vehicles             | 26496                                |
| Single stationary facilities | 29743                                |
| All other small sources      | 7546                                 |

**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                  | 403821                                    | <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/region.**

| Country/Region           | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) |
|--------------------------|--|--|
| United States of America | 191793                                     | 101294                                   |

**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                | 105652                                     | 46835                                    |
| Single stationary facilities | 70522                                      | 44238.82                                 |
| All other small sources      | 15619                                      | 10220.78                                 |

**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                  | 105652                                    | 46835   | Scope 2 emissions from transport services are from our electrified passenger haul trains. |

**C7.9**

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

Decreased

**C7.9a**

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

|   | Change in emissions (metric tons CO2e) | Direction of change | Emissions value (percentage) | Please explain calculation  |
|---|--|---------------------|------------------------------|---|
| Change in renewable energy consumption  | 30497                                  | Decreased           | 4                            | In FY21, about half of Amtrak's consumed electricity was from carbon-free sources utilizing energy-attribute certificates like Green-e RECs. This increased use of carbon-free energy resulted in a decrease of 30497 metric tons compared to FY20. In FY21 we avoided 109,039 metric tons of CO2e by using carbon-free sources compared to last year's avoidance of 78,542 metric tons of CO2e (109,039-78,542 = 30,497 Metric tons). This was 5.25% of our FY21 Market based total scope 1 and 2 (30,497/743,150) *100 = 4% |
| Other emissions reduction activities    | 1800                                   | Decreased           | 0.2                          | Electricity reduction in our top 40 sites resulted in a decrease of 4,869 mwh compared to last year which is approximately 1800 MT of CO2e, 0.02% reduction. 1800 MT compared to last year's total market based emissions of 743,150 MT CO2e is 0.2%.   |
| Divestment                              |  | <Not Applicable >   |                              |   |
| Acquisitions                            |  | <Not Applicable >   |                              |   |
| Mergers                                 |  | <Not Applicable >   |                              |   |
| Change in output                        | 109035                                 | Decreased           | 15                           | There was an overall decrease in energy use in FY21 as a result of our reduction in train service throughout the Amtrak System due to COVID-19. 109,035 MT of CO2e is estimated from the 10.5 million gallons of reduced fuel use. This accounted for 15% reduction from FY20's market-based value 109035/743150 MT CO2e = 15%  |
| Change in methodology                   |  | <Not Applicable >   |                              |   |
| Change in boundary                      |  | <Not Applicable >   |                              |   |
| Change in physical operating conditions |  | <Not Applicable >   |                              |   |
| Unidentified                            |  | <Not Applicable >   |                              |   |
| Other                                   |  | <Not Applicable >   |                              |   |

### 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 0% but less than or equal to 5%

### 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) | 1853890                    | 26444                          | 1880334                                 |
| Consumption of purchased or acquired electricity        | <Not Applicable>           | 320679465                  | 587537564                      | 627390974                               |
| Consumption of purchased or acquired heat               | <Not Applicable>           | <Not Applicable>           | <Not Applicable>               | <Not Applicable>                        |
| Consumption of purchased or acquired steam              | <Not Applicable>           | 14877                      | 0                              | 14877                                   |
| 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>           | 2175479                    | 347124                         | 2522602                                 |

**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**

22387

**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**

Small amount of biofuels is used in select highway vehicles

**Other biomass**

**Heating value**

**Total fuel MWh consumed by the organization**

**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**

4058

**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**

Testing use of renewable diesel in locomotives

**Coal**

**Heating value**

**Total fuel MWh consumed by the organization**

**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**

1727074

**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**

126816

**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**

**Total fuel MWh consumed by the organization**

**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**

1880334

**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.**

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Nuclear

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

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

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

287342

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

United States of America

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

**Comment**

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Wind

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

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

21236

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

United States of America

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

**Comment**

**Sourcing method**

Unbundled energy attribute certificates (EACs) purchase

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify

**Country/area of low-carbon energy consumption**

United States of America

**Tracking instrument used**

US-REC

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

12101

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

United States of America

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

**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  |
|---------------|----------------------|-------------------------------------|--|
| Please select | gCO2e/kWh            | 126                                 | The factor was calculated using market based method to quantify total CO2e of our electrified routes divided by the total kwh. 46,834 MT of CO2e divided by 370,452 mwh times 1000 to convert to grams |

## C8.2g

---

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

**Country/area**

United States of America

**Consumption of electricity (MWh)**

627391

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

14877

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

642268

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

## 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**

0.4

**Metric numerator**

Other, please specify (kwh)

**Metric denominator**

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

**Metric numerator: Unit total**

370452

**Metric denominator: Unit total**

917928301

**% change from last year**

25

**Please explain**

Last year Amtrak consumed approximately 0.32 kwh per passenger mile, 25% less than FY21. Amtrak consumed approximately 10,000 mwh less in FY21 than FY20 and carried approximately 300k less passengers on electrified routes. Continued impacts from the COVID pandemic resulted in lower ridership.

---

**Activity**

Rail

**Metric figure**

0.02

**Metric numerator**

Other, please specify (Gallons of diesel fuel )

**Metric denominator**

p.mile

**Metric numerator: Unit total**

36252405

**Metric denominator: Unit total**

1771747260

**% change from last year**

-9

**Please explain**

Compared to last year's metric of 0.022 we reduced gallons per passenger mile by 9%. This is attributed to a 21% decrease in fuel use but only a 14% reduction 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 reduction from last year is attributed to the ridership 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**

3086

**Metric numerator**

Tons of municipal waste diverted from landfill

**Metric denominator (intensity metric only)**

NA

**% change from previous year**

19

**Direction of change**

Decreased

**Please explain**

While the amount of recycling tons decreased, the rate of recycling (17%) was consistent compared to FY20. The decreased tons of recycling was due to lower ridership and lower amounts of waste onboard. While our mechanical facilities and back shops exceed expectations in recycling, we are still working on improving availability of recycling onboard. We are currently at 17% recycling rate for our top 40 largest facilities, but we aim to reach a 20% goal annually. We have been ensuring that the design of future fleets including our new Acela service and Intercity trainsets have collocated trash and recycling to facilitate proper waste management and at our end locations.

---

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

---

**(C-TO9.3/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 GenSet completed)

**Technology**

Other, please specify (Locomotive switchers)

**Metric figure**

**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. In FY20, Amtrak overhauled one switcher, which is 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.

---

**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**

0.16

**Metric unit**

Other, please specify (kg CO<sub>2</sub>e / PM)

**Explanation**

Amtrak's total emissions attributed to passenger travel was 451,613 MT CO<sub>2</sub>e. If Amtrak passengers drove a single-occupancy vehicle the equivalent distance they traveled on Amtrak, Amtrak passengers would have emitted a total of 955,483 MT CO<sub>2</sub>e based on EPA Emission Factors for Greenhouse Gas Inventories.\* By choosing to travel on Amtrak, our passengers avoided a total of 503,869 MT CO<sub>2</sub>e in FY21. 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 CO<sub>2</sub>e per vehicle mile vs. Amtrak's national FY21 average of 0.16 kg of CO<sub>2</sub>e per passenger 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**

---

(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**

Drivetrain

**Stage of development in the reporting year**

Full/commercial-scale demonstration

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

≤20%

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

10000000

**Comment**

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**

Third party verification/assurance underway

**Attach the statement**

APEX - RY2021 CDP Verification Statement Limited Amtrak v4-final draft\_revised.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 - RY2021 CDP Verification Statement Limited Amtrak v4-final draft\_revised.pdf

**Page/ section reference**

page 1

**Relevant standard**

ISO14064-3

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

100

---

**Scope 2 approach**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

APEX - RY2021 CDP Verification Statement Limited Amtrak v4-final draft\_revised.pdf

**Page/ section reference**

page 1

**Relevant standard**

Please select

**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**

Please select

**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 - RY2021 CDP Verification Statement Limited Amtrak v4-final draft\_revised.pdf

**Page/section reference**

page 1

**Relevant standard**

ISO14064-3

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

10

---

## 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                    | Other, please specify (Amtrak specific intensity factors) |                       | Amtrak undergoes a third-party assurance of its passenger rail service emission factors in terms of CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> O per passenger mile.<br>APEX - 2021 Passenger EF Verification Statement Limited Amtrak_Revised.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 originated or purchased any project-based carbon credits within the reporting period?**

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**

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

**% of customers by number**

100

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

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

In our commitment to support Amtrak's Sustainability goals and in recognition of Earth Day, 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**

Our measures of success were how many customers opened the banner and interacted with the carbon offset page. We organized open rate outcomes into the following categories: • Registered Acela version – 61.93% open rate • Registered Saver Fare version – 55.29% open rate • Non-Registered Acela version – 45.29% open rate • Non-Registered Saver Fare version – 36.31% open rate • S&S Acela version – 25.17% open rate • S&S Saver Fare version – 28.73% open rate

**Type of engagement & Details of engagement**

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

**% of customers by number**

100

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

**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 customer's 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 110 sustainability posts on social media in FY21 generated 2.56M impressions with an average of 23K 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.

**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 as the government's for-profit corporation. Because of our funding and regulatory structures, we maintain close contact with the Federal Railroad Administration, Transportation & Infrastructure Committee, and the House 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**

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

**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 engagement activities are consistent with your overall climate change strategy**

We ensure that engagement with external partners aligns with our climate change strategy through coordination between departments, and through oversight / review of those departments' activities by senior management and the Board of Directors. More specifically: Amtrak management provides the company's Board of Directors with periodic updates on the company's sustainability efforts. These updates enable the Board to make informed decisions when it conducts policy reviews and approvals; management then works to ensure that the Board's guidance is reflected in both day-to-day operations and strategic planning. Management includes both a Government Affairs Department and a Sustainability Group, which cooperate closely on matters relating to climate change. Internally, the Sustainability Group and Government Affairs Department are represented on interdepartmental committees that work to steer Amtrak's sustainability efforts; these include an executive-level Environmental and Sustainability Oversight Committee, which meets quarterly to review / discuss progress towards specific goals. Relevant external engagement happens largely through two channels: (1) participation within trade associations, and (2) engagement with policymakers. With respect to (1): Government Affairs and Sustainability staff stay abreast of the positions and activities of the relevant associations (e.g., the American Public Transportation Association [APTA]); attend their meetings; share information about Amtrak's goals and policies, as established via the processes discussed above; and seek to ensure that those associations' positions and activities remain consistent with such goals and policies. With respect to (2): as directed by senior management, the Government Affairs Department works with the Sustainability Group and other departments to educate partners in Congress and in the Administration about Amtrak's sustainability and resiliency efforts; opportunities to support and advance such efforts; and the resources needed to achieve congressionally-directed goals, including the statutory declaration that Amtrak should provide "energy-efficient intercity rail passenger transportation throughout the United States." Additionally, external communications related to climate risk and sustainability (including the annual Sustainability Report) are generally shared and discussed prior to release within the internal groups mentioned above.

**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?**

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

Other, please specify (49 U.S. Code § 24315(b)(1)(B))

**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." Amtrak is required to submit a report to Congress each year that outlines important information, such as ridership, revenues, on-time performance and any change to service. The law also states that Amtrak shall submit to the President and Congress a complete report of its operations and accomplishments, and may 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 continue to offer energy-efficient, climate-friendly travel options across a rail network spanning two countries; 50 states, provinces, or districts; and more than 500 communities. 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.

**Policy, law, or regulation geographic coverage**

National

**Country/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.

**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 is aligned with the goals of the Paris Agreement?**

No, we have not evaluated

**C12.3b**

**(C12.3b) Provide details of the trade associations your organization 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 consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We are not attempting to influence their position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

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, if applicable (currency as selected in C0.4) (optional)**

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 consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

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 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 and to gain support for that element of the pledge. Amtrak fully supports the 2019 UIC Railway Climate Responsibility pledge elements of reducing specific energy consumption and CO2 emissions, and contributing to the United Nations Sustainable Development Goals (SDGs).

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

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 (American Public Transportation Association)

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

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

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, if applicable (currency as selected in C0.4) (optional)**

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**

Underway – previous year attached

**Attach the document**

Amtrak-Sustainability-Report-FY20.pdf

**Page/Section reference**

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

## 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, but we 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, but we plan to do so within the next 2 years  | <Not Applicable>                        | <Not Applicable>     |

### C15.3

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

|       | Does your organization assess the impact of its value chain on biodiversity?            | Portfolio        |
|-------|---|------------------|
| Row 1 | No, and we do not plan to assess biodiversity-related impacts within the next two years | <Not Applicable> |

### C15.4

(C15.4) 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>  |

### C15.5

**(C15.5) 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                                       |

**C15.6**

**(C15.6) 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 18,000 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 2021, as Amtrak advanced its COVID-19 recovery efforts, customers took nearly 12.2 million trips. This was a 42% increase over the year's goal; more than half of all trips occurred in the second half of the year. On an average day, customers made more than 33,300 trips on Amtrak trains.

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, Mass., Albany, N.Y., 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 82% of Amtrak's carbon footprint and of that percentage; 65% is attributed to diesel fuel. The remaining segments of Amtrak's carbon footprint are stations and facilities at 14%, and the GSA highway fleet vehicles and miscellaneous sources at 4%. In FY21, Amtrak continued to make progress on our most ambitious target to reduce 40% emissions by 2030, over our 2010 baseline. In FY21, we reduced 22% of our emissions and due to impacts from COVID-19, we reduced fuel usage by 21% and electricity at our facilities by 2.5%.

Also in FY21, the company conducted climate roundtable discussions, developed a climate vulnerability assessment for critical NEC assets, and produced an action-oriented climate resilience strategic plan and vulnerability report. Both documents are internal and will serve as guides to build resilience into our business.

**SC0.1**

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

|       | Annual Revenue |
|-------|----------------|
| Row 1 | 2081804000     |

**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**  
Metropolitan Transportation Authority (MTA)
- Scope of emissions**  
Scope 2
- Allocation level**  
Company wide
- 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**

Emissions tracking is not available at this time. We are interested in exploring opportunities to estimate emissions on behalf of MTA projects however at this time we do not have an established process to do so. We look forward to enhancing our business relationship with MTA through parallel sustainability goals and partnership in climate resiliency planning in New York. We are further exploring the ability to track emissions to the project level. We anticipate insight in FY23.

---

**Requesting member**

PayPal Holdings Inc

**Scope of emissions**

Scope 2

**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.

---

**Requesting member**

L'Oréal

**Scope of emissions**

Scope 2

**Allocation level**

Commodity

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

1.114

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

L'Oreal traveled approximately 16,763 miles on Amtrak services in Amtrak's reporting year. Of these miles 15,151 were traveled on electrified routes and 1612 miles on diesel operated routes. Please note this response includes Amtrak's scope 1 (0.3 MT CO2e) and Scope 2 (0.8 MT CO2e) 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**

16763

**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'Oreal 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 average emission calculation applies to the electric routes.

---

**Requesting member**

Bank of America

**Scope of emissions**

Scope 2

**Allocation level**

Commodity

**Allocation level detail**

<Not Applicable>

**Emissions in metric tonnes of CO2e**

2.59

**Uncertainty (±%)**

**Major sources of emissions**

Bank of America traveled approximately 48,740 miles on Amtrak services in Amtrak's reporting year. Of these 48,740 miles, 48,093 were traveled on electrified routes and 647 miles on diesel operated routes. Please note this response includes Amtrak's scope 1 (0.1 MT CO2e) and Scope 2 (2.5 MT CO2e) 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**

48740

**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 average emission calculation applies to the electric routes.

---

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 FY21 numbers were not verified in time for published. Electric service in FY21 was 0.051 kgs per CO2e (lower than previous years due to increased sourcing of carbon-free electricity) and for Diesel 0.209 kgs per CO2e (higher than previous years due to unusually low ridership due to COVID)

---

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 FY21 operations. Factors were based on total emissions by locomotive propulsion type. FY21 values were not available at the time of EPA's published factors for FY21. 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 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's 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.

70

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**

0.05

**±% change from previous figure supplied**

12

**Date of previous figure supplied**

**Explanation of change**

Amtrak's FY19 operations resulted in 0.058 kgCO2e per passenger mile. In FY21 we estimated 0.051 kgCO2e for electrified service. Although ridership was much lower compared to Pre-COVID operations in FY19, the 12% decrease in our emission factor is due to the increase of carbon-free electricity. The figure reported in FY19 was location based while this year we have begun transitioning to Market-based reporting for our goal.

**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**

0.21

**±% change from previous figure supplied**

40

**Date of previous figure supplied**

**Explanation of change**

Amtrak's FY19 operations resulted in approximately 0.15 kgCO2e per passenger mile on routes pulled by a diesel locomotive. In FY21 we estimate this increased 40% to 0.21 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 FY21 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 |
|-----------------------|---------------|---------------------------|----------------------|---|
|-----------------------|---------------|---------------------------|----------------------|---|

**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