Union Pacific Corporation

2024 CDP Corporate Questionnaire 2024

C1. Introduction

(1.1) In which language are you submitting your response?

Select from:

☑ English

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

Select from:

☑ USD

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ Publicly traded organization

(1.3.3) Description of organization

Union Pacific Railroad Company (Union Pacific, UP, or the Company) is the principal operating company of Union Pacific Corporation (NYSE: UNP), with headquarters in Omaha, Nebraska. One of America's most recognized companies, Union Pacific owns and operates over 32,000 track miles that link 23 states in the western two-thirds of the country by rail, providing a critical link in the global supply chain. Over the past 10 years, from 2014 to 2023, Union Pacific invested over 35 billion dollars into its network and operations to support America's transportation infrastructure. Union Pacific serves many of the fastest-growing U.S. population centers, operates from all major West Coast and Gulf Coast ports to eastern gateways, connects with Canada's rail systems, and is the only railroad serving all six major gateways into and out of Mexico. Our diversified business mix includes the following three business groups: Bulk (e.g., grain and grain products, fertilizer, food and refrigerated, coal and renewables); Industrial (e.g., construction, industrial chemicals, plastics, forest products, specialized industrial products, metals and ores, petroleum, liquid petroleum gases (LPG), soda ash, and sand); and Premium (e.g., finished automobiles, automotive parts, merchandise in intermodal containers, both domestic and international). In early 2021, the Science Based Targets Initiative (SBTi) approved our target to reduce absolute scope 1 and scope 2 GHG emissions from our operations by 26% (against a 2018 baseline) by 2030. In 2022, we formally committed with SBTi to revise our near-term emissions reduction target to support a 1.5ºC climate ambition. In early 2024, SBTi approved our revalidated absolute targets. Our new targets are: (1) to reduce absolute Scope 1 and 2 GHG emissions by 50.4% by 2030 from a 2018 base year, and (2) to reduce Scope 3 absolute emissions from our purchased goods and services, capital goods and fuel- and energy-related activities 50.4% by 2030 from a 2018 base year. Most of our focus in reducing our carbon footprint is on our locomotive operations. In 2023,

94% of Union Pacific's direct GHG (Scope 1 and 2) footprint, and 80% of our Scope 1, 2 & 3 footprint, was directly related to locomotive fuel combustion, transportation & distribution. We are approaching our SBTi targets by continuing to make our operations more efficient through a better service plan and implementation of fuel-saving technology. In addition, we are pursuing efforts to decarbonize our operations through greater use of low-carbon fuels and the adoption of alternative-propulsion technology. Union Pacific's services can help freight customers reduce their own GHG footprint. In 2021, the U.S. EPA concluded that as an industry, freight railroads contribute only 0.5% of nationwide GHG emissions and just 1.7% of the emissions from all transportation-related sources. In fact, railroads are one of the most environmentally efficient means of transportation available to freight customers. On average, trains are up to four times more fuel efficient than trucks, which means moving freight by train instead of truck reduces greenhouse gas emissions from fuel consumption by up to 75%. Union Pacific can move a ton of freight 454 miles on a single gallon of diesel fuel. If 25% of truck traffic moving at least 750 miles went by rail instead, annual greenhouse gas emissions would fall by more than 13.1 million tons. This is equivalent to removing 2.6 million automobiles from highways for one year or diverting more than 4 million tons of recyclable waste from landfills. In 2023, Union Pacific customers eliminated an estimated 22.5 million metric tons of GHG emissions by choosing the company's rail services over long haul truck. Union Pacific by the Numbers (2023): Route Miles: 32,693; Employees: 32,973; Revenue Carloads (thousands): 8,112; Locomotives: 7,154; Investment in Capital Expenditures: 3,606 million
[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

	End date of reporting year	Alignment of this reporting period with your financial reporting period	Indicate if you are providing emissions data for past reporting years
	12/31/2023	*Select from:* ☑ Yes	*Select from:* ☑ No

[Fixed row]

(1.4.1) What is your organization’s annual revenue for the reporting period?

24119000000

(1.5) Provide details on your reporting boundary.

(1.5.1) Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?

Select from:

☑ No

(1.5.2) How does your reporting boundary differ to that used in your financial statement?

Union Pacific is an operating company by principal business activity, therefore an operational control approach is used to set our organizational boundary for the purpose of reporting annual GHG emissions. Using the selected approach, UPRR accounts for 100 percent of the GHG emissions over assets it controls in operational terms, including leased assets. UPRR does not account for GHG emissions in operations where it owns an interest but lacks operational control. We annually review the list of corporate subsidiaries, joint ventures, and partnerships included in our GHG inventory and update our inventory when a merger or acquisition occurs that materially affects our inventory. In early 2023, UPRR acquired MHX, a transloading company. A review of MHX operations concluded the acquisition did not result in a material change to the inventory. Our Scope 1, 2, and 3 public reporting footnotes the GHG contribution of MHX, a transload subsidiary acquired by Union Pacific in February 2023. MHXs GHG emissions for all of 2023 were estimated as: Scope 1: 6,385 mtons CO2e, Scope 2: 77 mtons CO2e, and Scope 3 (categories 6 & 9): 3,787 tons CO2e. For perspective, the 2023 Scope 1 emissions of MHX comprise less than 0.07% of Union Pacific's total Scope 1 GHG emissions over the same period.
[Fixed row]

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

	Does your organization use this unique identifier?	Provide your unique identifier
ISIN code - equity	*Select from:* ☑ Yes	*US9078181081*
Other unique identifier	*Select from:* ☑ No	*Rich text input [must be under 50 characters]*

[Add row]

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

Select all that apply

☑ United States of America

(1.8) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
	Select from: ☑ No, this is confidential data	*This is confidential data.*

[Fixed row]

(1.21) For which transport modes will you be providing data?

Select all that apply

☑ Rail

(1.24) Has your organization mapped its value chain?

(1.24.1) Value chain mapped

Select from:

☑ No, but we plan to do so within the next two years

(1.24.4) Highest supplier tier known but not mapped

Select from:

☑ Tier 1 suppliers

(1.24.8) Primary reason for not mapping your upstream value chain or any value chain stages

Select from:

☑ Not an immediate strategic priority

(1.24.9) Explain why your organization has not mapped its upstream value chain or any value chain stages

Not an immediate strategic priority.
[Fixed row]

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

(1.24.1.1) Plastics mapping

Select from:

☑ No, and we do not plan to within the next two years

(1.24.1.5) Primary reason for not mapping plastics in your value chain

Select from:

☑ Judged to be unimportant or not relevant

(1.24.1.6) Explain why your organization has not mapped plastics in your value chain

Mapping plastic usage throughout our value chain is not a high priority for us because we are a freight railroad. Our primary focus is on transporting goods rather than manufacturing or using plastics.
[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

0

(2.1.3) To (years)

3

(2.1.4) How this time horizon is linked to strategic and/or financial planning

The short-term planning horizon encompasses the period in which climate-related decisions are made based on the assets already in place.

Medium-term

(2.1.1) From (years)

3

(2.1.3) To (years)

10

(2.1.4) How this time horizon is linked to strategic and/or financial planning

The medium-term horizon aligns with our 2030 near-term SBTi GHG emissions target.

Long-term

(2.1.1) From (years)

10

(2.1.2) Is your long-term time horizon open ended?

Select from:
☑ No

(2.1.3) To (years)

30

(2.1.4) How this time horizon is linked to strategic and/or financial planning

These time horizons align with our climate scenario analysis and climate action strategies. When identifying, assessing and responding to long-term climate-related impacts, UP defines long-term as up to 30 years in the future.
[Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	Process in place	Dependencies and/or impacts evaluated in this process
	Select from: ☑ Yes	*Select from:* ☑ Both dependencies and impacts

[Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Biodiversity

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Impacts

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

(2.2.2.4) Coverage

Select from:

☑ Partial

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ As important matters arise

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

(2.2.2.12) Tools and methods used

Other

☑ External consultants

☑ Internal company methods

☑ Partner and stakeholder consultation/analysis

☑ Other, please specify :Our reviews also follow the federal level Clean Water Act Section 404 (CWA) and all resources included in the CWA's guidance.

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Local communities

☑ Indigenous peoples

☑ Regulators

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

Before starting construction projects, our teams engage early to identify and assess potential environmental impacts. We also coordinate externally with regulators, experts, local municipalities and Indigenous communities to inventory and identify critical habitat, endangered species, sensitive areas as well as archaeological and heritage features to minimize impacts. Where impacts are unavoidable, we fund the replacement of wetland, aquatic resources, and/or endangered species lost due to our impacts or purchase credits in approved mitigation banks. After project construction activities conclude, we monitor our mitigation measures and make necessary adjustments. This allows us to verify that our biodiversity initiatives are functional and effective, which helps improve the design and delivery of future projects. We consider the specific environmental and regulatory context when completing maintenance, growth, remediation, and/or emergency response projects across our network. We define our operational sites to include bridge replacement and facility construction sites, commercial facilities construction projects, and new railroad capacity (main line, siding, and yard) construction projects where our experience and evaluation protocols determine that a likelihood of potential impacts to waterways/wetlands/species exists. We review and manage sensitive resources (endangered species, migratory birds, etc.) as required by federal and state law. Our reviews follow the federal level Clean Water Act Section 404 (CWA) and all resources included in the CWA's guidance. This includes jurisdictional waterways and wetlands, threatened and endangered species, and cultural/historical/tribal resources. We conducted environmental and biodiversity impact evaluations on 1,318 bridge, capacity and commercial facilities construction sites from 2019-2023. Of these locations, approximately 1,250 involved the eventual utilization of biodiversity management plans in consideration of waterways, wetlands, and threatened and endangered species and migratory birds. For these locations, we followed the regulatory bodies' prescribed guidance for how to manage issues and impacts associated with these resources. We do not track area estimates for these projects.

Row 2

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Not location specific

(2.2.2.12) Tools and methods used

Enterprise Risk Management

☑ COSO Enterprise Risk Management Framework

☑ Internal company methods

Other

☑ Desk-based research

☑ External consultants

☑ Internal company methods

☑ Scenario analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Flood (coastal, fluvial, pluvial, ground water)

☑ Heavy precipitation (rain, hail, snow/ice)

☑ Wildfires

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Suppliers

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ Yes

(2.2.2.16) Further details of process

Union Pacific has identified "climate-related risk" as an enterprise risk in its Annual Report Form 10K. In 2022, we completed our first climate scenario analysis (CSA), a rigorous assessment of the climate-related risks and opportunities we may face under a range of potential climate scenarios. In 2023, our CSA risks were mapped against our enterprise risk management framework to help us manage climate-related risks and opportunities. Overarching Risk/Opportunity Identification Process: The company collects and assesses information regarding climate-related risks and opportunities at the operational performance level (short-term 0-3 years), infrastructure health level (medium-term 3-10 years), and long-term business strategy level (long-term 10-30 years) at least once a year. This risk and opportunity process incorporates bottom-up input from multiple departments, including Finance, Strategic Planning, Sustainability, Operations, Engineering, Law, Marketing & Sales, Corporate Relations, Finance, and the Fuel & Environmental Management Team. Risks and opportunities identified as high probability and/or high cost events are addressed as priority items within our overall risk/opportunity management process by the Enterprise Risk Management (ERM) Committee, which manages our multi-disciplinary company-wide risk management process. The ERM Committee meets monthly to monitor enterprise risk indicators, and coordinate risk assessment and mitigation initiatives. Overarching Risk/Opportunity Assessment and Response Process: Union Pacific assesses these impacts in terms of likelihood and magnitude of the impact, then determines a response strategy (to mitigate, transfer, accept or avoid) the identified climate-related risks and to capitalize on opportunities, and monitors progress. Management (including the Enterprise Risk Management Committee) identifies and prioritizes enterprise risks, including climate-related risks, and regularly presents them to the Board for its review and consideration. The senior executives responsible for implementation of appropriate mitigation strategies for the company's top enterprise risks, along with the Chief Accounting, Risk and Compliance officer, provide reports directly to the Audit Committee and/or the Board during the year. The process includes an assessment of cost, materiality and probability, with higher or more severe assessments along any off those three dimensions receiving higher prioritization and attention. In each case, the criteria for materiality and priorities are dictated first and foremost by an

analysis of impacts to health and safety. Evaluation of impacts to customer service, and the environment also dictate materiality and priority. These criteria are not mutually exclusive and can overlap.
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:
☑ Yes

(2.2.7.2) Description of how interconnections are assessed

In 2022, our climate scenario analysis considered the impact of chronic physical transition risks to our company. As our operations span 23 states and are conducted largely outdoors, long-term changes in weather patterns, such as secular shifts in annual temperature and precipitation levels, represent a risk to our infrastructure and our work patterns. We assess the interconnections between our environmental dependencies (temperature, precipitation, and water) using a variety of methods specific to the type of infrastructure and operational risks we are considering. Examples are given below: 1) Our assessment of dependencies on precipitation and water is location-specific. Plans prioritize locations with repeated high water events as identified by our historical data and forward-looking climate trend analysis. Additional qualitative and quantitative analysis of candidate projects prioritizes potential flood/washout locations that have 1) additional infrastructure at-risk factors that make them more susceptible to failure, 2) a critical role in our operational fluidity, such as being a major classification yard, 3) have higher train traffic, and 4) adjacent external stakeholders, such as customers or communities. Prioritized projects undergo additional engineering analysis to identify the type of resiliency capital improvement will be most effective, such as reestablishing the drainage system of culverts and ditches, embankment stabilization, working with adjacent landowners to reroute drainage, or nature-based solutions, such as plantings for erosion control. Chronic shifts in climate patterns, such as increased temperatures could cause rail to expand and buckle, resulting in more track repairs or speed restrictions to avoid derailments. We have engaged our infrastructure maintenance teams to understand the impact of rising temperatures on our track structure and are evaluating ways to refine our inspection and maintenance practices to improve our operational resiliency in the face of higher temperatures. In addition, shifts in climate patterns can also impact the markets and commodities we move. In 2022, we completed an analysis focused on potential impacts to UP's bulk agricultural commodity revenues via climate change-driven impacts to agriculture yields. Projected yield decreases in certain crops were offset by increases in other crop types, or increased yields for the same crop type in other states. Qualitative analysis of the dynamics of agricultural commodities markets revealed that international markets and crop yields are also an important driver in the amount of crop shipment revenue enjoyed by Union Pacific. Further analysis of international climate change-driven crop yields is a necessary next step in understanding this type of climate risk.
[Fixed row]

(2.3) Have you identified priority locations across your value chain?

(2.3.1) Identification of priority locations

Select from:

☑ Yes, we have identified priority locations

(2.3.2) Value chain stages where priority locations have been identified

Select all that apply

☑ Direct operations

(2.3.3) Types of priority locations identified

Sensitive locations

☑ Areas important for biodiversity

(2.3.4) Description of process to identify priority locations

We review and manage sensitive resources (endangered species, migratory birds, etc.) as required by federal and state law. Our reviews follow the federal level Clean Water Act Section 404 (CWA) and all resources included in the CWA's guidance. This includes jurisdictional waterways and wetlands, threatened and endangered species, and cultural/historical/tribal resources. We define our operational sites to include bridge replacement and facility construction sites, commercial facilities construction projects, and new railroad capacity (main line, siding, and yard) construction projects where our experience and evaluation protocols determine that a likelihood of potential impacts to waterways/wetlands/species exists. Before starting construction projects, our teams engage early to identify and assess potential environmental impacts. We also coordinate externally with regulators, experts, local municipalities and Indigenous communities to inventory and identify critical habitat, endangered species, sensitive areas as well as archaeological and heritage features to minimize impacts. We conducted environmental and biodiversity impact evaluations on 1,318 bridge, capacity and commercial facilities construction sites from 2019-2023. Of these locations, approximately 1,250 involved the eventual utilization of biodiversity management plans in consideration of waterways, wetlands, and threatened and endangered species and migratory birds. For these locations, we followed the regulatory bodies' prescribed guidance for how to manage issues and impacts associated with these resources. We do not track area estimates for these projects.

(2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

☑ No, we have a list/geospatial map of priority locations, but we will not be disclosing it

[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Direct operating costs

(2.4.3) Change to indicator

Select from:

☑ Absolute increase

(2.4.7) Application of definition

Union Pacific defines a substantive financial or strategic impact to be a significant impact on the company's Annual Plan achievement, defined as a material adverse effect on the Union Pacific's financial condition, results of operations or liquidity, and which could cause those results to differ materially from those expressed or implied in the Company's forward-looking statements, resulting in the potential for customer or shareholder concern. In the case of costs that exceed the Union Pacific's regular forecasts, our company may provide its shareholders with an estimate of the impact the event may have had on the company's financial results. For example, in 2021, the Company notified investors via an 8-K filing that the financial impact-including revenue, operating expenses and capital investment, of Winter Storm Uri, California wildfires, and heavy rains experienced during 2021 in the South and Southeast part of the Company's network exceeded 100 million through September 17, 2021.
[Add row]

(2.5) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

(2.5.1) Identification and classification of potential water pollutants

Select from:

☑ Yes, we identify and classify our potential water pollutants

(2.5.2) How potential water pollutants are identified and classified

The company commits to complying with national water quality standards and regulations. We have built infrastructure and processes to discharge effluent wastewater safely and meet federal, state, and local compliance obligations, minimizing our impact on the environment. To protect waters of the United States from stormwater runoff, Union Pacific has implemented and maintains Stormwater Pollution Prevention Plans (SWPP) and Spill Prevention, Control, and Countermeasure (SPCC) plans at appropriate facilities. The plans cover all facilities where maintenance of locomotives and rail cars occurs and identify inspections, maintenance, and best management practices to ensure the stormwater that contacts our facilities is not contaminated. The company self-reports effluent exceedances and routinely completes a post incident analysis to investigate root causes and implement corrective actions as part of the environmental policy's commitment to continuous improvement.
[Fixed row]

(2.5.1) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Row 1

(2.5.1.1) Water pollutant category

Select from:

☑ Oil

(2.5.1.2) Description of water pollutant and potential impacts

Stormwater runoff and/or spills at facilities where maintenance of locomotives and rail cars occurs could, if unmitigated by stormwater pollution prevention or control and countermeasure actions, adversely impact water quality in surrounding ecosystems.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience

☑ Industrial and chemical accidents prevention, preparedness, and response

☑ Provision of best practice instructions on product use

(2.5.1.5) Please explain

We have built infrastructure and processes to discharge effluent wastewater safely to meet federal, state, and local compliance obligations, and minimize our impact on the environment. Our wastewater treatment facilities are designed to capture and process wastewater from our fueling and maintenance operations. We treat and discharge wastewater in accordance with state and federal requirements and regularly report per permit requirements. Union Pacific is strengthening its wastewater infrastructure by investing in new industrial wastewater treatment plants, which indicate ultrafiltration systems. To protect waters of the United States from stormwater runoff, Union Pacific has implemented and maintains Stormwater Pollution Prevention Plans and Spill Prevention, Control, and Countermeasure plans. The plans cover all facilities where maintenance of locomotives and rail cars occurs and identify inspections, maintenance, and best management practices to ensure the stormwater that contacts our facilities is not contaminated. The company self-reports effluent exceedances and routinely completes a post incident analysis to investigate root causes and implement corrective actions as part of the environmental policy's commitment to continuous improvement.
[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

(3.1.1) Environmental risks identified

Select from:

☑ Yes, both in direct operations and upstream/downstream value chain

Water

(3.1.1) Environmental risks identified

Select from:

☑ No

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Environmental risks exist, but none with the potential to have a substantive effect on our organization

(3.1.3) Please explain

To date, the company has not identified substantive financial or strategic impacts from water risks associated with its value chain, e.g., the acquisition of materials from suppliers. To assess this risk in connection with our supply chain, in 2020 the company engaged its top five (5) suppliers based on total spend in the operating expense category of "purchased services and materials." Our assessment of key responses revealed a low likelihood of impact to key activities that support Union Pacific's business operations. The risk from customers may be slightly more significant since a lack of water resources to support customer operations can potentially impact customer demand for Union Pacific's services. However, we do not believe this risk rises to the level of a substantive financial or strategic impact.

Plastics

(3.1.1) Environmental risks identified

Select from:

☑ No

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Environmental risks exist, but none with the potential to have a substantive effect on our organization

(3.1.3) Please explain

To date, the company has not identified substantive financial or strategic impacts from plastics in our organization.
[Fixed row]

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk1

(3.1.1.3) Risk types and primary environmental risk driver

Market

☑ Changing customer behavior

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Downstream value chain

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ United States of America

(3.1.1.9) Organization-specific description of risk

Our company's railroad network supports the transportation of coal shipments to independent and regulated power companies and industrial facilities throughout the U.S. Coal shipments contributed over 7% of our company's revenue in 2023, and about 10% of our revenue carloads. According to the U.S. Energy Information Administration (EIA), the percentage of U.S. electricity generated from coal will continue to decline from approximately 39% in 2014 to 17% in 2023. Over a similar period (2014-2023), UP revenue from coal dropped over 50%. Significant cost increases, government regulation, or changes of consumer preferences for goods or services relating to alternative sources of energy, emissions reductions, and GHG emissions could materially affect the markets for the commodities we carry and demand for our services, which in turn could have a material adverse effect on our operations, financial condition, and liquidity. Decreasing cost for renewable energy, including solar, combined with various federal and state regulatory initiatives aimed at reducing the use of fossil fuels and promoting the adoption of renewable energy sources, continues to reduce the demand for coal over the long term, and this will have a continued anticipated impact on UP's shipment of fossil fuel commodities.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Change in revenue mix and sources

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Very likely

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

*Union Pacific assessed the potential revenue impacts of a changing electricity generation mix to our bulk business segment during our climate scenario analysis. In this analysis, we evaluated how current revenues from coal transportation to US utilities (1,321,866,226 in 2021) could change by 2050 in a business-as-usual and low-carbon scenario based on energy demand forecasts through EnerData. We determined that in a business-as-usual scenario, demand for coal could decline 87.45% by 2050 (1,321,866,226 * 87.45% 1,155,972,014) and in a low-carbon scenario, demand for coal could decline by 99.93% by 2050 (1,321,866,226 * 99.93% 1,320,940,919). The financial figures represent the total potential exposure, before any risk mitigation action. UP also evaluated the potential revenue impacts from other demand indicators (coal consumption in industry, coal consumption in exports, etc.), though the results from these analyses are less material overall compared to power generation in the U.S.*

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

1155972014

(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

1320940919

(3.1.1.25) Explanation of financial effect figure

Union Pacific assessed the potential revenue impacts of a changing electricity generation mix to our bulk business segment during our climate scenario analysis. In this analysis, we evaluated how current revenues from coal transportation to US utilities (1,321,866,226 in 2021) could change by 2050 in a business-as-usual and

*low-carbon scenario based on energy demand forecasts through EnerData. We determined that in a business-as-usual scenario, demand for coal could decline 87.45% by 2050 (1,321,866,226 * 87.45% 1,155,972,014) and in a low-carbon scenario, demand for coal could decline by 99.93% by 2050 (1,321,866,226 * 99.93% 1,320,940,919). The financial figures represent the total potential exposure, before any risk mitigation action. UP also evaluated the potential revenue impacts from other demand indicators (coal consumption in industry, coal consumption in exports, etc.), though the results from these analyses are less material overall compared to power generation in the U.S.*

(3.1.1.26) Primary response to risk

Diversification

☑ Develop new products, services and/or markets

(3.1.1.27) Cost of response to risk

1

(3.1.1.28) Explanation of cost calculation

Union Pacific expects to be able to continue to support most customers that choose to ship renewable energy, including renewable energy feedstock and wind power generation infrastructure via our current rail infrastructure and cannot further quantify the cost of responding to the risk due to restrictions governing public disclosure of sensitive forward-looking financial information. Therefore, Union Pacific is estimating the cost to realize the opportunity to be more than 1.00.

(3.1.1.29) Description of response

Company Specific Situation/Task: Decreasing cost for renewable energy, including solar, combined with various federal and state regulatory initiatives aimed at reducing the use of fossil fuels and promoting the adoption of renewable energy sources, continues to reduce the demand for coal over the long term, and this will have a continued anticipated impact on UP's shipment of fossil fuel commodities. Company Specific Actions: To mitigate the aforementioned market risk, the company is working to increase market share in the transportation of renewable energy infrastructure and alternative fuels. We are actively engaging with existing and potential customers to position the logistics and environmental benefits that rail offers, quickly realizing new production of biodiesel from new production coming online. Efforts include customer education and outreach through our sales and marketing department, including educating current and potential customers on how to ship renewable fuel and feedstocks by rail.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk2

(3.1.1.3) Risk types and primary environmental risk driver

Acute physical

☑ Flooding (coastal, fluvial, pluvial, groundwater)

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ United States of America

(3.1.1.9) Organization-specific description of risk

As a railroad with a vast network, UP is exposed to severe weather conditions and other natural phenomena, including precipitation extremes such as flooding and droughts, and secondary consequences like wildfires, which can impact business operations, decrease train velocity, cause delays, and disrupt customer service. Extreme weather events also impact the company by increasing track repair, roadbed restoration and maintenance costs. Moreover, line outages or other disruptions in one region of the network have adversely affected operations, with subsequent loss of revenue, in other regions, or the entire rail network. Precipitation extremes and droughts can also create harsh work environments for employees, many of whom work outside while restoring the rail lines impacted by weather extremes, further increasing rail restoration, repair, and maintenance costs. These events can happen throughout our network but are primarily a concern on floodplains or in mountainous regions. Two areas at significant risk of acute physical risk events are segments of track through Oregon and California, the upper Mississippi (Nebraska, Iowa, and Missouri) and Texas. Approximately 46% of our total network track miles are located in those states, and many of our key operating terminals are located there.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ More likely than not

(3.1.1.14) Magnitude

Select from:

☑ Medium

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Acute flooding-related operation disruptions can affect UP financially. However, the financial impact of an acute weather event is highly dependent on many factors, including but not limited to the type of event, the length of time required to address and restore our infrastructure, the amount of revenue traffic demand potentially at risk due to the event, the event's location on our network, and whether nearby track routes are available to reroute trains. The financial impact figure of 44 million provided in this disclosure represents the 2019-2023 average annual total infrastructure recovery costs of major acute weather-related events (defined as having at least 1 million in infrastructure recovery costs per event. This figure is not representative of total annual costs but instead provides an estimate of the potential infrastructure impact of future similar localized acute weather events.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.19) Anticipated financial effect figure in the short-term – minimum (currency)

44000000

(3.1.1.20) Anticipated financial effect figure in the short-term – maximum (currency)

44000000

(3.1.1.25) Explanation of financial effect figure

Acute flooding-related operation disruptions can affect UP financially. However, the financial impact of an acute weather event is highly dependent on many factors, including but not limited to the type of event, the length of time required to address and restore our infrastructure, the amount of revenue traffic demand potentially at risk due to the event, the event's location on our network, and whether nearby track routes are available to reroute trains. The financial impact figure of 44 million provided in this disclosure represents the 2019-2023 average annual total infrastructure recovery costs of major acute weather-related events (defined as having at least 1 million in infrastructure recovery costs per event. This figure is not representative of total annual costs but instead provides an estimate of the potential infrastructure impact of future similar localized acute weather events.

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Improve maintenance of infrastructure

(3.1.1.27) Cost of response to risk

17000000

(3.1.1.28) Explanation of cost calculation

Due to the variability and uncertainty of the scope, scale, and location of an acute physical impact weather event on our network, Union Pacific cannot exactly quantify the amount of service recovery response costs for future years; therefore, Union Pacific is estimating the cost to respond to the risk to be 17 million, which is an average of the prior five year history provided above for annual investments made for flood mitigation improvement measures.

(3.1.1.29) Description of response

We have several programs that aim to manage acute flooding and precipitation risks, including acute weather readiness plans, emergency response plans, inspection programs and rapid-deployment teams to quickly restore operations. We utilize weather data to identify patterns and impacts of storms on our network. We also perform an in-depth review of historical storms and their impact to anticipate future needs. Advance weather warnings allow us to mobilize equipment and personnel in advance, preparing our railroad for extreme weather. In 2022, we explored exposure to extreme weather events, including flooding, during our climate scenario analysis and used customized downscaled climate modeling to further identify future high-risk areas. Once identified, the company addresses high-priority locations by adding or improving drainage or raising track embankments to manage water flow and harden those portions of the network to better protect fluidity of the rail system before damage occurs. Example of investments related solely to climate-related event mitigation include raising the height of the track profile to prevent water over the top of the rails, strengthening bridges to combat future flooding issues, and the addition or expansion of culverts to prevent flood waters from washing out the track. Timescale: Analysis of flood modeling project prioritization is ongoing, and projects are initiated and completed annually to address the higher-risk locations.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk3

(3.1.1.3) Risk types and primary environmental risk driver

Policy

☑ Carbon pricing mechanisms

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ United States of America

(3.1.1.9) Organization-specific description of risk

Union Pacific is currently exposed to current and potential future carbon pricing mechanisms because of our corporate GHG emissions, especially Scope 1 emissions, which result from the combustion of fuel in our fleet and facilities. For example, our operations in California are currently exposed to the California Cap and Trade System, and in this region, we have seen fuel prices increase. Union Pacific's Scope 2 and Scope 3 emissions are also exposed indirectly, as supplier could pass on carbon costs to our organization.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Increased indirect [operating] costs

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ About as likely as not

(3.1.1.14) Magnitude

Select from:

☑ Medium

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Restrictions, caps, taxes, or other controls on emissions of GHGs, including diesel exhaust, could significantly increase our operating costs. Restrictions on emissions could also affect our customers that (a) use commodities that we carry to produce energy, (b) use significant amounts of energy in producing or delivering the commodities we carry, or (c) manufacture or produce goods that consume significant amounts of energy or burn fossil fuels, including chemical producers, farmers and food producers, and automakers and other manufacturers. Significant cost increases, government regulation, or changes of consumer preferences for goods or services relating to alternative sources of energy, emissions reductions, and GHG emissions could materially affect the markets for the commodities we carry and demand for our services, which in turn could have a material adverse effect on our results of operations, financial condition, and liquidity. Government incentives encouraging the use of alternative sources of energy also could affect certain of our customers and the markets for certain of the commodities we carry in an unpredictable manner.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

310959375

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

2404519782

(3.1.1.25) Explanation of financial effect figure

*The potential financial impact range was calculated by multiplying our corporate GHG emissions by an assumed carbon price for the years 2021-2050, based on the carbon pricing assumptions from our Climate Scenario Analysis. Specifically, UP evaluated a low-carbon scenario where carbon pricing is 130/tCO2e in 2030, 205/tCO2e in 2040, and 250/tCO2e in 2050. The minimum and maximum financial exposure was estimated based on 2 UP emissions scenarios – a business as usual scenario (maximum) where UP emissions remained flat throughout the 2021-2050 forecast period and a science-based target scenario (minimum) where UP meets its current science-based target and sets and achieves and net-zero science-based target by 2050. UP also made assumptions about cost passthrough rates for each emissions scope. Scope 1 passthrough rate 100%, Scope 2 passthrough rate 65%, Scope 3 passthrough rate 42%. The maximum financial impact figure in 2050 was calculated as [(9,236,742 Scope 1 * 100%) (208,904 Scope 2 * 65%) (584,642 Scope 3 * 42%)] * 250/tCO2e 2,404,519,782. The minimum financial impact figure in 2050 was calculated as [(1,127,968 Scope 1 * 100%) (46,045 Scope 2 * 65%) (204,620 Scope 3 * 42%)] * 250/tCO2e 310,959,375.*

(3.1.1.26) Primary response to risk

Policies and plans

☑ Participation in environmental collaborative industry frameworks, initiatives and/or commitments

(3.1.1.29) Description of response

Locomotive operations are the main driver of our total GHG footprint. A key enabler of meeting our near-term GHG reduction target is increasing our utilization of renewable, low-carbon fuels in our locomotives. We work with fuel supply-chain partners to secure supplies of low-carbon fuels to meet our current and projected future needs. This includes creating logistics solutions to enable the refueling of locomotives with biofuel blends at new locations on our network; establishing commercial contracts for biodiesel with our suppliers; exploring market-based ways to reduce the cost premium for biofuels over fossil fuel-based diesel; and making cooperative efforts to encourage efficient, circular shipping of biofuels and biofuel feedstocks by rail. We are actively collaborating with other Class I railroads and domestic locomotive manufacturers to test and approve the use of biofuels. In 2023, these and other testing collaborations led to both major locomotive manufacturers certifying the utilization of blends of up to 50% renewable diesel and 11% biofuel in locomotives. We are also collaborating with our industry and fuel suppliers to advocate for mode-neutral programs that promote fair market access to biofuels, including renewables, and their feedstocks across different transportation modes and consumers. In 2023, our consumption of low-carbon fuels reached 6.1% of total diesel used, up from 4.5% in 2022.
[Add row]

(3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

Climate change

(3.1.2.1) Financial metric

Select from:

☑ Other, please specify **:**Revenue from transporting coal

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

1320940919

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

☑ 91-99%

(3.1.2.7) Explanation of financial figures

*The use of coal and other fossil fuel commodities to generate electricity has declined due to climate transition impacts on coal as a desirable commodity for producing energy, complex regulatory frameworks, and market conditions. According to the Energy Information Administration (EIA) Energy Outlook, the percentage of U.S. electricity generated by coal has declined from approximately 57% in 1988 to 16% in 2022, while the percentage of electricity generated from renewable energy rose from 12% in 1990 to about 22% in 2023. The EIA further projects that coal's share of U.S. electricity production will fall to about 10% in 2050. This secular shift will impact Union Pacific revenues due to decreased demand for coal. The company has responded by increasing support for customers that generate power from renewables, including renewable fuels feedstocks and wind and solar energy equipment components. Union Pacific assessed the potential revenue impacts of a changing electricity generation mix to our bulk business segment during our 2022 climate scenario analysis. In this analysis, we evaluated how current revenues from coal transportation to US utilities (1,321,866,226 in 2021) could change by 2050 in a business-as-usual and low-carbon scenario based on energy demand forecasts through EnerData. We determined that in a business-as-usual scenario, demand for coal could decline 87.45% by 2050 (1,321,866,226 * 87.45% 1,155,972,014) and in a low-carbon scenario, demand for coal could decline by 99.93% by 2050 (1,321,866,226 * 99.93% 1,320,940,919). The financial figures represent the total potential exposure, before any risk mitigation action. UP also evaluated the potential revenue impacts from other demand indicators (coal consumption in industry, coal consumption in exports, etc.), though the results from these analyses are less material overall compared to power generation in the U.S.*
[Add row]

(3.3) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

(3.3.1) Water-related regulatory violations

Select from:

☑ Yes

(3.3.2) Fines, enforcement orders, and/or other penalties

Select all that apply

☑ Fines

☑ Enforcement orders or other penalties

(3.3.3) Comment

Only those fines or penalties amounting to over 10,000 have been included. The values refer to the year in which the incident occurred, not when the fine or penalty was paid.
[Fixed row]

(3.3.1) Provide the total number and financial value of all water-related fines.

(3.3.1.1) Total number of fines

0

(3.3.1.2) Total value of fines

0

(3.3.1.3) % of total facilities/operations associated

0

(3.3.1.4) Number of fines compared to previous reporting year

Select from:

☑ Lower

(3.3.1.5) Comment

Only those fines or penalties amounting to over 10,000 have been included. The values refer to the year in which the incident occurred, not when the fine or penalty was paid.
[Fixed row]

(3.3.2) Provide details for all significant fines, enforcement orders and/or other penalties for water-related regulatory violations in the reporting year, and your plans for resolving them.

Row 1

(3.3.2.1) Type of penalty

Select from:

☑ Fine

(3.3.2.2) Financial impact

0

(3.3.2.5) Description of penalty, incident, regulatory violation, significance, and resolution

Only those fines or penalties amounting to over 10,000 have been included. The values refer to the year in which the incident occurred, not when the fine or penalty was paid.
[Add row]

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

Select from:

☑ Yes

(3.5.1) Select the carbon pricing regulation(s) which impact your operations.

Select all that apply
☑ California CaT - ETS

(3.5.2) Provide details of each Emissions Trading Scheme (ETS) your organization is regulated by.

California CaT - ETS

(3.5.2.1) % of Scope 1 emissions covered by the ETS

4.3

(3.5.2.2) % of Scope 2 emissions covered by the ETS

0

(3.5.2.3) Period start date

01/01/2023

(3.5.2.4) Period end date

12/31/2023

(3.5.2.5) Allowances allocated

0

(3.5.2.6) Allowances purchased

0

(3.5.2.7) Verified Scope 1 emissions in metric tons CO2e

9156525

(3.5.2.8) Verified Scope 2 emissions in metric tons CO2e

215799

(3.5.2.9) Details of ownership

Select from:

☑ Facilities we own and operate

(3.5.2.10) Comment

Union Pacific's strategy to comply with California's Global Warming Solutions Act is to: 1) report our greenhouse gas emissions as required by the California Air Resources Board's (CARB) Mandatory Reporting Rule, and 2) purchase compliance instruments prior to the deadline for surrender as required by CARB's Cap and Trade Rule. Union Pacific is required to participate in CARB's cap-and-trade program under the California Global Warming Solutions Act and implementing regulations due to fuel delivered to tanks at four California railroad facilities (yards) via pipeline, meeting the definition of a fuel supplier. Union Pacific must acquire, and later surrender, compliance instruments equal to the GHG emissions reported to CARB during the second compliance period beginning in 2015. The fourth compliance period is from 2021 to 2023. Compliance instruments are either allowances or offsets. An allowance is a tradable and bankable permit to emit one metric ton of CO2e in a specified year. An offset is a credit approved by CARB that is equivalent to reducing 1 MTCO2e. Union Pacific surrendered 183,477 compliance instruments in 2023 against the program's fourth compliance period. UP's 2023 cap-and-trade regulated emissions were 395,430 tonnes of CO2e for which UP will surrender 1,240,830 compliance instruments before November 1, 2024 per program guidelines. Compliance instruments to be surrendered in 2024 will come from inventory acquired in previous years. Union Pacific did not purchase allowances or offsets during 2023.
[Fixed row]

(3.5.4) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Union Pacific's strategy to comply with California's Global Warming Solutions Act is to: 1) report our greenhouse gas emissions as required by the California Air Resources Board's (CARB) Mandatory Reporting Rule, and 2) purchase compliance instruments prior to the deadline for surrender as required by CARB's Cap and Trade Rule. Union Pacific is required to participate in CARB's cap-and-trade program under the California Global Warming Solutions Act and implementing regulations due to fuel delivered to tanks at four California railroad facilities (yards) via pipeline, meeting the definition of a fuel supplier. Union Pacific must acquire, and later surrender, compliance instruments equal to the GHG emissions reported to CARB during each compliance period. Compliance instruments are either allowances or offsets. An allowance is a tradable and bankable permit to emit one metric ton of CO2e in a specified year. An offset is a credit approved by CARB that is equivalent to reducing 1 MTCO2e. UP surrendered 183,477 compliance instruments in 2023 against the program's fourth compliance period. UP's 2023 cap-and-

trade regulated emissions were 395,430 tonnes of CO2e for which UP will surrender 1,240,830 compliance instruments before November 1, 2024 per program guidelines. Compliance instruments to be surrendered in 2024 will come from inventory acquired in previous years. Union Pacific did not purchase allowances or offsets during 2023.

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Water	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Products and services

☑ Increased sales of existing products and services

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

Railroads are currently the most fuel-efficient way to move freight over land. As more of our customers set science-based targets and begin focusing on reducing their own environmental footprints, we are uniquely positioned to provide lower carbon transportation solutions that can help them reach their targets. Converting traffic to rail from truck offers our customers an immediate reduction in Scope 3 GHG emissions, which we believe will enable us to become a bigger part of our customers' value chains, especially in our intermodal business segment, which competes directly with long-haul trucking. Rail intermodal is the long-haul movement of shipping containers and truck trailers by rail, combined with a truck or water movement at one or both ends. Intermodal combines the best attributes of different transportation modes to yield an efficient, cost-effective total movement. Intermodal freight transport is utilized by a broad cross-section of shippers and represents a continuing, excellent opportunity for our business to convert shippers from truck to rail transportation. In 2022, intermodal accounted for 5.2 billion in revenue. Revenues from our domestic and international intermodal shipments were 19% of our total 2023 revenue. Over time, intermodal revenue could continue increasing as we grow market share by better positioning the environmental benefits with our customers, in conjunction with improved shipment reliability and lowered costs.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ More likely than not (50–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Union Pacific cannot specifically quantify the amount of that opportunity due to restrictions governing public disclosure of sensitive forward-looking financial information. Additionally, the level of measurement uncertainty is too high such that quantitative information about this opportunity would not be useful.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

To realize the opportunity, we are actively engaging with existing and potential customers to position the environmental benefits that rail offers for long-haul shipments of freight over truck. Efforts include customer education and outreach through our sales and marketing department, issuance of carbon emissions statements to customers alerting them to the GHG emissions they avoided in 2023 by utilizing our transportation services vs shipping via truck, and market research to determine which customer segments most value the environmental benefits of using our transport services. We actively work on opportunities to grow our intermodal business, whether by providing more services for our customers or by expanding our reach through new transload facilities or pop-up intermodal terminals. We continue to make significant investments in our infrastructure to support our service product, which include both intermodal-specific infrastructure investments as well as investments in our network to improve operational reliability and efficiency to continue to position us to customers as an attractive alternative to trucks. Additionally, in 2023 we finalized contracts to purchase and test four hybrid cranes for our intermodal yards. The first crane became operational at the end of 2023, and all four cranes are expected to be commissioned by the end of 2024. Three cranes will be used at our Global I and Global II intermodal terminals in the Chicago area, while the fourth will be used at our Los Angeles terminal. The cranes will function primarily on battery power, with the diesel generator kicking in only when needed to reduce low batteries. We expect these cranes will consume at least 65% less diesel than standard cranes, resulting in reductions in both greenhouse gas and criteria pollutants. During 2022-2023, we also invested in increasing our intermodal ramp capacity in large markets such as Chicago, Southern California and the Twin Cities. Ramp capacity is critical to meeting demand and converting truck traffic to rail transportation, thus reducing our customers' emissions and helping to reduce the huge economic costs of highway congestion.

Water

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp3

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Expansion into new markets

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Downstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

Recycling plastic is one of the most effective ways to reduce the amount of water being used in the production of materials. Not only does it help conserve precious water resources, but plastics recycling also helps to reduce the amount of plastic waste that ends up in landfills or oceans. Revenue from shipping plastics commodities comprised approximately 4% of our freight revenues in 2023. We are working directly with companies to provide rail transportation supporting the circular economy to recycle plastics. Circular economy initiatives can reduce resource intensity by recapturing waste for re-use and recycling or using less resource-intensive modes of transportation like rail.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues through access to new and emerging markets

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ More likely than not (50–100%)

(3.6.1.12) Magnitude

Select from:

☑ Low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Union Pacific cannot specifically quantify the amount of that opportunity due to restrictions governing public disclosure of sensitive forward-looking financial information. Additionally, the level of measurement uncertainty is too high such that quantitative information about this opportunity would not be useful.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

Union Pacific joined the Cyclyx consortium in 2022 to partner with its member companies and lend our expertise to develop supply chain solutions for increasing plastic recycling rates and advancing circular economies. Cyclyx is a plastic feedstock management company that works with industries to increase plastic recyclability. Their goal is to increase plastic recycling rates from 10% to 90% by working with industry partners to source, collect and pre-process large volumes of waste and redirect it to be recycled. One example of how we directly engaged a customer to develop a supply chain solution to increase plastics circularity: We worked with Natura PCR, the largest film/post-consumer resin (PCR) producer in the Americas, to invest in rail infrastructure at its Texas plant so it could receive inbound plastic waste by rail and ship outbound PCR product by rail to its customers. In addition to shipping large PCR volumes by rail, Natura PCR has also begun shipping plastic bags by rail through transloading, where trucks transport large bales of used plastic bags to a transload facility. There, they are transferred into rail cars for the long haul. They are then transloaded once more to trucks and make the short trip to their final destination.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp2

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Markets

☑ Expansion into new markets

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Downstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

We have an opportunity to grow carload volumes of renewable energy, including biofuels. We provide value to renewable fuels producers by transporting low-carbon fuels to the West Coast, where demand is the highest and producers can benefit from state and federal incentives. Our trains are ideal for shipping large volumes of freight, including renewable fuels and feedstocks. Compared to shipping by truck, we can reduce our customers' logistics carbon footprint and simultaneously provide cost savings on their shipments by delivering feedstocks to biofuels refineries and then transporting renewable fuels to consumption markets. States with high demand for biofuels, such as California and Texas, are on our network. In 2023, our revenue from renewable diesel fuel shipments has grown 250% since 2020, and renewable fuels use is expected to grow sharply over the short term as some traditional fuel producers make large investments in petroleum refineries to switch to renewable diesel. It is estimated U.S. renewable diesel production capacity will total 4.8 billion gallons per year by the end of 2024, compared to nearly 2.6 billion gallons of production capacity in 2022.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues through access to new and emerging markets

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ More likely than not (50–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium-low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Union Pacific cannot specifically quantify the amount of that opportunity due to restrictions governing public disclosure of sensitive forward-looking financial information.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

To realize the opportunity, we are actively engaging with existing and potential customers to position the logistics and environmental benefits that rail offers, quickly realizing new production of biodiesel from new production coming online. Efforts include customer education and outreach through our sales and marketing department, including educating current and potential customers on how to ship renewable fuel and feedstocks by rail. We have also become the first railroad to join

Clean Fuels Alliance America, the national trade association representing the biodiesel, renewable diesel and sustainable aviation fuel industries and supporting development of the renewable fuels market.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp4

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Resource efficiency

☑ Move to more energy/resource efficient buildings

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Direct operations

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

We utilize purchased electricity in our office locations to operate and light our yards and other car-handling facilities for 24/7 operations and operate our trackside signal and safety systems. In 2023, our Scope 2 emissions accounted for approximately 2.3% of our total calculated Scope 1 and 2 emissions. While this percentage may seem small in relation to our overall emissions footprint, we anticipate an increase in electricity usage over the long term as we transition our locomotive and passenger vehicle fleets from fossil fuel-based energy to electric power. As our electricity demand grows, it is crucial we prioritize sustainability, energy efficiency, cost-effectiveness and reliability in our future Scope 2 energy sources.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Reduced indirect (operating) costs

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Long-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The reduction in power consumption for LED lighting should result in annual electricity cost savings to the company.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

Since 2018, we have decreased our GHG emissions from Scope 2 sources by over 22%, driven in part by an ongoing portfolio of projects that increase the efficiency of our electricity consumption. In 2023, these projects included converting the existing lighting infrastructure from high intensity discharge (HID) to light-emitting diode (LED) technology at six of our operating yards in California, Texas, Kansas and Missouri. Use of LED fixtures in yards can be up to 40% more efficient than HID lighting. Estimated annual GHG reductions from these six projects total over 2,000 mtons CO2e. In addition to the above projects, we investigating decarbonization options for our electricity supply, such as onsite solar power generation and virtual power purchase agreements.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp5

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Resilience

☑ Participation in environmental collaborative industry frameworks, initiatives and/or commitments

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Upstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

Meeting our near-term SBTi emissions reduction target cannot depend on operational excellence and technology-enabled fuel efficiency alone. With 80% of our GHG emissions (Scope 1 and Scope 3, category 3) generated from the use of fuel in our rail operations, a key enabler of meeting our near-term GHG reduction target is increasing our utilization of renewable, low-carbon fuels in our locomotives. We have committed to the goal of increasing the percentage of renewable fuels consumed to 10% of our total diesel consumption by 2025 and 20% by 2030.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Other, please specify **:**Avoidance of higher R&D costs to test renewable fuels across our infrastructure

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

We cannot usefully estimate the amount of future cost avoidance opportunity in this row, given high uncertainty surrounding future renewable fuels pricing, ongoing testing of renewable fuels in locomotives, and future maintenance costs for locomotives that utilize renewable fuels.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

We are actively collaborating with other Class I railroads and domestic locomotive manufacturers to test and approve the use of biofuels. For example, four Union Pacific locomotives providing service to a San Bernardino, California, sand and gravel mine are running on 100% biomass-based fuel. Data gathered during tests is demonstrating the performance and reliability of their engines are comparable whether operated with biofuel or traditional diesel fuel. Our testing of 100% biomass-based fuel is continuing to progress with no serious issues. Data and experience obtained during the ongoing pilot study, expected to last until the end of 2025 if positive, will help us meet our goals. In 2023, these and other testing collaborations led to both major locomotive manufacturers certifying the utilization of blends of up to 50% renewable diesel and 11% biofuel in locomotives. We are working with these manufacturers and Class I freight railroads through the American Association of Railroads' Decarbonization Working Group to test and approve even higher blends of biofuel and renewable diesel. We are also collaborating with our industry and

fuel suppliers to advocate for mode-neutral programs that promote fair market access to biofuels, including renewables, and their feedstocks across different transportation modes and consumers.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp6

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Products and services

☑ Development of new products or services through R&D and innovation

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Downstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ United States of America

(3.6.1.8) Organization specific description

We have identified an evolving opportunity to help our customers meet their emissions reduction goals by moving their captured carbon dioxide for utilization (i.e., carbonated beverages) or sequestration for permanent underground storage. Transporting captured carbon dioxide by rail can further reduce emissions, making it a highly effective strategy for enhancing our customers' sustainability efforts. Additionally, sequestering carbon dioxide can potentially generate significant tax and carbon credits, providing a further economic incentive. Our network aligns with the primary permanent storage geological formations, and we offer customers: 1) speed to market through our established geography, without the need for additional permitting; 2) our experience shipping carbon dioxide by rail for utilization, and 3) the most environmentally responsible way to ship by land. Freight trains generate a carbon footprint that is, on average, up to 75 percent less than trucks, making rail a greener choice for companies seeking to reduce transportation emissions. We anticipate incremental carloads in the next 12 to 24 months, so customers can take

advantage of the 45Q Carbon Capture and 45Z Clean Fuel tax credits. According to a 2024 Wood MacKenzie report, the global carbon capture capacity will reach 440 Mtpa and storage capacity will reach 664 Mtpa, requiring US 196 billion in total investment.

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ About as likely as not (33–66%)

(3.6.1.12) Magnitude

Select from:

☑ Low

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Union Pacific cannot specifically quantify the amount of that opportunity due to restrictions governing public disclosure of sensitive forward-looking financial information. Additionally, the level of market uncertainty is too high such that quantitative information about this opportunity would not be useful.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ No

(3.6.1.26) Strategy to realize opportunity

To realize the opportunity, we have actively engaged in this market for over two years by completing a front-end loading engineering study, conducting joint carbon capture economic analyses with industry experts and emitters, identifying a carbon by rail offtake terminal location in SW Wyoming adjacent to Frontier Carbon Solutions underground Class VI storage wells, and working directly with various carbon dioxide emitters on full scope carbon capture as a service solutions.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ More frequently than quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Executive directors or equivalent

☑ Independent non-executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

Union Pacific's commitment to diversity and inclusion is based on our desire to create an environment where people can be their best, personally and professionally. Our employees are unique individuals. Our diverse perspectives come from many sources including gender, race, age, national origin, religion, sexual orientation, gender identity, disability and veteran status. From an employee's perspective, a diverse culture increases engagement, improves morale and supports safety. From a business perspective, diversity improves the company's decision making, problem solving, and strategic thinking, which translates into a competitive advantage with bottom-line results.

(4.1.6) Attach the policy (optional)

UP_ Diversity at Union Pacific.pdf,pdf_up_2023_build_america_rpt (1).pdf
[Fixed row]

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply
☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Other policy applicable to the board, please specify **:**Corporate Governance, Nominating and Sustainability Committee of the Board of Directors, Charter

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in some board meetings – at least annually

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Monitoring the implementation of a climate transition plan

☑ Overseeing and guiding the development of a business strategy

☑ Overseeing and guiding major capital expenditures

☑ Reviewing and guiding annual budgets

☑ Reviewing and guiding innovation/R&D priorities

(4.1.2.7) Please explain

The Board of Directors provides oversight of our sustainability strategy. The Corporate Governance, Nominating and Sustainability Committee is responsible for reviewing current developments in sustainability and recommends adoption of new, or modifications to existing practices, policies, and procedures.

Water

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Other policy applicable to the board, please specify :Corporate Governance, Nominating and Sustainability Committee of the Board of Directors, Charter

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Sporadic – agenda item as important matters arise

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Monitoring the implementation of the business strategy

(4.1.2.7) Please explain

The Board of Directors provides oversight of our sustainability strategy. The Corporate Governance, Nominating and Sustainability Committee is responsible for reviewing current developments in sustainability and recommends adoption of new, or modifications to existing practices, policies, and procedures.

Biodiversity

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Board-level committee

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Other policy applicable to the board, please specify :Corporate Governance, Nominating and Sustainability Committee of the Board of Directors, Charter

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Sporadic – agenda item as important matters arise

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Monitoring the implementation of the business strategy

(4.1.2.7) Please explain

The Board of Directors provides oversight of our sustainability strategy. The Corporate Governance, Nominating and Sustainability Committee is responsible for reviewing current developments in sustainability and recommends adoption of new, or modifications to existing practices, policies, and procedures.
[Fixed row]

(4.2) Does your organization's board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Other, please specify **:**Board level competency comes from a mix of professional experience, education, board-level accountabilities, and professional education (including substantive training provided by internal and external subject matter experts).

Water

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ No, and we do not plan to within the next two years

(4.2.4) Primary reason for no board-level competency on this environmental issue

Select from:

☑ Not an immediate strategic priority

(4.2.5) Explain why your organization does not have a board with competence on this environmental issue

Historically, Union Pacific has focused water-related efforts on ensuring it is compliant with federal, state, and local regulations and permitting requirements. The company has begun efforts to build internal awareness and quantification of water impacts up and down its value chain. Water resources are an immaterial component of our transportation service offerings, and not a competitive dimension in our product market space.
[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:*

	Management-level responsibility for this environmental issue
	☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Strategy and financial planning

☑ Implementing a climate transition plan

☑ Implementing the business strategy related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

This individual holds the highest level of direct responsibility for the company's environmental performance, management, compliance, and the pursuit of initiatives related to managing the negative impacts associated with climate change.

Water

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ As important matters arise

(4.3.1.6) Please explain

The CEO has overall responsibility for the company's environmental management and performance. The CEO supervises senior environmental management personnel who report to the Audit Committee and Board of Directors at least annually regarding the Company's implementation of its environmental policy, including all activities, progress, performance and risks relating to water (e.g., protection of water resources on company property; management of wastewater treatment operations at our facilities system-wide; testing the quality of water to be used for employee WASH purposes). The environmental management team, consisting of 67 employees, is responsible for implementing the company's environmental management system, communicating best practices to company personnel, and monitoring compliance with the company's environmental policy.

Biodiversity

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ President

(4.3.1.2) Environmental responsibilities of this position

Engagement

☑ Managing public policy engagement related to environmental issues

Policies, commitments, and targets

☑ Setting corporate environmental policies and/or commitments

Strategy and financial planning

☑ Developing a business strategy which considers environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ As important matters arise

(4.3.1.6) Please explain

Union Pacific's President has overall responsibility for the company's sustainability initiatives, including biodiversity, under the direction of our CEO.

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ President

(4.3.1.2) Environmental responsibilities of this position

Strategy and financial planning

☑ Implementing a climate transition plan

☑ Implementing the business strategy related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Other, please specify :Corporate Sustainability/CSR reporting line

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

The President is the highest ranking executive employee with direct responsibility for the company's environmental performance, management, compliance, and the pursuit of initiatives related to managing the negative impacts associated with climate change.

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Committee

☑ Sustainability committee

(4.3.1.2) Environmental responsibilities of this position

Engagement

☑ Managing supplier compliance with environmental requirements

☑ Managing value chain engagement related to environmental issues

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Measuring progress towards environmental corporate targets

☑ Measuring progress towards environmental science-based targets

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

☑ Implementing the business strategy related to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Sustainability Officer (CSO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

Senior leaders from Law, Finance, Marketing and Sales, Operations, Supply Chain, Environmental Management, Corporate Relations, Investor Relations, and Workforce Resources meet quarterly to drive decision-making, accountability and ownership of specific initiatives

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Other

☑ Other, please specify **:**VP, Strategy & Corporate Development

(4.3.1.2) Environmental responsibilities of this position

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

Strategy and financial planning

☑ Conducting environmental scenario analysis

☑ Developing a business strategy which considers environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Other, please specify :Corporate Sustainability/CSR reporting line

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ As important matters arise

(4.3.1.6) Please explain

Reporting to the President is the VP Strategy & Corporate Development who is responsible for developing and implementing UP's sustainability strategy

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Committee

☑ Risk committee

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Annually

(4.3.1.6) Please explain

The Board has delegated to the Audit Committee primary responsibility for oversight of risks related to financial and operational controls of the Company, as well as compliance, regulatory, sustainability, climate, and cyber risks. The Chief Accounting, Risk and Compliance Officer, who reports to the Chief Financial Officer and is responsible for the Company's enterprise risk management program, meets with the Audit Committee at each of its scheduled meetings. The Audit Committee regularly receives reports throughout the year from the Chief Accounting, Risk and Compliance Officer and the senior executives responsible for financial reporting processes and compliance, cybersecurity, and environmental and litigation matters. Additionally, the senior executives responsible for implementation of appropriate mitigation strategies for the Company's top enterprise risks provide reports and updates directly to the Audit Committee and/or the Board throughout the year.

Biodiversity

(4.3.1.1) Position of individual or committee with responsibility

Other

☑ Other, please specify **:**Management level responsibility

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Engagement

☑ Managing engagement in landscapes and/or jurisdictions

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Operating Officer (COO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ As important matters arise

(4.3.1.6) Please explain

Union Pacific's executive leadership in our Engineering Department have management-level responsibility for implementing a mitigation hierarchy approach in regards to biodiversity issues. These activities largely are conducted as Engineering evaluates construction capital projects to determine whether there would be impacts to threatened or endangered species, and designs those identified projects to avoid or minimize negative impacts.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

7

(4.5.3) Please explain

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, all of which directly impact emissions, are tied to executive compensation.

Water

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ No, and we do not plan to introduce them in the next two years

(4.5.3) Please explain

While we recognize the importance of water conservation and responsible water management, it is not a significant part of our day-to-day operations. Our commitment to sustainability and environmental responsibility is primarily addressed through various initiatives related to energy efficiency, emissions reduction, and resource conservation. These initiatives align with the nature of our business and the areas where we can have the most significant impact.
[Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Executive Officer (CEO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify **:**Trip plan compliance and biofuels utilization.

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Financial Officer (CFO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify :Trip plan compliance and biofuels utilization.

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Operating Officer (COO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify :Trip plan compliance and biofuels utilization

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Procurement Officer (CPO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify :Trip plan compliance & biofuel utilization.

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Government Relations Officer (CGRO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Risks Officer (CRO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify :Trip plan compliance & biofuel utilization.

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Sustainability Officer (CSO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify :Trip Plan Compliance & biofuel utilization

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Technology Officer (CTO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Emission reduction

☑ Other emission reduction-related metrics, please specify :Trip plan compliance & biofuel utilization.

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Long-Term Incentive Plan, or equivalent, only (e.g. contractual multi-year bonus)

(4.5.1.5) Further details of incentives

Under the 2023 Annual Incentive Plan approved by the Board, seventy percent (70%) of the target annual incentive cash bonuses paid to executives, including our NEOs, other than Mr. Vena, was based on the attainment of pre-established objective financial goals, equally weighted between operating income and operating ratio and twenty-percent (20%) was based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

To advance our sustainability governance efforts, we are continuing to evolve sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's trip plan compliance and use of biofuel goals, both of which directly impact emissions, are tied to executive compensation.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Corporate executive team

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Organization performance against an environmental sustainability index

Emission reduction

☑ Implementation of an emissions reduction initiative

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Short-Term Incentive Plan, or equivalent, only (e.g. contractual annual bonus)

(4.5.1.5) Further details of incentives

Performance on these initiatives is a part of this role's annual bonus.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Union Pacific has established performance goals that incentivize the VP Strategy & Corp Development to address climate change and sustainability issues as part of their performance rating and compensation.
[Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply
☑ Climate change

(4.6.1.2) Level of coverage

Select from:
☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

Union Pacific's Climate Lobbying Alignment assessment is a company-wide assessment of our lobbying activities and is in line with the goals of the Paris Agreement.

(4.6.1.5) Environmental policy content

Climate-specific commitments

☑ Commitment to not funding climate-denial or lobbying against climate regulations

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with the Paris Agreement

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

Climate Lobbying Alignment Assessment.pdf

Row 2

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Biodiversity

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

Union Pacific's Biodiversity Statement is a company-wide policy that lays out commitments related to Union Pacific's operations and their impacts on biodiversity.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to avoidance of negative impacts on threatened and protected species

☑ Other environmental commitment, please specify **:**Biodiversity mitigation hierarchy

Additional references/Descriptions

☑ Description of biodiversity-related performance standards

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ No, and we do not plan to align in the next two years

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

UP_ UP Biodiversity Statement.pdf

Row 3

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Climate change

☑ Water

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

(4.6.1.4) Explain the coverage

Our Environmental Policy is company-wide and covers our direct operations.

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Other environmental commitment, please specify **:**- Minimizing, recycling, and repurposing of waste - Ensuring compliance with environmental laws & regulations - Training for employees to understand the impact our operations have on the environment & ensure compliance - Managing and preserving biodiversity

Climate-specific commitments

☑ Other climate-related commitment, please specify **:**- Reducing carbon in operations - Conserving energy and investing in developing energy alternatives

Water-specific commitments

☑ Commitment to reduce water consumption volumes

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ No, and we do not plan to align in the next two years

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

UP_ Environmental Policy.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

(4.10.1) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Select from:

☑ Yes

(4.10.2) Collaborative framework or initiative

Select all that apply

☑ Science-Based Targets Initiative (SBTi)

☑ Task Force on Climate-related Financial Disclosures (TCFD)

☑ Other, please specify **:**Business Ambition for 1.5C

(4.10.3) Describe your organization’s role within each framework or initiative

We publish a comprehensive view into how Union Pacific understands and manages the risks and opportunities associated with climate change in our TCFD disclosure. It is available here: https://www.up.com/aboutup/esg/sustainability-metrics-frameworks/index.htm In 2022, we joined the Business Ambition for 1.5C, an alliance of more than 3,000 companies pledged to taking bold action to limit global warming to 1.5C. As part of that pledge, we committed to the Science Based Targets Initiative (SBTi) to revalidate our short-term target in line with the 1.5C global warming scenario and develop a long-term, science-based target to reach net-zero value chain GHG emissions by 2050. Our SBTi-approved target is displayed on their webpage here: https://sciencebasedtargets.org/companies-taking-action?ambitionToggle1#table
[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select all that apply

☑ Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

Select from:

☑ Yes, we have a public commitment or position statement in line with global environmental treaties or policy goals

(4.11.3) Global environmental treaties or policy goals in line with public commitment or position statement

Select all that apply

☑ Paris Agreement

(4.11.4) Attach commitment or position statement

Climate Lobbying Alignment Assessment.pdf

(4.11.5) Indicate whether your organization is registered on a transparency register

Select from:

☑ Yes

(4.11.6) Types of transparency register your organization is registered on

Select all that apply

☑ Mandatory government register

(4.11.7) Disclose the transparency registers on which your organization is registered & the relevant ID numbers for your organization

Organizations: U.S. House of Representatives and United States Senate House ID 320170000 Senate ID 38995-12

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

It is important we ensure our direct and indirect climate-related lobbying activities are aligned with the goals of the Paris Agreement as well as our own climate-related targets and ambitions. Thus, Union Pacific published its first Climate Lobbying Alignment Assessment in 2023, and updated it in 2024. The purpose of this assessment was to facilitate responsive and open stakeholder communication regarding our position on climate change and how that position aligns with the organizations where we are members. We reviewed publicly available information for each of the trade associations detailed in the assessment to determine whether its respective position on climate change and related lobbying efforts align with the Paris Agreement and Union Pacific's position on climate change. This assessment includes trade associations where we made non-deductible 2023 payments attributable to lobbying activities in excess of 25,000. We exclude state railroad membership associations, even if our non-deductible payments exceeded 25,000, because these organizations' lobbying activities are limited to the positions endorsed by Union Pacific and the Association of American Railroads. Union Pacific executives review our trade association memberships annually for alignment with our position on climate. We are also engaged in the appropriate committees and working groups of trade associations to best exercise leadership and influence climate- and business-related policy positions. Union Pacific is committed to open and transparent discussions regarding our involvement in state and federal lobbying and policymaking.
[Fixed row]

(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.

Row 1

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

North America

☑ Other trade association in North America, please specify **:**Association of American Railroads

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

The AAR is the world's leading railroad policy, research, standard-setting, and technology organization that focuses on the safety and productivity of the U.S. freight rail industry. The AAR supports policies to increase the competitiveness of freight railroads, which are the most fuel-efficient way to move freight over land. Because railroads account for only 2.1% of U.S. transportation-related greenhouse gas emissions, supporting policies to take trucks off the road and move more freight by rail

supports the goals of the Paris Agreement. Given the AAR's statement of recognition of climate change impacts, and their aim to increase the amount of freight moved by rail, thus reducing emissions, we conclude that the AAR's lobbying activities are aligned with the goals of the Paris Agreement.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

12171696

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Union Pacific participates in a number of trade associations, industry groups and nonprofits across North America. There is a wide array of benefits to being involved with these organizations, including the development of policy recommendations and rail safety protocol, infrastructure investment, and shared knowledge and research.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

Row 2

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

North America

☑ US Chamber of Commerce

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ No, we did not attempt to influence their position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

The Chamber of Commerce of the United States is the world's largest business organization. Members range from small businesses and chambers of commerce across the country to leading industry associations and global corporations. The U.S. Chamber of Commerce released detailed principles for climate policy and welcomed the Biden Administration's decision to rejoin the Paris Agreement. The Chamber supports U.S. participation in the Paris Agreement and is clear that inaction is not an option. Of note, the Chamber vigorously supported the Infrastructure Investment and Jobs Act (IIJA) that included significant resources to advance climate and energy technology innovation, electric grid infrastructure and resilience, and EV (Electric Vehicle) infrastructure and supply chains. Therefore, we conclude the US Chamber of Commerce's policy positions are aligned with the goals of the Paris Agreement.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

250000

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Union Pacific participates in a number of trade associations, industry groups and nonprofits across North America. There is a wide array of benefits to being involved with these organizations, including the development of policy recommendations and rail safety protocol, infrastructure investment, and shared knowledge and research.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

Row 3

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via a trade association

(4.11.2.4) Trade association

North America

☑ Other trade association in North America, please specify **:**National Association of Manufacturers

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ No, we did not attempt to influence their position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

The NAM represents 14,000 member companies—from small businesses to global leaders—in every industrial sector and works as a resource and advocate for manufacturers in the United States. The National Association of Manufacturers calls on policymakers to negotiate and ratify a fair and binding international climate treaty to improve on the Paris Agreement, with the purpose "to keep post-industrial warming of the planet to well below 2 degrees and approaching 1.5 degrees." In addition, the NAM released specific recommendations to Congress to enact a "single, unified policy to manage GHG emissions." Thus, we conclude the NAM's stated policy positions are aligned with the goals of the Paris Climate Agreement.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

193278

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Union Pacific participates in a number of trade associations, industry groups and nonprofits across North America. There is a wide array of benefits to being involved with these organizations, including the development of policy recommendations and rail safety protocol, infrastructure investment, and shared knowledge and research.

(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization's engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

[Add row]

(4.12) Have you published information about your organization's response to environmental issues for this reporting year in places other than your CDP response?

Select from:

☑ Yes

(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:

☑ In voluntary sustainability reports

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change
☑ Water
☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:
☑ Complete

(4.12.1.5) Content elements

Select all that apply
☑ Strategy
☑ Governance
☑ Emission targets
☑ Emissions figures
☑ Risks & Opportunities
☑ Content of environmental policies
☑ Value chain engagement
☑ Dependencies & Impacts
☑ Biodiversity indicators
☑ Public policy engagement
☑ Water accounting figures

(4.12.1.6) Page/section reference

Climate Change - pgs. 44-53 Environmental Management (Waste, Water, Remediation, Biodiversity) - pgs. 42-43 Governance - pg. 7

(4.12.1.7) Attach the relevant publication

pdf_up_2023_build_america_rpt (1).pdf

(4.12.1.8) Comment

Our Building America Report is our corporate sustainability report that covers our material topics, including climte change, environmental managament, and sustainability governance.

Row 2

(4.12.1.1) Publication

Select from:

☑ In voluntary sustainability reports

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

☑ Biodiversity

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Biodiversity indicators

☑ Emissions figures

☑ Emission targets

☑ Water accounting figures

(4.12.1.6) Page/section reference

Environmental data [emissions, water, waste, etc]: pgs. 3-5

(4.12.1.7) Attach the relevant publication

pdf_up_sustainability_metrics (5).pdf

(4.12.1.8) Comment

Providing detailed, transparent, and accessible information on sustainability topics is an important component of our sustainability strategy. This webpage combines data reported in our Building America Report, portions of our Proxy Statement, and other sustainability-related data points into one table that is more accessible to our stakeholders. Some of the figures and information in the following tables have been compiled and, where necessary, restated from previous sustainability reports to reflect changes in reporting. All currency-related values are reported in US dollars.

Row 3

(4.12.1.1) Publication

Select from:

☑ In other regulatory filings

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Governance

☑ Risks & Opportunities

☑ Strategy

(4.12.1.6) Page/section reference

Environmental - pgs. 6-8 Governance - pgs. 10-11

(4.12.1.7) Attach the relevant publication

pdf_up_proxy_03262024.pdf

(4.12.1.8) Comment

Our annual Proxy Statement includes sections on environmental management, climate, governance, risks & opportunities, and strategy.
[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:

☑ Yes

(5.1.2) Frequency of analysis

Select from:

☑ Not defined

Water

(5.1.1) Use of scenario analysis

Select from:

☑ No, and we do not plan to within the next two years

(5.1.3) Primary reason why your organization has not used scenario analysis

Select from:

☑ Judged to be unimportant or not relevant

(5.1.4) Explain why your organization has not used scenario analysis

Water-related risks do not have a significant impact on our operations as we primarily focus on land-based transportation. Our infrastructure and operations are designed to minimize reliance on water resources. Instead, we prioritize conducting a climate scenario analysis to understand the potential impacts of climate change

on our business. This analysis helps us develop effective strategies to mitigate and adapt to the changing climate, ensuring the long-term sustainability of our operations.
[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization's scenario analysis.

Climate change

(5.1.1.1) Scenario used

Physical climate scenarios

☑ Customized publicly available climate physical scenario, please specify :Union Pacific developed a 1.5ºC aligned, low-carbon climate scenario using the IEA NZE 2050, EIA Low Renewables Cost, EIA High Oil Price, IPCC RCP 2.6, and EnerFuture EnerGreen scenarios.

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Reputation

☑ Technology

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 1.5°C or lower

(5.1.1.7) Reference year

2022

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Stakeholder and customer demands

☑ Consumer sentiment

Regulators, legal and policy regimes

☑ Global regulation

☑ Political impact of science (from galvanizing to paralyzing)

Macro and microeconomy

☑ Domestic growth

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

Key assumptions: this scenario is characterized by an economy that reaches net-zero by 2050. Decarbonization is led the power generation and transportation sectors – each of which decarbonize rapidly, primarily through renewables and electrification. This transition creates widespread opportunities for companies providing low-carbon services, as corporate customers slowly decarbonize their supply chains and investors value low-carbon services. However, even in this scenario, global emissions drive up U.S. mean air temperatures 1.4C above pre-industrial levels by 2050. This scenario assumes that climate policy is a significant

driver of transition costs, and carbon pricing reaches notable highs - 250/tonne by 2050. We made assumptions regarding the overall level of exposure Union Pacific could have to carbon pricing mechanisms in the future, and the ability of our suppliers to pass carbon pricing on to us, and our ability to pass carbon pricing on to our customers. Uncertainties: Technological progress on climate change in our industry is an uncertainty: for example, the rate of adoption of new low- or zero-emission technologies by Class I railroads will depend on several factors. These include technological readiness determined through locomotive reliability testing; safety considerations; the rate of growth of alternative fuel sources or electricity; readiness of the national infrastructure to deliver alternative fuels or electricity; interoperability within the rail network; workforce education on new locomotive technologies; and the production capabilities of locomotive manufacturers. Also, the reduction of our carbon emissions by utilizing biofuels in our locomotives is a decarbonization lever for our industry. Uncertainties exist in biofuels' production and distribution, cost, supply, and the future deployment of government incentive programs supporting the use of biofuels in the 23 states where we operate.

(5.1.1.11) Rationale for choice of scenario

Union Pacific used multiple public transition scenarios to source the data and context suitable to our company's business activities, including operations, suppliers, and customers. We determined that a long-term time horizon until 2050 for the analysis was relevant for our business as our asset and infrastructure life can exceed 30 years. We utilized a combination of public scenarios for our below 1.5 degrees C scenario because Union Pacific could be subject to rapid climate transition risks aligned with this scenario, such as potential increases in carbon pricing mandates, increased competition from low-emissions trucking, and loss of revenue from decarbonization of electricity generation. We also recognize that a below 1.5 degrees C scenario could have relevant business opportunity drivers for Union Pacific, such as increased demand for low-carbon freight transportation services and increased transportation demand from the renewable energy sector.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA NZE 2050

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Acute physical

☑ Chronic physical

☑ Market

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.0°C - 2.4°C

(5.1.1.7) Reference year

2022

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Changes to the state of nature

☑ Climate change (one of five drivers of nature change)

Regulators, legal and policy regimes

☑ Level of action (from local to global)

Macro and microeconomy

☑ Domestic growth

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

This scenario is characterized by an economy that largely fails to decarbonize – emissions reductions from efficiency gains and low-carbon energy are offset by an increasing population and increasing global economic activity largely unchanged by widescale climate transition actions. Assumptions: Emissions in the U.S. flatline from 2023 onwards, but global emissions double by 2050. Global emissions drive up U.S. mean air temperatures 2C above pre-industrial levels by 2050, exacerbating physical climate risks such as hurricanes and heat waves – which become more frequent and intense. Government actions mandating climate transition actions are muted, and investment into innovation and low-carbon technology costs are higher than in low carbon scenarios (but still reduced from today). Uncertainties: 1) The range, speed, and effectiveness of government action on climate, and the degree of positive coordination between local, state, federal, and sovereign nations on effective climate action is uncertain. Union Pacific operates in 23 states across the western two-thirds of the United States. Regulatory uncertainty is among our top risks and remains a focus area, as government actions at all levels impact our operations and the markets we serve. 2) Technological progress on climate change in our industry: for example, the rate of adoption of new low- or zero-emission technologies by Class I railroads will depend on several factors. These include technological readiness determined through locomotive reliability testing; safety considerations; the rate of growth of alternative fuel sources or electricity; readiness of the national infrastructure to deliver alternative fuels or electricity; interoperability within the rail network; workforce education on new locomotive technologies; and the production capabilities of locomotive manufacturers. Constraints: Our scenario largely focused and was constrained to analyzing the impact of driving forces on our U.S. operating territory and customers; however, we recognize that many of the same driving forces have international impacts that may impact our operations, supply chains, and markets.

(5.1.1.11) Rationale for choice of scenario

Union Pacific used multiple public transition scenarios to source the data and context suitable to our company's business activities, including operations, suppliers, and customers. Reference Scenarios: IEA NZE, EIA Low Renewables Cost, EIA High Oil Price, IPCC RCP 2.6, EnerFuture EnerGreen. We determined that a long-term time horizon until 2050 for the analysis was relevant for our business as our asset and infrastructure life can exceed 30 years. We utilized a combination of public scenarios for our above 2.0 degrees C scenario because Union Pacific could be impacted by a number of its driving forces, particularly acute and chronic weather, and the impact of higher temperatures and acute weather events on our operations and customer markets. For example, greater incidence of operational and maintenance challenges from acute weather – extreme precipitation, flooding, heat waves, and wildfire – could require changes in the level or type of investments for infrastructure and operational resiliency. Decreasing agricultural yields could impact some customer demand levels while increasing yields for other crops.
[Add row]

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply
☑ Risk and opportunities identification, assessment and management

☑ Resilience of business model and strategy

☑ Target setting and transition planning

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

During the reporting year: Target Setting In 2023, we completed our revalidation and in early 2024 the SBTi approved our new 2030 target, committing us to reduce absolute Scope 1 and 2 GHG emissions by 50.4% by 2030. Our scenario analysis included analysis of which GHG emissions category (Scope 1, 2, or 3) should we focus our decarbonization efforts on. Renewable Fuels Market Growth We considered how, under a 1.5ºC aligned, low-carbon climate transition scenario, how might the market for renewable fuels and ag feedstocks grow within the markets we serve. Compared to shipping by truck, we can provide customers with cost savings on their shipments by delivering feedstocks to biofuels refineries and then transporting renewable fuels to consumption markets. In 2023, our revenue from renewable diesel fuel shipments has grown 250% since 2020. Renewable fuels use is expected to grow sharply over the short term. Since conducting the climate scenario analysis, we have worked with fuel supply-chain partners to secure supplies of low-carbon fuels to meet our demand for biofuels, including this includes creating logistics solutions to enable the refueling of locomotives with biofuel blends at new locations on our network; establishing commercial contracts for biodiesel with our suppliers; exploring market-based ways to reduce the cost premium for biofuels over fossil fuel-based diesel; and making cooperative efforts to encourage efficient, circular shipping of biofuels and biofuel feedstocks by rail. In 2023, our consumption of low-carbon fuels reached 6.1% of total diesel used, up from 4.5% in 2022. We have also committed to thoroughly testing new locomotive technologies to evaluate whether they meet our operational and safety standards, maintain efficiency comparable to our current fleet, and deliver value to both the railroad and our customers. We have advanced a project to build six hybrid battery-electric locomotives for operational testing and ultimately revenue service, with the first beginning extensive testing beginning in May 2024. These units will function similarly to plugin hybrid cars, with the ability to operate in various modes and consume as much as 80% less fuel – reducing associated greenhouse gas and criteria pollutants. Resiliency to Flooding We used prior analysis of which track network subdivisions are projected to be at greater risk than today due to climate change-driven increases in acute precipitation/flooding, and the infrastructure improvements we could take to address these risks. The climate scenario for over 2.0 degrees C projected that eight of our routes could, by 2050, incur 99th percentile one-day historical precipitation annually. Our action planning to address this increased risk includes budgeting approximately 20 million USD annually for prioritized locations with 1) repeated high water events 2) additional infrastructure at-risk factors that make them more susceptible to failure, and 3) a critical role in our operational fluidity. Our efforts continue to reestablish drainage culverts and ditches, improve embankment stabilization, and work with adjacent landowners to reroute drainage away from our tracks.
[Fixed row]

(5.2) Does your organization’s strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

☑ Yes, we have a climate transition plan which aligns with a 1.5°C world

(5.2.3) Publicly available climate transition plan

Select from:

☑ Yes

(5.2.4) Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

Select from:

☑ No, and we do not plan to add an explicit commitment within the next two years

(5.2.6) Explain why your organization does not explicitly commit to cease all spending on and revenue generation from activities that contribute to fossil fuel expansion

Union Pacific is not a producer or distributor of fossil fuels, but instead a transportation service provider with a common carrier obligation. Union Pacific is subject by U.S. law to the common carrier obligation, meaning we do not have the option to refuse the transport service of coal, petroleum, or other fossil fuels as a part of our business. We do not make decisions (as a seller, buyer, or distributor would) on where and how fossil fuels are produced, distributed, or sold. Rail is not strictly dedicated to any one product group, and we cannot select which products we do and don't transport under this obligation. The proportions of different products being shipped on any given rail segment will vary over the course of time. A broad spectrum of commodities are moved across and around the country by freight railroads. Railroads safely transport everything from intermodal containers (mostly filled with consumer goods), agricultural products, construction materials, chemicals essential to health and safety, automobiles, and coal along with other fossil fuels. As common carriers, railroads are subject to the statutory obligation to provide "transportation or service on reasonable request," and cannot by law refuse a reasonable request to transport a particular commodity simply because that commodity is dangerous -- or because it may have upstream or downstream climate impacts. See 49 U.S.C. § 11101(a). This stands in stark contrast, for example, to the oil and gas pipelines that are purpose-built for fossil fuel transportation.

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

Select from:

☑ We have a different feedback mechanism in place

(5.2.8) Description of feedback mechanism

Union Pacific regularly engages with investors, customers, suppliers, industry trade groups, and policymakers to receive feedback on our climate transition plan. • Company representatives meet regularly with shareholders and analysts in discussion of UP's climate transition plan. • We also directly engage customers regarding their requests for climate-related data about our company, and provided over 1,150 customers with specific annual emissions savings statements estimating what their actual shipments with Union Pacific had saved in reduced GHG emissions versus utilizing trucks. • We collaborate with our supply chain to activate portions of our climate transition plan and receive feedback. Our strategic partnerships with locomotive manufacturers, for example, include testing of prototype battery-electric locomotives. We are working hand-in-hand with our locomotive and fuel suppliers to increase our use of renewable diesel and biofuels. We are also engaging with our upstream suppliers to better understand their emissions reduction activities so that we can better measure reductions in our Scope 3 emissions. • Union Pacific is an active member of the Association of American Railroads' Decarbonization Working Group, where freight railroads collaborate on climate transition initiatives and approaches. • We frequently engage government policymakers, such as the Federal Railroad Administration, the EPA, and state regulatory agencies to discuss and receive feedback on our climate transition plans.

(5.2.9) Frequency of feedback collection

Select from:

☑ More frequently than annually

(5.2.10) Description of key assumptions and dependencies on which the transition plan relies

Our transition plan relies on some assumptions and dependencies. Some of the key assumptions include projections about future market trends, such as the increasing focus on reducing greenhouse gas (GHG) emissions and the adoption of renewable fuels. The plan also assumes that technological advancements, such as the development of battery-electric locomotives, will continue to progress and be viable for operational testing and revenue service. Overall, the transition plan relies on the assumptions of a changing market landscape and the availability of supportive policies, as well as the cooperation of stakeholders and the availability of necessary resources. These key dependencies include stakeholder cooperation, (particularly from supply chain partners), the availability of resources, such as low-carbon fuels, and the technological readiness of infrastructure, such as low- and zero-emissions locomotives, and the societal provision of the necessary energy distribution infrastructure required to power our 32,000 mile railroad network. Government policies and regulations that support the use of renewable fuels and incentivize the adoption of low- or zero-emission technologies are also very important.

(5.2.11) Description of progress against transition plan disclosed in current or previous reporting period

2023 Climate Performance Highlights • Reduced our absolute GHG emissions for Scope 1 and 2 by 0.8% vs. 2022. Cumulatively, our emissions have experienced a 19.1% reduction vs. our 2018 baseline. • Reduced our absolute GHG emissions for the target Scope 3 categories by 0.8% vs. 2022. Cumulatively, our Scope 3 target categories' total GHG emissions have experienced a 12.1% absolute reduction vs. our 2018 baseline, including a 21.9% cumulative absolute reduction in Scope 3 fuel- and energy-related activities. • Increased our full-year average utilization of biofuels to 6.1% vs 4.5% in 2022. • Continued our partnership with locomotive manufacturers and fuel suppliers to test higher levels of renewable biofuels in our locomotives, leading to permission from those manufacturers to utilize blends of up to 50% renewable diesel and 11% biofuel in locomotives going forward. • Engaged suppliers representing 27% of our annual procurement spend on their sustainability-related practices and policies. For 2024, we have incorporated sustainability-related KPIs into our supplier scorecards for suppliers representing

approximately 46% of our procurement spend. • Recognized 12 customers and suppliers as Union Pacific Sustainability Partners for their sustainability practices and created collaboration sessions with them to brainstorm methods for working together more sustainably. • Progressed three projects supporting biodiversity restoration in partnership with The Nature Conservancy. Project goals include grassland and wetland restoration, groundwater recharge, threatened species habitat conservation and community education. • Extended our commitment to decarbonizing our operations by adopting the more stringent SBTi target standard of a 1.5C (versus 2.0 C) climate scenario.

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

pdf_up_2023_build_america_rpt (2).pdf

(5.2.13) Other environmental issues that your climate transition plan considers

Select all that apply

☑ No other environmental issue considered

[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:

☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply

☑ Upstream/downstream value chain

☑ Investment in R&D

☑ Operations

[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Upstream/downstream value chain

(5.3.1.1) Effect type

Select all that apply

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

During 2023, we conducted an extensive analysis to reassess and expand our Scope 3 emissions inventory, including our 2018 baseline. Those revised emissions footprints are in our updated GHG emissions footprint data. As a result of this exercise, we are now focusing our Scope 3 decarbonization efforts on the three largest categories: purchased goods and services (Scope 3, category 1), capital goods (Scope 3, category 2) and fuel- and energy-related emissions (Scope 3, category 3). We also validated a SBTi-approved target to reduce Scope 3 absolute emissions from our purchased goods and services, capital goods and fuel- and energy-related activities 50.4% by 2030 from a 2018 base year. We are engaging our upstream value chain on engaging with our upstream suppliers to better understand their emissions reduction activities so we can better measure reductions in our Scope 3 emissions. In 2023 we also began asking our critical and strategic Tier 1 suppliers to complete a self-assessment annually on various sustainability topics, including climate. One hundred percent of those surveyed responded to the self-assessment, which we then utilized to engage with them on GHG emissions reduction, emissions data sharing opportunities, and how we can collaborate to accelerate decarbonization initiatives. During 2024 these suppliers' decarbonization journey progress will be included as an element of the sustainability KPI on suppliers' performance scorecard.

Investment in R&D

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Current advances in low- or zero-emission passenger rail vehicles are encouraging, but we believe additional research and development is required before our industry can adopt zero emissions locomotives at scale. We are committed to thoroughly testing new locomotive technologies to evaluate whether they meet our operational and safety standards, maintain efficiency comparable to our current fleet, and deliver value to both our company and our customers. For example: 1) Hybrid Battery-Electric Locomotives We continue to advance our partnership with ZTR, a green technology company and leader in locomotive control systems, to build six hybrid battery-electric locomotives for operational testing and ultimately revenue service. The first unit built in our Arkansas shop will undergo extensive testing beginning in May 2024 in a Union Pacific facility and rail yard. The next of the remaining five hybrid locomotives is expected to be ready for testing in 2025. These first of its kind locomotives within North America's freight rail industry will function similarly to plugin hybrid cars, with the ability to operate in various modes. They will have multiple charging options for their batteries, including wayside charging and onboard self-charging capabilities. The engineless slug design increases the number of traction motors available, enhancing the locomotive's pulling and braking power for yard switching work. Depending on the mode of operation, these hybrid switchers are expected to consume as much as 80% less fuel – reducing associated greenhouse gas and criteria pollutants. Additional benefits include reduced noise and lower maintenance expenses compared to diesel units. The insights gained will help us determine the potential for hybrid units as a transition strategy in our operations. 2) Zero-Emissions Locomotives In January 2022, we announced plans to purchase battery-electric locomotives for testing in yard operations. Testing battery-electric locomotives in yard switching, as opposed to line-haul operations, offers a more realistic path for locomotive conversion to 100% batteries, as switch locomotives have limited range and lower power requirements than line-haul locomotives. They also have planned downtime that can be utilized for battery recharging at a fixed location, rather than a line-haul locomotive recharging along a main line route without high voltage electrical infrastructure support. Procuring the 2.4 MWh batteries needed for our battery-electric locomotives has proven to be more challenging than expected, not only for Union Pacific but also for other Class I freight railroads that have ordered similar locomotives for demonstration testing. Because of these procurement difficulties, we adjusted our locomotive order to four units, which are now expected to be delivered in 2026 and will be based in Southern California for operational testing. We remain committed to testing battery-electric locomotive technology in our operations.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Recognizing the need to address climate-related risks from carbon pricing mechanisms and loss of cusotmers, and opportunities as customers seek low-carbon transportation services, we recognize that locomotive operations are our greatest source of GHG emissions. In 2023, locomotive emissions comprised over 94% of our total Scope 1 and 2 emissions. Addressing this, we are implementing near-term strategies focused on reducing the absolute quantity of diesel we use. These strategies include 1) improving operating efficiencies; 2) increasing locomotive fuel efficiency; and 3) investing in locomotive overhauls and modernizations for reliability and efficiency. Through these efforts, the company intends to encourage or otherwise facilitate a sustained shift of freight transport from long haul truck to rail. 1) Operating efficiencies: In 2023 we refocused our efforts on operational excellence in our network operations. By eliminating unnecessary work, increasing average train length and improving locomotive productivity, we can achieve operational improvements that reduce fuel consumption and lead to decreased emissions.. 2) Locomotive Fuel Efficiency: We have equipped our locomotive fleet with Energy Management Systems (EMS), which adjust the locomotive's throttle and dynamic braking to optimize fuel usage. In 2023, we installed EMS on over 225 additional locomotives. By the end of 2023, approximately 83% of active locomotives in our road fleet were equipped with EMS. We are on track to achieve full implementation of EMS by 2026. 3) Locomotive Modernizations: As part of a continuing partnership with Wabtec Corporation, in 2023, we successfully overhauled 200 older locomotives, resulting in improved reliability and up to 5% better fuel efficiency, along with approx. 53% fewer GHG emissions. The total program will result in 600 modernized locomotives by the end of 2026, resulting in more efficient fuel consumption and reduced emissions. The enhanced reliability and capacity of these updated locomotives will allow us to achieve approximately 210,000 tons in annual emission reductions.
[Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

- ☑ Assets
- ☑ Revenues
- ☑ Direct costs
- ☑ Access to capital
- ☑ Capital allocation
- ☑ Capital expenditures

(5.3.2.2) Effect type

Select all that apply

- ☑ Risks
- ☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

Revenue As part of our annual financial planning processes, we assess the potential revenues and growth projections from individual commodity groups, which include impacts of climate-related risks and opportunities. Examples of how climate risks and opportunities influence this process include 1) analyzing intermodal market trends for modal shift opportunities where customers prioritize lower-carbon freight transportation, and 2) creating support and initiatives to capture additional revenue from growing renewable power markets. Direct Costs Climate-related opportunities have influenced our operations strategy by reinforcing the importance of operating and fuel efficiencies as a key lever for achieving both our business growth and climate-related goals. Also, our targets to increase the percentage of low-carbon fuels consumed to 10% of our total diesel consumption by 2025 and 20% by 2030 influence our direct cost financial planning as we manage the cost of biofuels vs fossil fuel-based petroleum. Capital Expenditures We make infrastructure investments to improve our resiliency to acute physical impacts. Examples in 2023 included raising the height of the track profile to prevent water over the top of the rails, strengthening bridges to combat future flooding issues, and the addition or expansion of culverts to prevent flood waters from washing out the track. Annual capital expenditures related solely to climate-related event mitigation have averaged 17 million over the past five years. Capital Allocation Union Pacific annually allocates capital expenditures towards climate-related projects, such as the replacement of LED lighting infrastructure in yard, and the development of hybrid- and zero-emissions locomotives. Assets As part of our financial planning process, our Transportation and Engineering functions allocate specific budgets to that support operational and asset plans to prevent and mitigate potential disruptions to our network from extreme weather events, such as acute precipitation/flooding/snow, wildfire, and acute temperature swings. Access to Capital In 2022, Union Pacific issued 600 million in green bonds to support investments that will reduce the railroad's carbon footprint. Proceeds from the bond were exclusively applied to climate-related or environmentally friendly projects.

[Add row]

(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Methodology or framework used to assess alignment with your organization's climate transition
	Select from:	*Select all that apply*

	Identification of spending/revenue that is aligned with your organization's climate transition	Methodology or framework used to assess alignment with your organization's climate transition
	☑ Yes	☑ Other methodology or framework

[Fixed row]

(5.4.1) Quantify the amount and percentage share of your spending/revenue that is aligned with your organization's climate transition.

Row 1

(5.4.1.1) Methodology or framework used to assess alignment

Select from:

☑ A sustainable finance taxonomy

(5.4.1.2) Taxonomy under which information is being reported

Select from:

☑ Other, please specify :Climate Bonds Taxonomy and the low-carbon transport universal freight threshold for all types of freight transport on the IEA's 1.5 Degrees Scenario Mobility Model

(5.4.1.3) Objective under which alignment is being reported

Select from:

☑ Climate change mitigation

(5.4.1.5) Financial metric

Select from:

☑ Revenue/Turnover

(5.4.1.6) Amount of selected financial metric that is aligned in the reporting year (currency)

19562800000

(5.4.1.7) Percentage share of selected financial metric aligned in the reporting year (%)

87

(5.4.1.12) Details of the methodology or framework used to assess alignment with your organization's climate transition

Shipping via rail cars instead of trucks enables customers to utilize a lower-carbon transportation product for the majority of their shipment miles, as a typical Union Pacific freight train is on average three to four times more fuel efficient per freight ton-mile than truck transportation, equating to up to a 75% reduction in transportation related CO2e emissions. As a result of this efficiency, our low-carbon transportation services help customers avoid and/or reduce GHG emissions that would otherwise be generated from more carbon-intensive modes of transportation. In 2023 Union Pacific's GHG emissions intensity for its rail freight transportation product was 7.741 gCO2e/tkm, well below the 25 gCO2e/tkm emissions threshold criteria for the low-carbon transport sector, per the Climate Bonds Taxonomy and the low-carbon transport universal freight threshold for all types of freight transport on the IEA's 1.5 Degrees Scenario Mobility Model. The 87% share of total revenue related to providing the above low carbon freight transportation services includes our freight revenue for intermodal, industrial and bulk shipments, excluding coal, petcoke, petroleum, and liquid petroleum gas.
[Add row]

(5.5) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

(5.5.1) Investment in low-carbon R&D

Select from:
☑ Yes

(5.5.2) Comment

Current technological advances in low- or zero-emission passenger rail vehicles are encouraging, but we believe additional research and development is required before our industry can adopt zero emissions locomotives at scale. The rate of adoption of new low- or zero-emission technologies by Class I railroads will depend on several factors. These include technological readiness determined through locomotive reliability testing; safety considerations; the rate of growth of alternative fuel sources or electricity; readiness of the national infrastructure to deliver alternative fuels or electricity; interoperability within the rail network; workforce education on

new locomotive technologies; and the production capabilities of locomotive manufacturers. Addressing these factors will require time and ongoing collaboration across our industry and supply chain. We are committed to thoroughly testing new locomotive technologies to evaluate whether they meet our operational and safety standards, maintain efficiency comparable to our current fleet, and deliver value to both the railroad and our customers. We take this responsibility seriously and are dedicated to making progress. We are working with the other Class I railroads and external partners to continue technical evaluation of various new locomotive propulsion technologies. We continue to collaborate with third parties both within and outside the industry, facilitate and learn from wider industry initiatives, and advocate for policies that promote and encourage additional cooperation to advance progress on low- and zero-emissions locomotives In 2021, we began establishing separate sustainability budgets for low-carbon R&D project and their implementation. Because of the lack of budget history, UP is reporting % of total R&D budget for 2022-2023 only (not average three years).
[Fixed row]

(5.5.8) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Row 1

(5.5.8.1) Activity

Select all that apply
☑ Rail

(5.5.8.2) Technology area

Select from:
☑ Alternative fuels

(5.5.8.3) Stage of development in the reporting year

Select from:
☑ Pilot demonstration

(5.5.8.4) Average % of total R&D investment over the last 3 years

5

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

As a transitional strategy, we are focused on utilizing low-carbon fuels in our locomotives to further reduce our emissions across our entire fleet while proactively supporting research and testing for a new generation of low- and zero-emissions locomotives. In 2022, we announced a company-specific target to increase the percentage of low-carbon fuels consumed to 10% of our total diesel consumption by 2025 and 20% by 2030. To reach our goals related to the consumption of low-carbon fuels, more of our locomotive model types must be certified as compatible with higher blends of low-carbon fuels. We are actively collaborating with other Class I railroads and domestic locomotive manufacturers to test and approve the use of biofuels. For example, four Union Pacific locomotives providing service to a San Bernardino, California sand and gravel mine are running on 100% biomass-based fuel. Data gathered during tests is demonstrating the performance and reliability of their engines are comparable whether operated with biofuel or traditional diesel fuel. Our testing of 100% biomass-based fuel is continuing to progress with no serious issues. Data and experience obtained during the ongoing pilot study, expected to last until the end of 2025 if positive, will help us meet our goals. In 2023, these and other testing collaborations led to both major locomotive manufacturers certifying the utilization of blends of up to 50% renewable diesel and 11% biofuel in locomotives. We are working with these manufacturers and Class I freight railroads through the American Association of Railroads' Decarbonization Working Group to test and approve even higher blends of biofuel and renewable diesel.

Row 2

(5.5.8.1) Activity

Select all that apply

☑ Rail

(5.5.8.2) Technology area

Select from:

☑ Electrification

(5.5.8.3) Stage of development in the reporting year

Select from:

☑ Pilot demonstration

(5.5.8.4) Average % of total R&D investment over the last 3 years

11

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

In January 2022, we announced plans to purchase battery-electric locomotives for testing in yard operations. Testing battery-electric locomotives in yard switching, as opposed to line-haul operations, offers a more realistic path for locomotive conversion to 100% batteries, as switch locomotives have limited range and lower power requirements than line-haul locomotives. They also have planned downtime that can be utilized for battery recharging at a fixed location, rather than a line-haul locomotive recharging along a main line route without high voltage electrical infrastructure support. Procuring the 2.4 MWh batteries needed for our battery-electric locomotives has proven to be more challenging than expected, not only for Union Pacific but also for other Class I freight railroads that have ordered similar locomotives for demonstration testing. Because of these procurement difficulties, we adjusted our locomotive order to four units, which are now expected to be delivered in 2026 and will be based in Southern California for operational testing. We remain committed to testing battery-electric locomotive technology in our operations. These delays serve as a reminder of the complexities and supply chain challenges that arise during the transition to alternative propulsion technologies in the rail industry. However, we remain dedicated to driving progress in the industry. By sharing our findings with our partner locomotive original equipment manufacturers (OEMs) and other member railroads of the AAR's Decarbonization Working Group, we can accelerate our collective learning and advancement along the technological curve.

Row 3

(5.5.8.1) Activity

Select all that apply

☑ Rail

(5.5.8.2) Technology area

Select from:

☑ Control systems

(5.5.8.3) Stage of development in the reporting year

Select from:

☑ Pilot demonstration

(5.5.8.4) Average % of total R&D investment over the last 3 years

15

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

We continue to advance our partnership with ZTR, a green technology company and leader in locomotive control systems, to build six hybrid battery-electric locomotives for operational testing and ultimately revenue service. The locomotives are being constructed at our locomotive shop in North Little Rock, Arkansas, and the first unit will undergo extensive testing beginning in May 2024 in a Union Pacific facility and rail yard. The next of the remaining five hybrid locomotives is expected to be ready for testing in 2025. These first of its kind locomotives within North America's freight rail industry will function similarly to plugin hybrid cars, with the ability to operate in various modes. They will have multiple charging options for their batteries, including wayside charging and onboard self-charging capabilities. The engineless slug design increases the number of traction motors available, enhancing the locomotive's pulling and braking power for yard switching work. Depending on the mode of operation, these hybrid switchers are expected to consume as much as 80% less fuel – reducing associated greenhouse gas and criteria pollutants. Additional benefits include reduced noise and lower maintenance expenses compared to diesel units. The insights gained will help us determine the potential for hybrid units as a transition strategy in our operations.
[Add row]

(5.9) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

(5.9.1) Water-related CAPEX (+/- % change)

-4

(5.9.2) Anticipated forward trend for CAPEX (+/- % change)

-24

(5.9.3) Water-related OPEX (+/- % change)

-10

(5.9.4) Anticipated forward trend for OPEX (+/- % change)

0

(5.9.5) Please explain

These estimates may vary depending on events that are difficult to predict, such as extreme weather events (e.g., floods, droughts, hurricanes), customer or resource demands, and/or external conditions or other circumstances beyond the company's control (e.g., COVID-19).
[Fixed row]

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities
	Select from: ☑ No, and we do not plan to in the next two years

[Fixed row]

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change
Customers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Plastics
Investors and shareholders	*Select from:*	*Select all that apply*

	Engaging with this stakeholder on environmental issues	Environmental issues covered
	☑ Yes	☑ Climate change ☑ Water ☑ Plastics
Other value chain stakeholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Water ☑ Plastics

[Fixed row]

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

Climate change

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Contribution to supplier-related Scope 3 emissions

(5.11.1.3) % Tier 1 suppliers assessed

Select from:

☑ 100%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

We have analyzed the contribution of each of our Tier 1 suppliers to our Scope 3 emissions for categories 1 (purchased goods and services), 2 (capital goods), and 3 (fuel-related emissions). We have used Pareto analysis to define those suppliers making the largest contribution to our company's Scope 3 emissions for the aforementioned categories for the purpose of initially engaging them to understand their plans and commitments on reducing those same Scope 3 emissions.

(5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

Select from:
☑ 1-25%
[Fixed row]

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:
☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply
☑ Reputation management
☑ Supplier performance improvement

(5.11.2.4) Please explain

During 2023, we asked our Tier 1 suppliers comprising 27% of our annual procurement spend to complete a sustainability questionnaire about each supplier's sustainability initiatives, including six key topics: safety, ethics, cybersecurity, climate action, human rights and diversity. The suppliers were scored on their

responses, and during annual one-on-one, in-person supplier reviews with our procurement executives, we discussed each supplier's sustainability progress and worked with them on improvement opportunities. For 2024, we have updated our questionnaire to include results-based sustainability metrics and commitments and expanded its reach to include our Tier 1 suppliers representing 46% of our total procurement spend. We are incorporating this questionnaire into our suppliers' overall KPI scorecard to reinforce sustainability as a key performance metric for our supply chain.
[Fixed row]

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization's purchasing process?

Climate change

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:
☑ No, but we plan to introduce environmental requirements related to this environmental issue within the next two years

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:
☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

Our supplier code of conduct encourages suppliers to measure their carbon footprint using the Greenhouse Gas (GHG) Protocol carbon accounting framework, and to develop strategies to reduce their emissions.
[Fixed row]

(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.

Climate change

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Emissions reduction

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to measure GHG emissions

Information collection

☑ Collect climate transition plan information at least annually from suppliers

☑ Collect environmental risk and opportunity information at least annually from suppliers

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 26-50%

(5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

☑ Unknown

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

During 2023, we asked our Tier 1 suppliers comprising 27% of our annual procurement spend to complete a sustainability questionnaire about each supplier's sustainability initiatives, including initiatives related to climate action. The suppliers were scored on their responses, and during annual one-on-one, in-person supplier reviews with our procurement executives, we discussed each supplier's sustainability progress and worked with them on improvement opportunities. For 2024, we have updated our questionnaire to include resultsbased sustainability metrics and commitments and expanded its reach to include our Tier 1 suppliers representing

46% of our total procurement spend. We are incorporating this questionnaire into our suppliers' overall KPI scorecard to reinforce sustainability as a key performance metric for our supply chain.

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

[Add row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 51-75%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ Unknown

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Union Pacific's Carbon Emission Estimator allows customers seeking to reduce carbon emissions to calculate their potential carbon emissions savings from shipping on our railroad compared to moving goods by truck. This calculator is public and gives customers and potential customers the ability to make the best environmental choice of transportation option for their needs. They can calculate the carbon emissions savings of specific rail shipments, providing comparative data among their choices. We also provide interested customers with annual emissions savings estimates. Customers sign up to receive the savings estimates. We estimate that our customers avoided approximately 22.5 million metric tons of GHG emissions by choosing rail over truck transportation, in 2023.

(5.11.9.6) Effect of engagement and measures of success

We estimate that our customers avoided approximately 22.5 million metric tons of GHG emissions by choosing rail over truck transportation, in 2023. In 2024, 1,611 of our 2,982 customers [# of unique send freight parent names] received carbon savings estimates from UP [roughly 54% as mentioned above] for their 2023 shipments. Over 2,200 letters were sent to 1,611 customers in total. We aim to increase the % of customers who choose to receive an annual emissions savings estimate YOY.
[Add row]

(5.13) Has your organization already implemented any mutually beneficial environmental initiatives due to CDP Supply Chain member engagement?

(5.13.1) Environmental initiatives implemented due to CDP Supply Chain member engagement

Select from:

☑ No, but we plan to within the next two years

(5.13.2) Primary reason for not implementing environmental initiatives

Select from:

☑ Other, please specify **:**No, our organization has not yet implemented a mutually beneficial environmental initiatives due to CDP Supply Chain member engagement. While no such opporunity has arisen, we are open to exploring and implementing opportunities when they arise, provided they align with our company's goals and values. We recognize the importance of environmental sustainability and are open to collaborating with CDP Supply Chain members to drive positive environmental change.

(5.13.3) Explain why your organization has not implemented any environmental initiatives

No, our organization has not yet implemented a mutually beneficial environmental initiatives due to CDP Supply Chain member engagement. While no such opportunity has arisen, we are open to exploring and implementing opportunities when they arise, provided they align with our company's goals and values. We recognize the importance of environmental sustainability and are open to collaborating with CDP Supply Chain members to drive positive environmental change. [Fixed row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

Climate change

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Union Pacific is an operating company by principal business activity, therefore operational control approach is used to ser our organizational boundary for the purpose of reporting annual GHG emissions. Using the selected approach, we account for 100 percent of the GHG emissions over assets it controls in operational terms, including leased assets. UPRR does not account for GHG emissions in operations where it owns an interest but lacks operational control. Our reporting protocol's rationale for determining whether Union Pacific has operational control over a business unit (i.e., the facility is considered “operated”) is whether Union Pacific has the authority to introduce and implement its operating policies at the operation. The test is also be applied to joint ventures. This approach ensures that all emissions associated with our operations in which we have authority to introduce and implement our operating policies are comprehensively tracked. 1134/2

Water

(6.1.1) Consolidation approach used

Select from:

☑ Operational control

(6.1.2) Provide the rationale for the choice of consolidation approach

Union Pacific is an operating company by principal business activity, therefore operational control approach is used to set our organizational boundary for the purpose of reporting water impacts on our business. However, Union Pacific does not track, at the corporate level, water usage data for all facilities and work areas in its 32,000 mile network. This exclusion pertains, in particular, to individual facilities and remote work areas that are not metered, such as locations where the company has water rights and draws directly from a surface or groundwater source located on company property. These facilities and remote work areas are typically managed at the local level in accordance with federal, state and/or local regulatory requirements that pertain to small public water systems or independent water wells. They

represent a small percentage of total water resources managed or accessed by Union Pacific. Additionally, Union Pacific does not track the water usage of non-railroad entities that lease real or personal property from Union Pacific to conduct other forms of business, unless the tenant’s water usage is billed directly to Union Pacific by a municipal water supplier. In general, Union Pacific does not exercise direct control over water withdrawals by non-railroad entities. Union Pacific procures the vast majority of its water supplies from municipal/local water authorities and uses a software application called ProKarma-EMS to track monthly water withdrawals associated with over 1,400 municipal water accounts across the company's network. This system tracks 100% of the company's municipally-sourced water withdrawals. In select locations (representing a small fraction of the company's total water withdrawals), the company extracts water from railroad-owned groundwater wells or surface water sources. These locations are managed at the local level in accordance with federal, state and/or local regulatory requirements that pertain to small public water systems or independent water wells. The majority of these locations are not metered. We track monthly sewer discharge volumes where meters are present. The company also owns and operates 85 waste water treatment facilities across its network. Water discharge volumes are monitored using electronic flow meters or estimated based on pump hour meter run times and managed in accordance with applicable federal, state and local regulatory requirements. [Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:
☑ No

(7.1.1) 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?

(7.1.1.1) Has there been a structural change?

Select all that apply
☑ Yes, an acquisition

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

MHX

(7.1.1.3) Details of structural change(s), including completion dates

On February 29, 2023, UPRR acquired MHX, a transloading company. A review of MHX's operations concluded the acquisition did not result in a material change to the inventory. For perspective, the 2023 Scope 1 emissions of MHX comprise less than 0.07% of Union Pacific's total Scope 1 GHG emissions over the same period. Our Scope 1, 2, and 3 public reporting footnotes the GHG contribution of MHX, MHX's GHG emissions for all of 2023 were estimated as: Scope 1: 6,385 mtons CO2e, Scope 2: 77 mtons CO2e, and Scope 3 (categories 6 & 9): 3,787 tons CO2e.
[Fixed row]

(7.1.2) 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?
	Select all that apply ☑ No

[Fixed row]

(7.1.3) Have your organization’s base year emissions and past years’ emissions been recalculated as a result of any changes or errors reported in 7.1.1 and/or 7.1.2?

	Base year recalculation	Past years’ recalculation
	Select from: ☑ No, because the impact does not meet our significance threshold	*Select from:* ☑ No

[Fixed row]

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

Select all that apply

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

(7.3) Describe your organization’s approach to reporting Scope 2 emissions.

	Scope 2, location-based	Scope 2, market-based	Comment
	Select from: ☑ We are reporting a Scope 2, location-based figure	*Select from:* ☑ We are reporting a Scope 2, market-based figure	*Rich text input [must be under 2400 characters]*

[Fixed row]

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

Select from:

☑ Yes

(7.4.1) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Row 1

(7.4.1.1) Source of excluded emissions

Our Scope 1, 2, and 3 reporting also excludes the GHG contribution of MHX, a transload subsidiary acquired by Union Pacific in February 2023. MHX's GHG emissions for all of 2023 were estimated as: Scope 1: 6,385 mtons CO2e, Scope 2: 77 mtons CO2e, and Scope 3 (categories 6 & 9): 3,787 tons CO2e.

(7.4.1.2) Scope(s) or Scope 3 category(ies)

Select all that apply

☑ Scope 1

☑ Scope 2 (location-based)

☑ Scope 3: Business travel

☑ Scope 3: Downstream transportation and distribution

(7.4.1.3) Relevance of Scope 1 emissions from this source

Select from:

☑ Emissions excluded due to a recent acquisition or merger

(7.4.1.4) Relevance of location-based Scope 2 emissions from this source

Select from:

☑ Emissions excluded due to a recent acquisition or merger

(7.4.1.6) Relevance of Scope 3 emissions from this source

Select from:

☑ Emissions excluded due to a recent acquisition or merger

(7.4.1.7) Date of completion of acquisition or merger

02/29/2024

(7.4.1.10) Explain why this source is excluded

For perspective, MHX revenue comprises less than 0.5% of total Union Pacific revenue, and MHX's employee full-time equivalent headcount comprises less than 0.5% of total Union Pacific headcount. Calculated MHX emissions for 2023 were based on estimated data as MHX was still validating their total GHG footprint. The total GHGs comprise less than 0.07% of our total corporate GHG footprint and are therefore not material. We have disclosed these estimates in this CDP disclosure and in our corporate CSR report. We expect to integrate additional MHX sustainability data into our full sustainability disclosures for reporting in 2025.
[Add row]

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

11313933

(7.5.3) Methodological details

Fuel-based Method. Calculated using actual fuel consumed and emission factors. Emissions factors for diesel, propane, natural gas, heating oil, and other mobile and stationary combustion source fuels were used with Union Pacific activity data and IPCC GWP values to calculate Scope GHG emissions.

Scope 2 (location-based)

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

277200

(7.5.3) Methodological details

Electricity consumption data is collected from all Union Pacific facilities and aggregated by month, U.S. State, and eGrid sub-region. Emissions are calculated using emission factors from the EPA Emission Factors Hub for Greenhouse Gas Inventories and IPCC GWP values.

Scope 2 (market-based)

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

311560

(7.5.3) Methodological details

Electricity consumption data is collected from all Union Pacific facilities and aggregated by month, U.S. State, and eGrid sub-region. Emissions are calculated using emission factors from the EPA Emission Factors Hub for Greenhouse Gas Inventories and IPCC GWP values.

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

659281

(7.5.3) Methodological details

Spend-based Method EEIO approach using US EPA emission factors. Spend data is used and multiplied by the appropriate EEIO factors.

Scope 3 category 2: Capital goods

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

559287

(7.5.3) Methodological details

Spend-based Method EEIO approach using US EPA emission factors. Spend data is used and multiplied by the appropriate EEIO factors.

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

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

3824960

(7.5.3) Methodological details

Fuel-based Method Calculated using actual gallons consumed and emission factors. Evaluation completed in 2023 added biofuels WTT (Biodiesel and Renewable diesel) calculations, including new GREET WTT emission factors for biofuels. The Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model is a United States-specific life-cycle model provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and developed by Argonne National Laboratory. In the absence of relevant emission factors from the US EPA Climate Registry, the GREET emission factors were determined as an appropriate source based on relevant geography and source quality.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

697657

(7.5.3) Methodological details

Other: Spend-based Method for UP Upstream T&D and a Distance-based Method for Loup Upstream T&D UP upstream T&D spend plus Loup T&D of other companies products by third-party logistics providers.

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

21212

(7.5.3) Methodological details

Waste-based Method 100% of data from suppliers Using supplier provided data. Evaluation completed in 2023 determined emissions from UPRRs landfill tonnage from operations, MSW recycling tonnage from operations and incineration tonnage from operations will be included in UPRRs Scope 3 Category 5 emissions.

Scope 3 category 6: Business travel

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

18246

(7.5.3) Methodological details

Other: Combination of a Distance-based Method and a Fuel-based Method, depending on the exact emissions source. 100% of data from suppliers As of 2023, UPRR now reports the following supplier provided data: Rental Car miles, Airline miles, Hotel stays, Crew Shuttle miles.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

141618

(7.5.3) Methodological details

Other: Combination of a Distance-based Method and a Fuel-based Method, depending on the exact emissions source. 100% of data from suppliers As of 2023, UPRR now reports the following supplier provided data: Rental Car miles, Airline miles, Hotel stays, Crew Shuttle miles.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

8470

(7.5.3) Methodological details

Fuel-based Method Used square footage values provided by UPRR Real Estate department to estimate consumption. Excluded Loup downstream leased equipment, estimates based on equipment list from Loup and One Click emission factors, 0.12% of scope 3 emissions. Not material for UP to calculate each year without collecting data direct from third-party leases of the equipment.

Scope 3 category 15: Investments

(7.5.1) Base year end

12/31/2018

(7.5.2) Base year emissions (metric tons CO2e)

312479

(7.5.3) Methodological details

Investment-specific Method Used combination of Joint Facility provided data and estimation. Confirmed joint facilities, ownership % and set threshold for inclusion (2% Ownership). Include site / locomotive emissions estimates where source information on floorspace/number of locomotives provided.
[Fixed row]

(7.6) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

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

9156525

(7.6.3) Methodological details

Emissions factors for diesel, propane, natural gas, heating oil, and other mobile and stationary combustion source fuels were used with Union Pacific activity data and IPCC GWP values to calculate Scope GHG emissions.
[Fixed row]

(7.7) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

(7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

215799

(7.7.2) Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)

235705

(7.7.4) Methodological details

Electricity consumption data is collected from all Union Pacific facilities and aggregated by month, U.S. State, and eGrid sub-region. Emissions are calculated using emission factors from the EPA Emission Factors Hub for Greenhouse Gas Inventories and IPCC GWP values.
[Fixed row]

(7.8) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

823752

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

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

0

(7.8.5) Please explain

EEIO approach using US EPA emission factors. Spend data is used and multiplied by the appropriate EEIO factors.

Capital goods

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

619214

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

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

0

(7.8.5) Please explain

EEIO approach using US EPA emission factors. Spend data is used and multiplied by the appropriate EEIO factors.

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

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

2989164

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

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

0

(7.8.5) Please explain

Calculated using actual gallons consumed and emission factors. Evaluation completed in 2023 added biofuels WTT (Biodiesel and Renewable diesel) calculations, including new GREET WTT emission factors for biofuels. The Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model is a United States-specific life-cycle model provided by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and developed by Argonne National Laboratory. In the absence of relevant emission factors from the US EPA Climate Registry, the GREET emission factors were determined as an appropriate source based on relevant geography and source quality.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

351916

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

☑ Distance-based method

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

51

(7.8.5) Please explain

Spend-based Method for UP Upstream T&D and a Distance-based Method for Loup Upstream T&D UP upstream T&D spend plus Loup T&D of other companies products by third-party logistics providers.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

111219

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

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

100

(7.8.5) Please explain

Using supplier provided tonnage data. Evaluation completed in 2023 determined emissions from UPRRs landfill tonnage from operations, MSW recycling tonnage from operations and incineration tonnage from operations will be included in UPRRs Scope 3 Category 5 emissions.

Business travel

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

77382

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

☑ Distance-based method

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

100

(7.8.5) Please explain

Combination of a Distance-based Method and a Fuel-based Method, depending on the exact emissions source. Emissions factors used were based on fuel type (gasoline, diesel fuel and jet fuel) from the EPA Emissions Factor Hub.

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

40688

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Distance-based method

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

0

(7.8.5) Please explain

Calculated using data from workforce resources & publicly reported in UPRRs 10-K and estimating average commute distance. Average number of commute miles per person taken from Numbeo, using "Average when primary using Car" value, and emission factors used were EPA. https://www.numbeo.com/traffic/country_result.jsp?countryUnitedStates

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Based upon the Guidance for Calculating Scope 3 Emissions, Union Pacific has concluded that this category is not relevant. This category is based on square footage of buildings where UPRR is the lessee and have not been accounted for in scope 1 and 2. UPRR captures all relevant instances in our reported Scope 1 & 2 data.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Based upon the Guidance for Calculating Scope 3 Emissions, Union Pacific has concluded that this category is not relevant. Union Pacific reached this conclusion based upon the definition of "downstream transportation and distribution." This category includes emissions from transportation and distribution of products sold by Union Pacific in the reporting year. Union Pacific does not sell or distribute a product. Union Pacific is a common carrier and transports freight.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Based upon the Guidance for Calculating Scope 3 Emissions, Union Pacific has concluded that this category is not relevant. Union Pacific reached this conclusion based upon the definition of "processing of sold products." The category includes emissions from the processing of intermediate products by third parties. Union Pacific does not sell intermediate products for processing. Union Pacific is a common carrier and transports freight.

Use of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Based upon the Guidance for Calculating Scope 3 Emissions, Union Pacific has concluded that this category is not relevant. Union Pacific reached this conclusion based upon the definition of "use of sold products." This category includes emissions from the use of goods and services sold by Union Pacific in the reporting year to end users. Union Pacific does not sell products for use. Union Pacific is a common carrier and transports freight

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Based upon the Guidance for Calculating Scope 3 Emissions, Union Pacific has concluded that this category is not relevant. Union Pacific reached this conclusion based upon the definition of "end of life treatment of sold products." This category includes emissions from the waste disposal and treatment of products sold by Union Pacific in the reporting year at the end of their life. Union Pacific is a common carrier and transports freight. There is no end of life treatment of sold products because UP provides a service and therefore does not have sold products with end of life treatment.

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

7481

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

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

0

(7.8.5) Please explain

This category includes emissions from the operation of assets that are owned by Union Pacific and leased to other entities in the reporting year that are not already included in its Scope 1 or Scope 2 emission calculations. For GHG reporting Union Pacific is including real estate assets it owns and leases to other entities that are not captured in its Scope 1 or 2 emissions calculations. Emissions were calculated using square footage measurements and average emission factors provided by the EPA Emissions Factor Hub.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not relevant, explanation provided

(7.8.5) Please explain

Based upon the Guidance for Calculating Scope 3 Emissions, Union Pacific has concluded that this category is not relevant. Union Pacific reached this conclusion based upon the definition of "franchise." A franchise is a business operating under a license to sell or distribute another Company's goods or services within a certain location. Union Pacific has no franchises.

Investments

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

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

303671

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

☑ Investment-specific method

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

92

(7.8.5) Please explain

Emissions were calculated using data directly collected by Union Pacific, provided by UPRRs investment & joint venture partners. Included in UPRRs emissions are Scope 1 & 2 emissions directly provided by partners or calculated emissions from locomotives, and office & shop space.

Other (upstream)

(7.8.1) Evaluation status

Select from:

☑ Not evaluated

Other (downstream)

(7.8.1) Evaluation status

Select from:

☑ Not evaluated

[Fixed row]

(7.9) Indicate the verification/assurance status that applies to your reported emissions.

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

[Fixed row]

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

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:
☑ Complete

(7.9.1.3) Type of verification or assurance

Select from:

☑ Reasonable assurance

(7.9.1.4) Attach the statement

11228514-LTR-5-Cappucci-2023 Verification Report (003).pdf

(7.9.1.5) Page/section reference

Section 3, Level of Assurance. Section 4, Verification Standards. Section 8.6 Emission Sources. Section 16.1 Verification Findings. Section 17, Verification Opinion.

(7.9.1.6) Relevant standard

Select from:

☑ ISO14064-3

(7.9.1.7) Proportion of reported emissions verified (%)

100
[Add row]

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

Row 1

(7.9.2.1) Scope 2 approach

Select from:

☑ Scope 2 location-based

(7.9.2.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:

☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:

☑ Reasonable assurance

(7.9.2.5) Attach the statement

11228514-LTR-5-Cappucci-2023 Verification Report (003).pdf

(7.9.2.6) Page/ section reference

Section 3, Level of Assurance. Section 4, Verification Standards. Section 8.6 Emission Sources. Section 16.1 Verification Findings. Section 17, Verification Opinion.

(7.9.2.7) Relevant standard

Select from:

☑ ISO14064-3

(7.9.2.8) Proportion of reported emissions verified (%)

100

Row 2

(7.9.2.1) Scope 2 approach

Select from:

☑ Scope 2 market-based

(7.9.2.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:
☑ Reasonable assurance

(7.9.2.5) Attach the statement

11228514-LTR-5-Cappucci-2023 Verification Report (003).pdf

(7.9.2.6) Page/ section reference

Section 3, Level of Assurance. Section 4, Verification Standards. Section 8.6 Emission Sources. Section 16.1 Verification Findings. Section 17, Verification Opinion.

(7.9.2.7) Relevant standard

Select from:
☑ ISO14064-3

(7.9.2.8) Proportion of reported emissions verified (%)

100
[Add row]

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

Row 1

(7.9.3.1) Scope 3 category

Select all that apply

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

(7.9.3.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.3.3) Status in the current reporting year

Select from:

☑ Complete

(7.9.3.4) Type of verification or assurance

Select from:

☑ Reasonable assurance

(7.9.3.5) Attach the statement

11228514-LTR-5-Cappucci-2023 Verification Report (003).pdf

(7.9.3.6) Page/section reference

Section 3, Level of Assurance. Section 4, Verification Standards. Section 8.6 Emission Sources. Section 16.1 Verification Findings. Section 17, Verification Opinion.

(7.9.3.7) Relevant standard

Select from:
☑ ISO14064-3

(7.9.3.8) Proportion of reported emissions verified (%)

100
[Add row]

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

Select from:
☑ Decreased

(7.10.1) 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 renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

3

(7.10.1.2) Direction of change in emissions

Select from:
☑ Increased

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

*Union Pacific had 1 yard office generating and using solar power in 2022, which remained the same in 2023. We calculated a reduction of 3 MT CO2e emissions from renewable energy consumption. [(Change in Solar Power Generation)/(Prior Year Scope 12 emissions)]*100% [(3/9,447,084)]*100% 0.00003%.*

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

122100

(7.10.1.2) Direction of change in emissions

Select from:

☑ Increased

(7.10.1.3) Emissions value (percentage)

1.2925

(7.10.1.4) Please explain calculation

*Total Scope 1 & Scope 2 emissions decreased by 74,760 MT from 9,447,084 MT CO2e in 2022 to 9,372,324 MT CO2e in 2023. Union Pacific continues to pursue a variety of emission reduction initiatives including increased usage of biodiesel and renewable diesel for locomotive fuel by 35.03% going from 4.5% of total locomotive fuel use from biogenic sources in 2022 to 6.1% in 2023. [(Change in Locomotive Fuel Consumption and Renewable Diesel and Biodiesel emissions)/(Prior Year Scope 12 emissions)]*100% [(122,100/9,447,084)]*100% 1.2925%*

Change in output

(7.10.1.1) Change in emissions (metric tons CO2e)

120295

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

1.2734

(7.10.1.4) Please explain calculation

GHG emissions from combustion of diesel, used to power locomotives, represents the largest source of the Scope 1 & Scope 2 emissions categories (94%). In 2023, Union Pacific saw decrease in revenue ton-miles (RTMs) of 1.8%. [((Prior Year Scope 12 emissions)(Change in RTMs)((Change in Current Year vs Prior Year Scope 12 emissions - Overall Change))/(Prior Year Scope 12 emissions)]*100% [((9,447,084*1.8%)(-74,760 - (121,806))/9,447,084)]*100% -1.2734%.*

Change in methodology

(7.10.1.1) Change in emissions (metric tons CO2e)

76565

(7.10.1.2) Direction of change in emissions

Select from:

☑ Decreased

(7.10.1.3) Emissions value (percentage)

0.8105

(7.10.1.4) Please explain calculation

In 2023, Union Pacific changed the specific EPA emissions factor used for the Mobile Combustion "Other" CH4 and N2O emission factors in order to be based off the Vehicle Type "Railroad Equipment" as opposed to "Construction/Mining Offroad Trucks". Additionally, Union Pacific excluded any UP to UP rail shipments from their Upstream T&D calculation, as these emissions are already accounted for under Scope 1. Also, there was a methodology change from 2022 to 2023 for US Average electricity emissions for leases with building sizes 10,001-100,000 sqft. In 2022, emissions were calculated using SAP spend data but in 2023 there was a shift to use actual building sqft data and electricity estimates. Together these methodology changes account for a decrease of 76,565 MT CO2e, or 0.810% of the prior year's

*emissions. [(Sum of Emission Factor Change emissions, Upstream T&D change emissions, and Scope 2 US Average Electricity emissions change)/(Prior Year Scope 12 emissions)]*100% [-(76,565)/9,447,084]*100% -0.8105%.*
[Fixed row]

(7.10.2) Are your emissions performance calculations in 7.10 and 7.10.1 based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Select from:
☑ Location-based

(7.12) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Select from:
☑ Yes

(7.12.1) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

(7.12.1.1) CO2 emissions from biogenic carbon (metric tons CO2)

544724

(7.12.1.2) Comment

Represents the CO2 portion of biogenic source emissions from biodiesel and renewable diesel used to power locomotives. Any methane (CH4) and nitrous oxide (N2O) from biogenic emissions are accounted for in our Scope 1 reporting.
[Fixed row]

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

Select from:
☑ Yes

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

Row 1

(7.15.1.1) Greenhouse gas

Select from:
☑ CO2

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

9049705

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 2

(7.15.1.1) Greenhouse gas

Select from:
☑ HFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

13095

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 3

(7.15.1.1) Greenhouse gas

Select from:
☑ CH4

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

22330

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 4

(7.15.1.1) Greenhouse gas

Select from:
☑ N2O

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

71395

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)
[Add row]

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

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
United States of America	*9156525*	*215799*	*235705*

[Fixed row]

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

Select all that apply

☑ By activity

(7.17.3) Break down your total gross global Scope 1 emissions by business activity.

Row 1

(7.17.3.1) Activity

Locomotives

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

8820409

Row 2

(7.17.3.1) Activity

Vehicle/Mobile AC

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

5052

Row 3

(7.17.3.1) Activity

Building AC

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

4

Row 4

(7.17.3.1) Activity

Railcar Refrigerant

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

7845

Row 5

(7.17.3.1) Activity

Stationary Combustion Sources

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

72588

Row 6

(7.17.3.1) Activity

Vehicles and Other Mobile Sources

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

246715

Row 7

(7.17.3.1) Activity

Corporate Jets

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

3717

Row 8

(7.17.3.1) Activity

Misc. Refrigerant Loss

(7.17.3.2) Scope 1 emissions (metric tons CO2e)

194
[Add row]

(7.19) Break down your organization’s total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

Transport services activities

(7.19.1) Gross Scope 1 emissions, metric tons CO2e

8820409

(7.19.3) Comment

This amount accounts for locomotive fuel. Union Pacific uses biodiesel and renewable diesel for its locomotives. However, based on the "Technical Note on Special Conditions for Reporting Scope 1 Emissions," the CO2 emissions associated with these fuel sources are reported separately under 7.12.1.
[Fixed row]

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

Select all that apply
☑ By activity

(7.20.3) 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)
Row 1	*Electricity*	*215689*	*235595*
Row 3	*Chilled Water*	*35*	*35*
Row 4	*Steam*	*75*	*75*

[Add row]

(7.21) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

Transport services activities

(7.21.1) Scope 2, location-based, metric tons CO2e

215799

(7.21.2) Scope 2, market-based (if applicable), metric tons CO2e

235705

(7.21.3) Comment

The emissions associated with purchased electricity are attributable to facility used in transport services activities (i.e., freight haul) such as rail yards, maintenance operations and office-related functions. Scope 2 emissions values requested for sector production activity is equal to our gross global scope 2 emissions as listed in question 7.7.
[Fixed row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

Consolidated accounting group

(7.22.1) Scope 1 emissions (metric tons CO2e)

9156525

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

215799

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

235705

(7.22.4) Please explain

All emissions reported are Union Pacific's emissions. We do not report emissions from other entities.

All other entities

(7.22.1) Scope 1 emissions (metric tons CO2e)

6385

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

77

(7.22.4) Please explain

Our Scope 1, 2, and 3 consolidated reporting excludes the GHG contribution of MHX, a transload subsidiary acquired by Union Pacific in February 2023. MHX's GHG emissions for all of 2023 were estimated as: Scope 1: 6,385 mtons CO2e, Scope 2: 77 mtons CO2e, and Scope 3 (categories 6 & 9): 3,787 tons CO2e.
[Fixed row]

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

Select from:
☑ No

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

Row 1

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:
☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Allocation based on another physical factor

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Other unit, please specify **:**Total Shipments

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

106755

(7.26.9) Emissions in metric tonnes of CO2e

106755

(7.26.11) Major sources of emissions

Mobile combustion (Locomotives).

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

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

Total Scope 1 emissions exclude the CO2e portion of Scope 1 emissions derived from the combustion of biogenic fuels, including biodiesel and renewable diesel fuels.

(7.26.14) Where published information has been used, please provide a reference

No published info referenced.

Row 2

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Allocation based on another physical factor

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Other unit, please specify **:**Total Shipments

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

180029

(7.26.9) Emissions in metric tonnes of CO2e

171030

(7.26.11) Major sources of emissions

Mobile combustion (Locomotives).

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

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

Total Scope 1 emissions exclude the CO2e portion of Scope 1 emissions derived from the combustion of biogenic fuels, including biodiesel and renewable diesel fuels.

(7.26.14) Where published information has been used, please provide a reference

No published information referenced.

Row 3

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Company wide

(7.26.6) Allocation method

Select from:

☑ Allocation based on another physical factor

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Other unit, please specify **:**Total Shipments

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

14450

(7.26.9) Emissions in metric tonnes of CO2e

10460

(7.26.11) Major sources of emissions

Mobile combustion (Locomotives).

(7.26.12) Allocation verified by a third party?

Select from:

☑ No

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

Total Scope 1 emissions exclude the CO2e portion of Scope 1 emissions derived from the combustion of biogenic fuels, including biodiesel and renewable diesel fuels.

(7.26.14) Where published information has been used, please provide a reference

No published information referenced.
[Add row]

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

Row 1

(7.27.1) Allocation challenges

Select from:
☑ Diversity of product lines makes accurately accounting for each product/product line cost ineffective

(7.27.2) Please explain what would help you overcome these challenges

Union Pacific continues to investigate methodologies to improve our allocation of emissions to different customers.

Row 3

(7.27.1) Allocation challenges

Select from:
☑ Customer base is too large and diverse to accurately track emissions to the customer level

(7.27.2) Please explain what would help you overcome these challenges

Union Pacific continues to investigate methodologies to improve our allocation of emissions to different customers.
[Add row]

(7.28) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

(7.28.1) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Select from:

☑ Yes

(7.28.2) Describe how you plan to develop your capabilities

Union Pacific continues to investigate methodologies for improve our allocation of emissions to different customers, but our efforts are proprietary and forward looking. We cannot disclose them at this time.
[Fixed row]

(7.29) What percentage of your total operational spend in the reporting year was on energy?

Select from:

☑ More than 15% but less than or equal to 20%

(7.30) 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)	*Select from:* ☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:*

	Indicate whether your organization undertook this energy-related activity in the reporting year
	☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ Yes
Consumption of purchased or acquired cooling	*Select from:* ☑ Yes
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ Yes

[Fixed row]

(7.30.1) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ HHV (higher heating value)

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

36203691

(7.30.1.4) Total (renewable and non-renewable) MWh

36203693

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

536954

(7.30.1.4) Total (renewable and non-renewable) MWh

536954

Consumption of purchased or acquired steam

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

330

(7.30.1.4) Total (renewable and non-renewable) MWh

330

Consumption of purchased or acquired cooling

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

82

(7.30.1.4) Total (renewable and non-renewable) MWh

82

Consumption of self-generated non-fuel renewable energy

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

166

(7.30.1.4) Total (renewable and non-renewable) MWh

166

Total energy consumption

(7.30.1.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

166

(7.30.1.3) MWh from non-renewable sources

36741060

(7.30.1.4) Total (renewable and non-renewable) MWh

36741226
[Fixed row]

(7.30.6) 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	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:*

	Indicate whether your organization undertakes this fuel application
	☑ No
Consumption of fuel for the generation of steam	*Select from:* ☑ No
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ No

[Fixed row]

(7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

(7.30.7.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

No sustainable biomass is used.

Other biomass

(7.30.7.1) Heating value

Select from:
☑ HHV

(7.30.7.2) Total fuel MWh consumed by the organization

686778

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

686778

(7.30.7.8) Comment

Biodiesel Fuel - Heat energy from fuel combustion used to power locomotives and work equipment.

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ HHV

(7.30.7.2) Total fuel MWh consumed by the organization

730181

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

730181

(7.30.7.8) Comment

Renewable Diesel Fuel - Heat energy from fuel combustion used to power locomotives and work equipment.

Coal

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

No coal used.

Oil

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

No oil used.

Gas

(7.30.7.1) Heating value

Select from:
☑ HHV

(7.30.7.2) Total fuel MWh consumed by the organization

224487

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

224487

(7.30.7.8) Comment

Natural gas as a heating source in buildings and powering heat generating equipment.

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

(7.30.7.1) Heating value

Select from:
☑ HHV

(7.30.7.2) Total fuel MWh consumed by the organization

36203693

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.8) Comment

Heat energy from fuel combustion used to power locomotives, vehicles, work equipment, heaters, and other equipment used to support operations.

Total fuel

(7.30.7.1) Heating value

Select from:

☑ HHV

(7.30.7.2) Total fuel MWh consumed by the organization

37845139

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

1641445

(7.30.7.8) Comment

Heat energy from fuel combustion used to power locomotives, vehicles, work equipment, heaters, and other equipment used to support operations.
[Fixed row]

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

Electricity

(7.30.9.1) Total Gross generation (MWh)

55069

(7.30.9.2) Generation that is consumed by the organization (MWh)

55069

(7.30.9.3) Gross generation from renewable sources (MWh)

166

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

166

Heat

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Steam

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Cooling

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0
[Fixed row]

(7.30.14) 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 7.7.

Row 1

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Other, please specify :Onsite renewable energy generation

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Solar

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

166

(7.30.14.6) Tracking instrument used

Select from:

☑ Other, please specify :Solar power generation tracked using an onsite system for measuring MWh

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

Select from:

☑ United States of America

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

Select from:

☑ Yes

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

2010

(7.30.14.10) Comment

Electricity generation from onsite solar PV arrays at the Santa Teresa facility.
[Add row]

(7.30.15) Provide details on the average emission factor used for all transport movements per mode that directly source energy from the grid.

Row 1

(7.30.15.1) Category

Select from:
☑ Rail

(7.30.15.2) Emission factor unit

Select from:
☑ gCO2/kWh

(7.30.15.3) Average emission factor: unit value

0

(7.30.15.4) Comment

UPRR does not currently have any rail transport movements that directly source energy from the grid. However, in January 2022, we announced plans to purchase battery-electric locomotives for testing in yard operations. Testing battery-electric locomotives in yard switching, as opposed to line-haul operations, offers a more

realistic path for locomotive conversion to 100% batteries, as switch locomotives have limited range and lower power requirements than line-haul locomotives. They also have planned downtime that can be utilized for battery recharging at a fixed location, rather than a line-haul locomotive recharging along a main line route without high voltage electrical infrastructure support. Procuring the 2.4 MWh batteries needed for our battery-electric locomotives has proven to be more challenging than expected, not only for Union Pacific but also for other Class I freight railroads that have ordered similar locomotives for demonstration testing. Because of these procurement difficulties, we adjusted our locomotive order to four units, which are now expected to be delivered in 2026 and will be based in Southern California for operational testing. We remain committed to testing battery-electric locomotive technology in our operations. These delays serve as a reminder of the complexities and supply chain challenges that arise during the transition to alternative propulsion technologies in the rail industry. However, we remain dedicated to driving progress in the industry. By sharing our findings with our partner locomotive original equipment manufacturers (OEMs) and other member railroads of the AAR's Decarbonization Working Group, we can accelerate our collective learning and advancement along the technological curve.
[Add row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

United States of America

(7.30.16.1) Consumption of purchased electricity (MWh)

536954

(7.30.16.2) Consumption of self-generated electricity (MWh)

166

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

413

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

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

537533
[Fixed row]

(7.36) Provide any efficiency metrics that are appropriate for your organization’s transport products and/or services.

Row 1

(7.36.1) Activity

Select from:

☑ Rail

(7.36.2) Metric figure

1.088

(7.36.3) Metric numerator

Select from:

☑ Other, please specify :Gallons of Fuel (thousands)

(7.36.4) Metric denominator

Select from:

☑ Other, please specify :gross ton-miles (GTMs) (Millions)

(7.36.5) Metric numerator: Unit total

911116

(7.36.6) Metric denominator: Unit total

837502

(7.36.7) % change from last year

1

(7.36.8) Please explain

Locomotive operations comprised 96.5% of Union Pacific's 2022 Scope 1 emissions. Improved locomotive fuel economy via engine efficiency, locomotive handling, and network efficiency reduces fuel consumption, which also reduces GHG emissions. For 2023 vs 2022 % change: total gross ton-miles (denominator) declined approx 1%, while total fuel consumed was flat. We continue to explore and invest to improve our fuel consumption efficiency, including equipping locomotives with energy management systems, utilizing automatic shutdown technology to reduce unnecessary idling, and improving operating practices.
[Add row]

(7.45) 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.

Row 1

(7.45.1) Intensity figure

0.0003885868

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

9372324

(7.45.3) Metric denominator

Select from:
☑ unit total revenue

(7.45.4) Metric denominator: Unit total

24119000000

(7.45.5) Scope 2 figure used

Select from:
☑ Location-based

(7.45.6) % change from previous year

2.32

(7.45.7) Direction of change

Select from:

☑ Increased

(7.45.8) Reasons for change

Select all that apply

☑ Change in revenue

☑ Other, please specify **:**Change in Emissions

(7.45.9) Please explain

Year over year decrease in revenue was 3.04% while Scope 12 emission change year over year was a decrease of 0.79%.
[Add row]

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

Rail

(7.51.1) Scopes used for calculation of intensities

Select from:

☑ Report just Scope 1

(7.51.2) Intensity figure

1.05412e-05

(7.51.3) Metric numerator: emissions in metric tons CO2e

8828254

(7.51.4) Metric denominator: unit

Select from:

☑ t.mile

(7.51.5) Metric denominator: unit total

837501999998

(7.51.6) % change from previous year

-0.6

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

YoY change of gross ton-miles (GTMs) was down 0.7% while Scope 1 Rail Activity (Loco Fuel - Biogenic CO2 Railcar Refrigerant) YoY emission change was a 1.3% decrease. No exclusions in coverage of transport emissions were made.
[Fixed row]

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

Row 1

(7.52.1) Description

Select from:

☑ Energy usage

(7.52.2) Metric value

6.1

(7.52.3) Metric numerator

Renewable biofuels consumption in gallons

(7.52.4) Metric denominator (intensity metric only)

Total biofuels and petroleum diesel consumption

(7.52.5) % change from previous year

36

(7.52.6) Direction of change

Select from:

☑ Increased

(7.52.7) Please explain

Meeting our near-term emissions reduction target cannot depend on operational excellence and technology-enabled fuel efficiency alone. With 80% of our GHG emissions (Scope 1 and Scope 3, category 3) generated from the use of fuel in our rail operations, a key enabler of meeting our near-term GHG reduction target is increasing our utilization of renewable, low-carbon fuels in our locomotives. We have committed to the goal of increasing the percentage of renewable fuels consumed to 10% of our total diesel consumption by 2025 and 20% by 2030. Use of renewable fuels reduces both greenhouse gas and criteria pollutant emissions. We work with fuel supply-chain partners to secure supplies of low-carbon fuels to meet our current and projected future needs. This includes creating logistics solutions to enable the refueling of locomotives with biofuel blends at new locations on our network; establishing commercial contracts for biodiesel with our suppliers; exploring market-based ways to reduce the cost premium for biofuels over fossil fuel-based diesel; and making cooperative efforts to encourage efficient, circular shipping of biofuels and biofuel feedstocks by rail. Since committing to increasing our use of biofuels, we have made consistent progress. In 2023, our consumption of low-carbon fuels reached 6.1% of total diesel used, up from 4.5% in 2022. We are actively collaborating with other Class I railroads and domestic locomotive manufacturers to test and approve the use of biofuels. For example, four Union Pacific locomotives providing service to a San Bernardino, California, sand and gravel mine are running on 100% biomass-based fuel. Data gathered during tests is demonstrating the performance and reliability of their engines are comparable whether operated with biofuel or traditional diesel fuel. Our testing of 100% biomass-based fuel is continuing to progress with no serious issues. Data and experience obtained during the ongoing pilot study, expected to last until the end of 2025 if positive, will help us meet our goals. In 2023, these and other testing collaborations led to both major locomotive manufacturers certifying the utilization of blends of up to 50% renewable diesel and 11% biofuel in locomotives.
[Add row]

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

Select all that apply

☑ Absolute target

(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.

Row 1

(7.53.1.1) Target reference number

Select from:

☑ Abs 1

(7.53.1.2) Is this a science-based target?

Select from:

☑ Yes, and this target has been approved by the Science Based Targets initiative

(7.53.1.3) Science Based Targets initiative official validation letter

Union Pacific Corporation - Near-Term Target Validation Report - Friday_ 9 February 2024.pdf

(7.53.1.4) Target ambition

Select from:

☑ 1.5°C aligned

(7.53.1.5) Date target was set

02/12/2024

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Carbon dioxide (CO2)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

☑ Scope 3

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Location-based

(7.53.1.10) Scope 3 categories

Select all that apply

☑ Scope 3, Category 1 – Purchased goods and services

☑ Scope 3, Category 2 – Capital goods

☑ Scope 3, Category 3 – Fuel- and energy- related activities (not included in Scope 1 or 2)

(7.53.1.11) End date of base year

12/31/2018

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

11313933

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

277200

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

659281

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

559287

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

3824960

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

5043528

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

16634661

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

100

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

100

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

100

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

100

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

100

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

0

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

0

(7.53.1.54) End date of target

12/31/2030

(7.53.1.55) Targeted reduction from base year (%)

50.4

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

8250791.856

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

9156525

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

215799

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

823752

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

619214

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

2989164

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

4432130.000

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

13804454.000

(7.53.1.78) Land-related emissions covered by target

Select from:

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

(7.53.1.79) % of target achieved relative to base year

33.76

(7.53.1.80) Target status in reporting year

Select from:

☑ Revised

(7.53.1.81) Explain the reasons for the revision, replacement, or retirement of the target

We revalidated our science-based target to align with a 1.5-degree ambition, as recommended by the Intergovernmental Panel on Climate Change (IPCC). This adjustment reflects the company's commitment to further reducing its greenhouse gas emissions and contributing to global efforts to combat climate change. By aligning with the more ambitious 1.5-degree target, Union Pacific demonstrates its dedication to sustainability and proactive climate action.

(7.53.1.82) Explain target coverage and identify any exclusions

Our revalidated targets covers all Scope 1 & 2 emissions, as well as categories 1, 2 and 3 of our Scope 3 emissions.

(7.53.1.83) Target objective

50.4% Scope 1 and 2 absolute reduction by 2030 based on 2018 baseline. 50.4% Scope 3 absolute reduction for purchased goods and services, capital goods, and fuel- and energy-related activities by 2030 based on 2018 baseline.

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

In 2023, we reduced our absolute GHG emissions for Scope 1 and 2 by 0.8% vs. 2022. Cumulatively, our emissions have experienced a 19.1% reduction vs. our 2018 baseline. In 2023, we reduced our absolute GHG emissions for the target Scope 3 categories by 0.8% vs. 2022. Cumulatively, our Scope 3 target categories' total GHG emissions have experienced a 12.1% absolute reduction vs. our 2018 baseline, including a 21.9% cumulative absolute reduction in Scope 3 fuel- and energy-related activities. In the near-term, we are focused on operational excellence, fuel efficiency, biofuels utilization and technology investments to reduce our GHG footprint. We are also making investments to assess strategies and technologies that can further reduce GHG emissions from our locomotive operations over the long term, including hybrid locomotive and battery-electric locomotives. While GHG emissions from locomotives are the largest component of our GHG footprint, we are also taking action to reduce our GHG emissions beyond locomotives to meet our revised near-term, science-based target. We are actively working with customers on sustainable supply chain solutions, including investing for modal conversion from trucks to rail, expanding our presence in renewable fuel shipments, and creating circular economy logistics solutions. We know it is critical to involve our entire value chain partners in climate action, so we are advocating for improved sustainability practices from our suppliers, engaging our employees in sustainability solutions, and working with industry groups and policymakers

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

[Add row]

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

Select all that apply

☑ Targets to increase or maintain low-carbon energy consumption or production

(7.54.1) Provide details of your targets to increase or maintain low-carbon energy consumption or production.

Row 1

(7.54.1.1) Target reference number

Select from:

☑ Low 1

(7.54.1.2) Date target was set

12/31/2021

(7.54.1.3) Target coverage

Select from:

☑ Organization-wide

(7.54.1.4) Target type: energy carrier

Select from:

☑ Other, please specify :renewable diesel and biodiesel fuels

(7.54.1.5) Target type: activity

Select from:

☑ Consumption

(7.54.1.6) Target type: energy source

Select from:

☑ Renewable energy source(s) only

(7.54.1.7) End date of base year

12/31/2018

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

334317

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

1.2

(7.54.1.10) End date of target

12/31/2030

(7.54.1.11) % share of low-carbon or renewable energy at end date of target

20

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

6.1

(7.54.1.13) % of target achieved relative to base year

26.06

(7.54.1.14) Target status in reporting year

Select from:

☑ Underway

(7.54.1.16) Is this target part of an emissions target?

No.

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ No, it's not part of an overarching initiative

(7.54.1.19) Explain target coverage and identify any exclusions

We are working to increase the percentage of renewable fuels consumed to 10% of our total diesel consumption by 2025 and push that number to 20% by 2030. Along with reductions resulting from more efficient operations and reduced fuel consumption, the achievement of these alternative fuel goals would enable us to meet our sciencebased target. In February 2021, Union Pacific announced its target to reduce absolute Scope 1 and 2 GHG emissions and GHG emissions on a well-to-wheel basis from locomotive operations 26% by 2030 from a 2018 baseline. Well-to-wheel emissions include well-to-tank emissions, which are Scope 3 emissions generated upstream in the value chain during fuel production and transport, and tank-to-wheel emissions, which are Scope 1 emissions related to the consumption of the fuel. The target boundary includes biogenic emissions and removals from bioenergy feedstocks and has been validated by the Science Based Target initiative (SBTi).

(7.54.1.20) Target objective

10% biofuels utilization by 2025 20% biofuels utilization by 2030

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

To facilitate our increased use of low-carbon fuels, we added more locomotive fueling locations using low-carbon fuels, including Los Angeles, Houston, Roseville, Des Moines and Baton Rouge. Additionally, we have analyzed our network fueling locations and begun infrastructure design work for new and retrofitted storage and blending infrastructure to further increase our usage of low-carbon fuels each year. For the 2023 reporting year, the percentage of renewable fuels consumed grew from 4.5% to over 6.1%. To reach our goals related to the consumption of low-carbon fuels, more of our locomotive model types must be certified as compatible with higher blends of low-carbon fuels. We continue to collaborate with other North American freight railroads and with domestic locomotive manufacturers on testing and

approving use of blends of biofuel and renewable diesel for use in nearly every major locomotive model we operate and expect to implement results from the testing into our fueling plans during 2024. We are also working with our fuel supply-chain partners to secure supplies of low-carbon fuels to meet both our current and projected future needs. Additionally, we believe governmental and regulatory action is necessary to encourage the supply of biodiesel and renewable diesel in the 23 states where we operate. Federal and state government policies should harness market principles to encourage the development and deployment of low-carbon fuels. We are working to develop policy strategies through the Decarbonization Working Group of the Association of American Railroads (AAR) to support this effort. [Add row]

(7.55) 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.

Select from:

☑ Yes

(7.55.1) 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	*6*	*`Numeric input*
To be implemented	*4*	*900*
Implementation commenced	*3*	*148000*
Implemented	*11*	*628000*
Not to be implemented	*0*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in buildings

☑ Lighting

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

2000

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

Select all that apply

☑ Scope 2 (location-based)

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

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

1017000

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

4625000

(7.55.2.7) Payback period

Select from:

☑ 4-10 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 11-15 years

(7.55.2.9) Comment

Since 2018, we decreased our GHG emissions from Scope 2 sources by over 22%, driven in part by an ongoing portfolio of projects that increase the efficiency of our electricity consumption. These projects at multiple operational locations included replacing outdoor facility lighting with LED systems. Additional similar projects have commenced implementation and will be completed in future reporting periods.

Row 2

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption

☑ Liquid biofuels

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

554000

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

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

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

0

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

8888000

(7.55.2.7) Payback period

Select from:

☑ No payback

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 21-30 years

(7.55.2.9) Comment

A key enabler of meeting our near-term GHG reduction target is increasing our utilization of renewable, low-carbon fuels in our locomotives. We have committed to the goal of increasing the percentage of renewable fuels consumed to 10% of our total diesel consumption by 2025 and 20% by 2030. We work with fuel supply-chain partners to secure supplies of low-carbon fuels to meet our current and projected future needs. This includes creating logistics solutions and infrastructure to enable the refueling of locomotives with biofuel blends at new locations on our network; establishing commercial contracts for biodiesel with our suppliers; and exploring market-based ways to reduce the cost premium for biofuels over fossil fuel-based diesel. Since committing to increasing our use of biofuels, we have made consistent progress. In 2023, our consumption of low-carbon fuels reached 6.1% of total diesel used, up from 4.5% in 2022. Estimated annual CO2e savings in this reporting row are only for the incremental growth in biofuels utilization achieved during the reporting year. We are actively collaborating with other Class I railroads and domestic locomotive manufacturers to test and approve the use of biofuels. In 2023, these and other testing collaborations led to both major locomotive manufacturers certifying the utilization of blends of up to 50% renewable diesel and 11% biofuel in locomotives.

Row 3

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Machine/equipment replacement

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

72000

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

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 16-20 years

(7.55.2.9) Comment

We are actively upgrading our existing locomotive fleet with new technology to enhance fuel efficiency, reliability and reduce emissions. In 2023, we successfully overhauled 200 older locomotives, resulting in improved reliability and up to 5% better fuel efficiency, along with approximately 53% fewer GHG emissions. This initiative continues our ongoing partnership with Wabtec Corporation to modernize a total of 600 locomotives. This extensive project, valued at over 1 billion, includes engine refurbishment with next-generation controls and replacement of the electrical control system in our high horsepower fleet, allowing for software updates and functionality required to reduce road failures and variability. In addition, modernizations include a complete rebuild of engines and redesign of the fuel distribution system, resulting in more efficient fuel consumption and reduced emissions. The enhanced reliability and capacity of these updated locomotives will allow us to reduce the number of locomotives needed to transport our freight efficiently. Modernizations also align with the principles of the circular economy, as more than half of each locomotive's weight will consist of reused components. This investment will allow us to achieve approximately 210,000 tons in annual emission reductions – equivalent to removing emissions from nearly 45,000 passenger cars each year. We plan to complete all 600 modernizations by the end of 2026.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:

☑ Dedicated budget for low-carbon product R&D

(7.55.3.2) Comment

We are working with a locomotive OEM to develop and purchase 4 battery-electric locomotives for testing in yard operations. Battery-electric locomotives do not use fuel and emit zero emissions. By working with the locomotive manufacturers in this test phase, Union Pacific hopes to advance battery-electric technology development and evaluate its potential deployment in long-haul service. Procuring the 2.4 MWh batteries needed for our battery-electric locomotives has proven to be more challenging than expected, not only for Union Pacific but also for other Class I freight railroads that have ordered similar locomotives for demonstration testing. We also continue to advance our partnership with ZTR, a green technology company and leader in locomotive control systems, to build six hybrid battery-electric locomotives for operational testing and ultimately revenue service. The locomotives are being constructed at our locomotive shop in North Little Rock, Arkansas, and the first unit will undergo extensive testing beginning in May 2024 in a Union Pacific facility and rail yard. The next of the remaining five hybrid locomotives is expected to be ready for testing in 2025. These first of its kind locomotives within North America's freight rail industry will function similarly to plugin hybrid cars, with the ability to operate in various modes. They will have multiple charging options for their batteries, including wayside charging and onboard self-charging capabilities. The engineless slug design increases the number of traction motors available, enhancing the locomotive's pulling and braking power for yard switching work. Depending on the mode of operation, these hybrid switchers are expected to consume as much as 80% less fuel – reducing associated greenhouse gas and criteria pollutants. Additional benefits include reduced noise and lower maintenance expenses compared to diesel units. The insights gained will help us determine the potential for hybrid units as a transition strategy in our operations.

Row 2

(7.55.3.1) Method

Select from:

☑ Partnering with governments on technology development

(7.55.3.2) Comment

Union Pacific partnered with the Port of Los Angeles to partially fund the cost of one of the battery-electric locomotives for use at the port via a Diesel Emission Reduction Act (DERA) grant from the U.S. Environmental Protection Agency. Via this partnership, Union Pacific and the locomotive OEM will gain valuable experience testing battery-electric locomotives in warm weather service, and the Port will see reduced emissions from our operations.

Row 3

(7.55.3.1) Method

Select from:

☑ Dedicated budget for other emissions reduction activities

(7.55.3.2) Comment

Union Pacific has endeavored to be part of the climate solution by proactively seizing opportunities to meet our sustainability goals. Under our Green Financing Framework, Union Pacific Corporation issued a 600 million green bond in September 2022 to support projects with environmental benefits. We have disbursed 100% of the net proceeds of 590.8 million to eligible projects, with 41% disbursed post-bond issuance. Disbursements included 564.5 million for clean transportation projects (new rolling stock, vehicles and equipment), 265.5 million for upgrades to existing rolling stock, 220.9 million for contributions to improve modal shift to rail and expanding network capacity, 19.9 million for investing in a solar facility, and 6.4 million for energy efficiency projects. For more information, see our Green Bond Allocation and Impact Report at https://www.up.com/cs/groups/public/@uprr/@corprel/documents/up_pdf_nativedocs/pdf_up_esg_green_bond_2023_rpt.pdf.

Row 4

(7.55.3.1) Method

Select from:

☑ Internal incentives/recognition programs

(7.55.3.2) Comment

To further align and accelerate the Company's sustainability initiatives, we have incorporated sustainability-related key performance indicators in our executive compensation scorecard. Continuous improvement in achieving the Company's fuel efficiency goals, trip plan compliance and use of biofuels, all which directly impact emissions, are tied to executive compensation. For 2022, we note the improvement in the fuel consumption rate and the increase in biofuel blend to over 4.5%. Pages 60-62 of our 2023 Proxy details how 20% of target annual incentive cash bonuses paid to executives is based on a shared set of Company goals in key areas such as safety, customer service, trip plan compliance, market share, employee engagement and renewable fuel blend. Attainment of trip plan compliance and renewable fuel blend utilization goals positively impact our GHG reduction goals.

Row 5

(7.55.3.1) Method

Select from:

☑ Compliance with regulatory requirements/standards

(7.55.3.2) Comment

Investment is directed towards emissions reduction activities that are mandated by federal, state and/or local laws, regulations and standards. Union Pacific's locomotive emissions, are governed by EPA regulations that limit greenhouse gas, particulate, and other emissions based on locomotive manufacture date. Based on this obligation, we assess our locomotive fleet annually through financial optimization calculations to determine the budget that would be necessary to meet our regulatory commitments in the context of our business needs.

Row 6

(7.55.3.1) Method

Select from:

☑ Employee engagement

(7.55.3.2) Comment

Operating expenses and other resources are provided to support training and implementation of other employee engagement strategies designed to help achieve the company's goal of improved environmental performance and reduce our environmental footprint. Employees play a role in fuel conservation and other efforts that help reduce GHG emissions.Additionally, Union Pacific is the first railroad to organize an employee-led business resource group focused on environmental sustainability, Planet Tracks. The organization's mission is to improve business performance while fostering workforce engagement and personal awareness driven by initiatives that inspire sustainable focus and innovation throughout the organization. Its objectives include identifying and educating Union Pacific's workforce on environmental issues; championing environmental stewardship across the company and fostering employee engagement through training, networking and targeted activities.
[Add row]

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

Select from:

☑ No, I am not providing data

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

Select from:

☑ Yes

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

Row 1

(7.74.1.1) Level of aggregation

Select from:

☑ Product or service

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

Select from:

☑ Climate Bonds Taxonomy

(7.74.1.3) Type of product(s) or service(s)

Rail

☑ Other, please specify **:**Low-carbon transportation service

(7.74.1.4) Description of product(s) or service(s)

The main competitor to rail transportation is transportation via trucks, and Union Pacific is engaged in attempting to win market share from truck transportation. Shipping via intermodal or general merchandise rail cars instead of trucks enables customers to utilize a lower-carbon transportation product for the majority of their shipment miles, as a typical UP freight train is on average three to four times more fuel efficient per freight ton-mile than truck transportation, equating to up to a 75% reduction in transportation related CO2e emissions. As a result of this efficiency, UP helps customers avoid and/or reduce GHG emissions that would otherwise be generated from more carbon-intensive modes of transportation.

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

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify **:**Internal Union Pacific methodology

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

Select from:

☑ Use stage

(7.74.1.8) Functional unit used

Revenue Ton-Miles (RTM) and Revenue Ton-Mile per gallon of diesel (RTM/gal) are used as freight haul efficiency metrics in the railroad sector. RTM/gal measures a freight train's efficiency in transporting one short ton of freight a distance (miles) per gallon of diesel fuel. For this metric, the higher the more efficient. For the inversion of this ratio "gallons of fuel per RTM", less is better and represents fuel consumed to move one freight ton one mile.

(7.74.1.9) Reference product/service or baseline scenario used

The references used were the RTM and RTM/gal metrics for freight hauling if the transport mode was a heavy-duty diesel semi-truck, which is the primary surface transport mode for freight hauling, and our average actual freight shipments occurring during 2023 for our customers. The types of shipments generally belong to our merchandise, agricultural and intermodal shipment types (e.g. excludes coal, due to regulatory restrictions relating to its hauling).

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

Select from:

☑ Use stage

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

22500000

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

Our internal methodology compares actual customer shipments in 2023 (system avg revenue miles, waybilled shipment and freight car weight, and average 2023 fuel consumption rate per mile) to a theoretical shipping movement for the same origin-destination pairs utilizing the truck transportation mode. This methodology aligns with Association of American Railroads analysis concluding that Rail transport is three to four times more fuel and GHG efficient than trucks. Assumptions: Estimates apply to one-way loaded shipments only. Emissions calculations for the truck emissions comparison are based on heavy-duty diesel semi-truck emissions factors from EPA/NHTSA's Draft Regulatory Impact Analysis: Proposed Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles. Railroad routes and mileages are applied to the comparative truck shipments. Actual emissions and savings may vary based on routing and other variable factors. Union Pacific's fuel consumption rate is applied to other carriers' miles for interline moves. Using this methodology, in 2024 we provided over 1,100 customers with annual emissions savings statements for reporting year 2023. The statements estimated what the customers' actual shipments with Union Pacific had saved in reduced GHG emissions versus utilizing trucks. The total estimated avoided emissions for these customers was over 22,500,000 mtons CO2e. Converting traffic to rail from truck offers an immediate reduction in Scope 3 GHG emissions. UP’s focus on improvements in locomotive

fuel efficiency has allowed us to provide a low-carbon transportation option to our customers. In 2023 UP's GHG emissions intensity was below the 25 gCO2e/tkm emissions threshold criteria for the low-carbon transport sector, per the Climate Bonds Taxonomy and the low-carbon transport universal freight threshold for all types of freight transport on the IEA's 2 Degrees Scenario Freight Activity Mode [for more information on our intensities, see section 6 of CDP].

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

87
[Add row]

(7.75) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Row 1

(7.75.1) Activity

Select from:
☑ Rail

(7.75.2) Metric

Select from:
☑ Fleet adoption

(7.75.3) Technology

Select from:
☑ Other, please specify **:**Battery Electric Locomotives Adoption

(7.75.4) Metric figure

0

(7.75.5) Metric unit

Select from:

☑ Other, please specify **:**Low- or zero-emissions locomotives placed in service in our locomotive fleet

(7.75.6) Explanation

This metric tracks the number of low- or zero-emissions locomotives placed in service in our network for field testing. Low-Emissions Hybrid Locomotives We are partnering with an external company to build six hybrid battery-electric locomotives for operational testing and ultimately revenue service. The first of six units will undergo extensive testing beginning in May 2024 in a Union Pacific facility. These first of its kind locomotives within North America's freight rail industry will function similarly to plugin hybrid cars, with the ability to operate in various modes, and are expected to consume as much as 80% less fuel – reducing associated GHGs and criteria pollutants and helping us determine the potential for hybrid units as a transition strategy. Zero-Emissions Locomotives In January 2022, we announced plans to purchase battery-electric locomotives for testing in yard operations. Yard switching, as opposed to line-haul operations, offers a more realistic path for locomotive conversion to 100% batteries, as yard locomotives have limited range, fixed location recharging, and lower power requirements. Procuring the 2.4 MWh batteries needed for our battery-electric locomotives has proven to be more challenging than expected for us and other freight railroads. Because of these procurement difficulties, we adjusted our locomotive order to four units, which are now expected to be delivered in 2026 and will be based in Southern California for operational testing. The rate of adoption of new low- or zero-emission technologies by Union Pacific will depend on several factors. These include technological readiness determined through locomotive reliability testing; safety considerations; the rate of growth of alternative fuel sources or electricity; readiness of the national infrastructure to deliver alternative fuels or electricity; interoperability within the rail network; workforce education on new locomotive technologies; and the production capabilities of locomotive manufacturers. Addressing these factors will require time and ongoing collaboration across our industry and supply chain. We are committed to thoroughly testing these new locomotive technologies to evaluate whether they meet our operational and safety standards, maintain efficiency comparable to our current fleet, and deliver value to both the us and our customers.

Row 2

(7.75.1) Activity

Select from:

☑ Rail

(7.75.2) Metric

Select from:

☑ Other, please specify **:**Number of high-horsepower locomotives modernized

(7.75.3) Technology

Select from:

☑ Other, please specify **:**Refurbished/upgraded (modernized) locomotives

(7.75.4) Metric figure

200

(7.75.5) Metric unit

Select from:

☑ Other, please specify **:**Count of modernized locomotives

(7.75.6) Explanation

We are actively upgrading our existing locomotive fleet with new technology to enhance fuel efficiency, reliability and reduce emissions. In 2023, we successfully overhauled 200 older locomotives, resulting in improved reliability and up to 5% better fuel efficiency, along with approximately 53% fewer GHG emissions. This initiative continues our ongoing partnership with Wabtec Corporation to modernize a total of 600 locomotives. This extensive project, valued at over 1 billion, includes engine refurbishment with next-generation controls and replacement of the electrical control system in our high horsepower fleet, allowing for software updates and functionality required to reduce road failures and variability. In addition, modernizations include a complete rebuild of engines and redesign of the fuel distribution system, resulting in more efficient fuel consumption and reduced emissions. The enhanced reliability and capacity of these updated locomotives will allow us to reduce the number of locomotives needed to transport our freight efficiently. Modernizations also align with the principles of the circular economy, as more than half of each locomotive's weight will consist of reused components. This investment will allow us to achieve approximately 210,000 tons in annual emission reductions – equivalent to removing emissions from nearly 45,000 passenger cars each year. We plan to complete all 600 modernizations by the end of 2026.

Row 3

(7.75.1) Activity

Select from:

☑ Rail

(7.75.2) Metric

Select from:

☑ Other, please specify **:**Biofuels utilization as a percentage of total annual diesel consumption

(7.75.3) Technology

Select from:

☑ Other, please specify **:**Vehicle using Biofuel

(7.75.4) Metric figure

6.1

(7.75.5) Metric unit

Select from:

☑ Other, please specify **:**Biofuels utilization as a percentage of total annual diesel consumption

(7.75.6) Explanation

Meeting our near-term emissions reduction target cannot depend on operational excellence and technology-enabled fuel efficiency alone. With 80% of our GHG emissions (Scope 1 and Scope 3, category 3) generated from the use of fuel in our rail operations, a key enabler of meeting our near-term GHG reduction target is increasing our utilization of renewable, low-carbon fuels in our locomotives. We have committed to the goal of increasing the percentage of renewable fuels consumed to 10% of our total diesel consumption by 2025 and 20% by 2030. Use of renewable fuels reduces both greenhouse gas and criteria pollutant emissions. We work with fuel supply-chain partners to secure supplies of low-carbon fuels to meet our current and projected future needs. This includes creating logistics solutions to enable the refueling of locomotives with biofuel blends at new locations on our network; establishing commercial contracts for biodiesel with our suppliers; exploring market-based ways to reduce the cost premium for biofuels over fossil fuel-based diesel; and making cooperative efforts to encourage efficient, circular shipping of biofuels and biofuel feedstocks by rail. Since committing to increasing our use of biofuels, we have made consistent progress. In 2023, our consumption of low-carbon fuels reached 6.1% of total diesel used, up from 4.5% in 2022.
[Add row]

(7.79) Has your organization canceled any project-based carbon credits within the reporting year?

Select from:

☑ No

C9. Environmental performance - Water security

(9.1) Are there any exclusions from your disclosure of water-related data?

Select from:
☑ Yes

(9.1.1) Provide details on these exclusions.

Row 1

(9.1.1.1) Exclusion

Select from:
☑ Specific groups, businesses, or organizations

(9.1.1.2) Description of exclusion

Certain water right withdrawals. Certain leased real and personal properties (including buildings and facilities).

(9.1.1.3) Reason for exclusion

Select from:
☑ Data is not available

(9.1.1.4) Primary reason why data is not available

Select from:
☑ Not an immediate strategic priority

(9.1.1.7) Percentage of water volume the exclusion represents

Select from:

☑ 1-5%

(9.1.1.8) Please explain

Union Pacific does not track, at the corporate level, water usage data for all facilities and work areas in its 32,000 mile network. This exclusion pertains, in particular, to individual facilities and remote work areas that are not metered, such as locations where the company has water rights and draws directly from a surface or groundwater source located on company property. These facilities and remote work areas are typically managed at the local level in accordance with federal, state and/or local regulatory requirements that pertain to small public water systems or independent water wells. They represent a small percentage of total water resources managed or accessed by Union Pacific. Union Pacific does not track the water usage of non-railroad entities that lease real or personal property from Union Pacific to conduct other forms of business, unless the tenant's water usage is billed directly to Union Pacific by a municipal water supplier. In general, Union Pacific does not exercise direct control over water withdrawals by non-railroad entities.
[Add row]

(9.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

Water withdrawals – total volumes

(9.2.1) % of sites/facilities/operations

Select from:
☑ 76-99

(9.2.2) Frequency of measurement

Select from:
☑ Monthly

(9.2.3) Method of measurement

Utility meters

(9.2.4) Please explain

Union Pacific procures the vast majority of its water supplies from municipal/local water authorities and uses a software application called ProKarma-EMS to track monthly water withdrawals associated with approximately 1,400 municipal water accounts across the company's network. This system tracks 100% of the company's

municipally-sourced water withdrawals. In select locations (representing a very small fraction of the company's total water withdrawals), the company extracts water out of railroad-owned groundwater wells or surface water sources. These locations are managed at the local level in accordance with federal, state and/or local regulatory requirements that pertain to small public water systems or independent water wells. The majority of these locations are not metered. Consequently, the volumes are not tracked.

Water withdrawals – volumes by source

(9.2.1) % of sites/facilities/operations

Select from:

☑ 76-99

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Utility meters

(9.2.4) Please explain

Union Pacific procures the vast majority of its water supplies from municipal/local water authorities and uses a software application called ProKarma-EMS to track monthly water withdrawals associated with approximately 1,400 municipal water accounts across the company's network. This system tracks 100% of the company's municipally-sourced water withdrawals. In select locations (representing a very small fraction of the company's total water withdrawals), the company extracts water out of railroad-owned groundwater wells or surface water sources. These locations are managed at the local level in accordance with federal, state and/or local regulatory requirements that pertain to small public water systems or independent water wells. The majority of these locations are not metered. Consequently, the volumes are not tracked.

Water withdrawals quality

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Utility meters

(9.2.4) Please explain

The company relies on municipal water authorities to test and monitor water quality. At locations where the company obtains water from a non-municipal source (e.g., groundwater well on company property), water quality is monitored by qualified operators in accordance with applicable federal, state and local regulatory standards and requirements. All non-municipal water systems are tested annually, consistent with EPA protocol, to ensure they meet primary drinking water standards. This is standard procedure for all company-owned water systems, even at locations where no sampling requirement exists.

Water discharges – total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Various local wastewater treatment plant meters and utility meters.

(9.2.4) Please explain

The company utilizes a software application called ProKarma-EMS to track monthly sewer discharge volumes where meters are present. The company also owns and operates approximately 90 wastewater treatment facilities across its network. Water discharge volumes are monitored using electronic flow meters or estimated

based on pump hour meter run times. Discharge data and regulatory reporting are generated monthly and managed in accordance with applicable federal, state and local regulatory requirements.

Water discharges – volumes by destination

(9.2.1) % of sites/facilities/operations

Select from:

☑ 76-99

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Various local wastewater treatment plant meters and utility meters.

(9.2.4) Please explain

The company owns and operates approximately 90 wastewater treatment facilities across its network. Four discharge to evaporation units; six discharge to surface waters; and the remaining discharge to a municipal sewer system or have their discharge water collected and hauled. Water discharge volumes are monitored on a monthly basis using electronic flow meters, or estimated based on pump hour meter run times. The company manages discharge data and regulatory reporting for these facilities in accordance with applicable federal, state and local regulatory requirements.

Water discharges – volumes by treatment method

(9.2.1) % of sites/facilities/operations

Select from:

☑ 76-99

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

Various local wastewater treatment plant meters and utility meters.

(9.2.4) Please explain

The company owns and operates approximately 90 wastewater treatment facilities across its network. Examples include, but are not limited to oil water separators, belt skimmers, de-emulsifying chemicals, and air strippers. Water discharge volumes are monitored on a monthly basis using electronic flow meters or estimated based on pump hour meter run times. The company manages discharge data and regulatory reporting for these facilities in accordance with applicable federal, state and local regulatory requirements.

Water discharge quality – by standard effluent parameters

(9.2.1) % of sites/facilities/operations

Select from:

☑ 76-99

(9.2.2) Frequency of measurement

Select from:

☑ Other, please specify **:**Sampling and monitoring happen on timelines as dictated by permits, regulations, ordinances.

(9.2.3) Method of measurement

Analytical samples

(9.2.4) Please explain

The company owns and operates approximately 90 wastewater treatment facilities across its network. Water discharge quality is monitored on a basis, determined by regulations or permits, through routine sampling and laboratory analyses, and is measured against permit effluent parameter standards at all facilities with permitted activities. Data and regulatory reporting are managed in accordance with applicable federal, state and local regulatory requirements.

Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)

(9.2.1) % of sites/facilities/operations

Select from:

☑ 76-99

(9.2.2) Frequency of measurement

Select from:

☑ Other, please specify **:**Sampling and monitoring happen on timelines as dictated by permits, regulations, ordinances.

(9.2.3) Method of measurement

Analytical samples

(9.2.4) Please explain

The company owns and operates approximately 90 wastewater treatment facilities across its network. Water discharge quality is monitored on a basis, determined by regulations or permits, through routine sampling and laboratory analyses, and is measured against permit effluent parameter standards at all facilities with permitted activities. Data and regulatory reporting are managed in accordance with applicable federal, state and local regulatory requirements.

Water discharge quality – temperature

(9.2.1) % of sites/facilities/operations

Select from:

☑ Not monitored

(9.2.4) Please explain

In general, Union Pacific does not measure water discharge temperature as this is not required by our environmental permits.

Water consumption – total volume

(9.2.1) % of sites/facilities/operations

Select from:
☑ 76-99

(9.2.2) Frequency of measurement

Select from:
☑ Monthly

(9.2.3) Method of measurement

Utility meters

(9.2.4) Please explain

Union Pacific procures the vast majority of its water supplies from municipal/local water authorities and uses a software application called ProKarma-EMS to track monthly water withdrawals associated with approximately 1,400 municipal water accounts across the company's network. This system tracks 100% of the company's municipally-sourced water withdrawals. In select locations (representing a very small fraction of the company's total water withdrawals), the company extracts water out of railroad-owned groundwater wells or surface water sources. These locations are managed at the local level in accordance with federal, state and/or local regulatory requirements that pertain to small public water systems or independent water wells. The majority of these locations are not metered. Consequently, the volumes are not tracked.
[Fixed row]

(9.2.2) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

Total withdrawals

(9.2.2.1) Volume (megaliters/year)

2598

(9.2.2.2) Comparison with previous reporting year

Select from:
☑ Lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.2.4) Five-year forecast

Select from:

☑ About the same

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in business activity

(9.2.2.6) Please explain

The company is obligated by law to provide adequate supplies of good-quality potable water to its workforce. This applies to both office and field employees. The company must also have access to sufficient quantities of water to conduct railroad operations and maintain railroad infrastructure. Examples of this need include, but are not limited to, water to be used as locomotive coolant, water for wash and paint operations, water for dust suppression, water used to test soil consistency associated with track and bridge construction, and water used to maintain landscape and vegetation. The quantity of water needed to support operations and infrastructure can increase or decrease from year-to-year, consistent with growth or decline in business, repair and/or replacement of infrastructure, and other business needs. The company has been engaged in an ongoing effort to reduce water dependency and increase conservation of freshwater.

Total discharges

(9.2.2.1) Volume (megaliters/year)

2576

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify

(9.2.2.4) Five-year forecast

Select from:

☑ About the same

(9.2.2.5) Primary reason for forecast

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.2.6) Please explain

The company utilizes a software application called ProKarma-EMS to track monthly sewer discharge volumes where meters are present. The company also owns and operates 93 wastewater treatment facilities across its network. Variations in discharge volumes can result from discharge of stormwater collected through wastewater treatment plants, and therefore can be weather dependent. Water discharge volumes are monitored using electronic flow meters or estimated based on pump hour meter run times. Discharge data and regulatory reporting are generated monthly and managed in accordance with applicable federal, state and local regulatory requirements.

Total consumption

(9.2.2.1) Volume (megaliters/year)

22

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.2.4) Five-year forecast

Select from:

☑ About the same

(9.2.2.5) Primary reason for forecast

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.2.6) Please explain

The company utilizes a software application called ProKarma-EMS to track monthly sewer discharge volumes where meters are present. The company also owns and operates 93 wastewater treatment facilities across its network. Variations in discharge volumes can result from discharge of stormwater collected through wastewater treatment plants, and therefore can be weather dependent. Water discharge volumes are monitored using electronic flow meters or estimated based on pump hour meter run times. Discharge data and regulatory reporting are generated monthly and managed in accordance with applicable federal, state and local regulatory requirements.
[Fixed row]

(9.2.4) Indicate whether water is withdrawn from areas with water stress, provide the volume, how it compares with the previous reporting year, and how it is forecasted to change.

(9.2.4.1) Withdrawals are from areas with water stress

Select from:

☑ Unknown

(9.2.4.9) Please explain

Union Pacific receives the majority of its water supplies from municipal/local water authorities. The company uses a software application known as ProKarma-EMS to track monthly water withdrawals associated with more than 1,400 municipal water accounts across the company's 23 state network. We do not, however, segment data to track water withdrawals from volume stressed areas.
[Fixed row]

(9.2.7) Provide total water withdrawal data by source.

Fresh surface water, including rainwater, water from wetlands, rivers, and lakes

(9.2.7.1) Relevance

Select from:
☑ Relevant

(9.2.7.2) Volume (megaliters/year)

54

(9.2.7.3) Comparison with previous reporting year

Select from:
☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:
☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.7.5) Please explain

Fresh surface water withdrawals occur in remote locations where access to a municipal water supply source is not available. With some exceptions, the majority of these locations are not metered and not tracked in total water withdrawal volumes. The volumes reported here represent a fraction of locations that are metered.

Brackish surface water/Seawater

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

The company does not rely on brackish surface water or sea water to support railroad operations, nor have we identified demand for brackish surface water or sea water in our value chain. The company did not withdraw from these sources in 2023 and does not anticipate withdrawing in the future.

Groundwater – renewable

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

169

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ About the same

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.7.5) Please explain

Groundwater withdrawals occur in remote locations where access to a municipal water supply source is not available. The year over year change can be attributed to the fact that water usage is variable based on annual business activities and weather trends.

Groundwater – non-renewable

(9.2.7.1) Relevance

Select from:
☑ Not relevant

(9.2.7.5) Please explain

The company did not withdraw from this source in 2023 and does not anticipate withdrawing in the future.

Produced/Entrained water

(9.2.7.1) Relevance

Select from:
☑ Not relevant

(9.2.7.5) Please explain

The company did not withdraw from this source in 2023 and does not anticipate withdrawing in the future.

Third party sources

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

2375

(9.2.7.3) Comparison with previous reporting year

Select from:
☑ Lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:
☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.7.5) Please explain

Union Pacific procures the majority of its water from municipal/local water authorities and uses a software application called ProKarma-EMS to track monthly water withdrawals.
[Fixed row]

(9.2.8) Provide total water discharge data by destination.

Fresh surface water

(9.2.8.1) Relevance

Select from:
☑ Relevant

(9.2.8.2) Volume (megaliters/year)

801

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ Much higher

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.8.5) Please explain

This number includes discharges from the company's network of 93 wastewater treatment facilities system-wide.

Brackish surface water/seawater

(9.2.8.1) Relevance

Select from:

☑ Not relevant

(9.2.8.5) Please explain

The company did not discharge into brackish surface water or seawater in 2023 and does not expect to do so in the future.

Groundwater

(9.2.8.1) Relevance

Select from:

☑ Not relevant

(9.2.8.5) Please explain

The company did not discharge into groundwater in 2023 and does not expect to do so in the future. This assessment excludes groundwater discharges associated with pump and treat operations at active environmental remediation sites.

Third-party destinations

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

675

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ Much lower

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.8.5) Please explain

The majority of water in this subcategory is discharged directly into municipal storm water/sewer systems or is delivered to a discharge/disposal destination through a pump and haul process.
[Fixed row]

(9.2.9) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

Tertiary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

(9.2.9.6) Please explain

Union Pacific does not perform tertiary treatment at any of the 93 wastewater treatment plants in its network.

Secondary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

866

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 21-30

(9.2.9.6) Please explain

Union Pacific performs secondary treatment at some wastewater treatment plants within its network. Secondary treatment involves the use of dissolved air flotation to remove emulsified oil before discharge to a POTW or surface water body.

Primary treatment only

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

598

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ About the same

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Other, please specify **:**Water data is not a primary input because our railroad operations do not heavily rely on water; consequently, there may be variances in our water data from year to year.

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 91-99

(9.2.9.6) Please explain

Primary treatment is the highest level of treatment performed by the majority of Union Pacific's network of 93 wastewater treatment plants. Primary treatment involves the use of an oil water separator to reduce the concentration of oil and grease contained within influent before discharge to a POTW.

Discharge to the natural environment without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

(9.2.9.6) Please explain

In compliance with federal and state permitting privileges, Union Pacific treats water prior to discharge to appropriate permit limits.

Discharge to a third party without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

(9.2.9.6) Please explain

Union Pacific treats water prior to discharge to appropriate permit limits. We do not discharge to any third party without treatment.

Other

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

(9.2.9.6) Please explain

Union Pacific does not measure any other treatment options within direct operations outside of listed options.
[Fixed row]

(9.3) In your direct operations and upstream value chain, what is the number of facilities where you have identified substantive water-related dependencies, impacts, risks, and opportunities?

Direct operations

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ No, we have not assessed this value chain stage for facilities with water-related dependencies, impacts, risks, and opportunities, and are not planning to do so in the next 2 years

(9.3.4) Please explain

Union Pacific (UP) defines substantive financial or strategic impact by identifying factors, events, and uncertainties that, if realized, would have a material adverse impact on our business, reputation, financial condition, results of operations, cash flows, or prospects. As a company with a vast geographic footprint, the company is frequently exposed to weather conditions and other natural phenomena (e.g., hurricanes, earthquakes, fires, floods, landslides, extreme temperatures, and precipitation) that can cause significant business interruption or require large expenditures to remedy the impacts.

Upstream value chain

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ No, we have not assessed this value chain stage for facilities with water-related dependencies, impacts, risks, and opportunities, and are not planning to do so in the next 2 years

(9.3.4) Please explain

To date, the company has not identified substantive financial or strategic impacts from water risks associated with its value chain, e.g., the acquisition of materials from suppliers. To assess this risk in connection with our supply chain, in 2020 the company engaged its top five (5) suppliers based on total spend in the operating expense category of "purchased services and materials." Our assessment of key responses revealed a low likelihood of impact to key activities that support Union

Pacific's business operations. The risk from customers may be slightly more significant since a lack of water resources to support customer operations can potentially impact customer demand for Union Pacific's services. However, we do not believe this risk rises to the level of a substantive financial or strategic impact.
[Fixed row]

(9.4) Could any of your facilities reported in 9.3.1 have an impact on a requesting CDP supply chain member?

Select from:
☑ No facilities were reported in 9.3.1

(9.5) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue (currency)	Total water withdrawal efficiency	Anticipated forward trend
	24119000000	*9283679.75*	*Water usage is variable based on annual business activities and weather trends.*

[Fixed row]

(9.13) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
	Select from: ☑ No	*Union Pacific does not produce, sell or distribute a product.*

[Fixed row]

(9.14) Do you classify any of your current products and/or services as low water impact?

(9.14.1) Products and/or services classified as low water impact

Select from:

☑ No, and we do not plan to address this within the next two years

(9.14.3) Primary reason for not classifying any of your current products and/or services as low water impact

Select from:

☑ Judged to be unimportant, explanation provided

(9.14.4) Please explain

Historically, Union Pacific has focused water-related efforts on ensuring it is compliant with federal, state, and local regulations and permitting requirements. Water is a small input of our transportation service offering, chiefly consisting of potable drinking water for employees, water for employee toilet/sanitation, and equipment wash facilities. The company has begun efforts to build internal awareness and quantification of water impacts up and down its value chain.
[Fixed row]

(9.15) Do you have any water-related targets?

Select from:

☑ No, and we do not plan to within the next two years

(9.15.3) Why do you not have water-related target(s) and what are your plans to develop these in the future?

(9.15.3.1) Primary reason

Select from:

☑ Judged to be unimportant, explanation provided

(9.15.3.2) Please explain

Union Pacific uses relatively little water for its operation. Water usage and water supply pose a relatively low risk to the company's business. Primary uses are as a locomotive coolant, washing equipment, vegetation protection to minimize fire risk, and drinking water. We conserve water by analyzing accounts, researching irregularities, and making changes and repairs to eliminate unnecessary use. Our team focuses on using data to identify and address consumption changes, which might suggest a leak or other issue. The company commits to complying with national water quality standards and regulations. We have built infrastructure and processes to discharge effluent wastewater safely and meet federal, state, and local compliance obligations, minimizing our impact on the environment. To protect waters of the United States from stormwater runoff, Union Pacific has approximately 270 Stormwater Pollution Prevention Plans (SWPPP), and approximately 140 Spill Prevention, Control, and Countermeasure (SPCC) plans. The plans cover all facilities where maintenance of locomotives and rail cars occurs and identify inspections, maintenance, and best management practices to ensure the stormwater that contacts our facilities is not contaminated. The company self-reports effluent exceedances and routinely completes a post incident analysis to investigate root causes and implement corrective actions as part of the environmental policy's commitment to continuous improvement.
[Fixed row]

C11. Environmental performance - Biodiversity

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

(11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

☑ Yes, we are taking actions to progress our biodiversity-related commitments

(11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

☑ Land/water protection

☑ Land/water management

☑ Education & awareness

[Fixed row]

(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?
	Select from: ☑ No

[Fixed row]

(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?

Legally protected areas

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ Yes (partial assessment)

(11.4.2) Comment

We implement biodiversity management plans to protect ecosystems and endangered species in various locations. Before starting construction projects, our teams engage early to identify and assess potential environmental impacts. We also coordinate externally with regulators, experts, local municipalities and Indigenous communities to inventory and identify critical habitat, endangered species, sensitive areas as well as archaeological and heritage features to minimize impacts. We consider the specific environmental and regulatory context when completing maintenance, growth, remediation, and/or emergency response projects across our network. We review and manage sensitive resources (endangered species, migratory birds, etc.) as required by federal and state law. Our reviews follow the federal level Clean Water Act Section 404 (CWA) and all resources included in the CWA's guidance. This includes jurisdictional waterways and wetlands, threatened and endangered species, and cultural/historical/tribal resources. We define our operational sites to include bridge replacement and facility construction sites, commercial facilities construction projects, and new railroad capacity (main line, siding, and yard) construction projects where our experience and evaluation protocols determine that a likelihood of potential impacts to waterways/wetlands/species exists. We conducted environmental and biodiversity impact evaluations on 1,318 bridge, capacity and commercial facilities construction sites from 2019-2023. Of these locations, approximately 1,250 involved the eventual utilization of biodiversity management plans in consideration of waterways, wetlands, and threatened and endangered species and migratory birds. For these locations, we followed the regulatory bodies' prescribed guidance for how to manage issues and impacts associated with these resources. We do not track area estimates for these projects.

Key Biodiversity Areas

(11.4.2) Comment

Rich text input [must be under 2500 characters]

Other areas important for biodiversity

(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

☑ Yes (partial assessment)

(11.4.2) Comment

We implement biodiversity management plans to protect ecosystems and endangered species in various locations. Before starting construction projects, our teams engage early to identify and assess potential environmental impacts. We also coordinate externally with regulators, experts, local municipalities and Indigenous communities to inventory and identify critical habitat, endangered species, sensitive areas as well as archaeological and heritage features to minimize impacts. We consider the specific environmental and regulatory context when completing maintenance, growth, remediation, and/or emergency response projects across our network. We review and manage sensitive resources (endangered species, migratory birds, etc.) as required by federal and state law. Our reviews follow the federal level Clean Water Act Section 404 (CWA) and all resources included in the CWA's guidance. This includes jurisdictional waterways and wetlands, threatened and endangered species, and cultural/historical/tribal resources. We define our operational sites to include bridge replacement and facility construction sites, commercial facilities construction projects, and new railroad capacity (main line, siding, and yard) construction projects where our experience and evaluation protocols determine that a likelihood of potential impacts to waterways/wetlands/species exists. We conducted environmental and biodiversity impact evaluations on 1,318 bridge, capacity and commercial facilities construction sites from 2019-2023. Of these locations, approximately 1,250 involved the eventual utilization of biodiversity management plans in consideration of waterways, wetlands, and threatened and endangered species and migratory birds. For these locations, we followed the regulatory bodies' prescribed guidance for how to manage issues and impacts associated with these resources. We do not track area estimates for these projects. [Fixed row]

(11.4.1) Provide details of your organization's activities in the reporting year located in or near to areas important for biodiversity.

Row 1

(11.4.1.2) Types of area important for biodiversity

Select all that apply

☑ Legally protected areas

(11.4.1.3) Protected area category (IUCN classification)

Select from:

☑ Unknown

(11.4.1.4) Country/area

Select from:

☑ United States of America

(11.4.1.5) Name of the area important for biodiversity

Various bridge, capacity and commercial facilities construction sites on or adjacent to our operations within our 23-state operating area in the United States.

(11.4.1.6) Proximity

Select from:

☑ Data not available

(11.4.1.8) Briefly describe your organization’s activities in the reporting year located in or near to the selected area

We conducted environmental and biodiversity impact evaluations on 187 bridge, 38 capacity and eight commercial facilities construction sites during 2023. Of these locations, most involved the eventual utilization of biodiversity management plans in consideration of waterways, wetlands, and threatened and endangered species and migratory birds. For these locations, we followed the regulatory bodies’ prescribed guidance for how to manage issues and impacts associated with these resources. We do not track area estimates for these projects.
[Add row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

(13.1.1) Other environmental information included in your CDP response is verified and/or assured by a third party

Select from:

☑ No, and we do not plan to obtain third-party verification/assurance of other environmental information in our CDP response within the next two years

(13.1.2) Primary reason why other environmental information included in your CDP response is not verified and/or assured by a third party

Select from:

☑ Lack of internal resources, capabilities, or expertise (e.g., due to organization size)

(13.1.3) Explain why other environmental information included in your CDP response is not verified and/or assured by a third party

Currently, only our Greenhouse Gas emissions data is verified by an external party. We have conducted an assurance readiness assessment with an external auditor and plan on reaching reasonable assurance when required by upcoming SEC disclosure requirements for Greenhouse Gas Emissions. The process of third-party verification and assurance takes time and resources, so we prioritize specific data sets based on regulatory requirements, their significance and stakeholder demands.
[Fixed row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

President

(13.3.2) Corresponding job category

Select from:

☑ Chief Sustainability Officer (CSO)

[Fixed row]

(13.4) Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Select from:

☑ No